



PUBLIC VERSION

DOMESTIC MOBILE ROAMING DECLARATION INQUIRY

**PART A OF THE SUBMISSION BY
VODAFONE HUTCHISON AUSTRALIA**

MAIN SUBMISSION

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Executive Summary

Telstra is extracting a 'price premium' from Australia's retail mobile markets of some **\$1.4 billion per year**. This 'premium' is a form of monopoly rent that is disproportionately borne by regional Australians. Many regional consumers have little practical choice but to acquire mobile telecommunications services from Telstra. They have no choice but to pay this 'premium', essentially as a 'Telstra tax'.

Telstra's pricing is well above competitive levels. Telstra's market power arises because a vast swathe of Australia's geography can only be served by a single, mobile infrastructure – it is a natural monopoly.

Australia's geography is uniquely susceptible to natural monopoly due to its extreme land area and low population density. Throughout Telstra's history of government ownership and extensive subsidies, Telstra has built infrastructure across this geography. Telstra now has an absolute monopoly over some 1.4 million square kilometres; an area more than four times the size of Victoria. Telstra's mobile monopoly covers an astounding 60% of the mobile coverage area in Australia.

Telstra's monopoly coverage is extreme by global standards. By definition, as a natural monopoly, Telstra's competitors cannot feasibly duplicate this infrastructure. Telstra's mobile monopoly is absolute and unassailable. We provide extensive evidence and expert opinion in this submission to prove this.

The natural monopoly is being exploited to the detriment of consumers. While infrastructure sharing and roaming arrangements have been the accepted policy solutions for delivering regional coverage in virtually every Western economy with a large land mass and low population density, they have not occurred in Australia. Instead, Australia has provided subsidies for Telstra to expand its coverage, entrenching its monopoly and compounding its market power.

Notwithstanding taxpayer funding, [C-I-C]. By doing so, Telstra is engaging in the classic exclusionary behaviour by a vertically-integrated natural monopolist that the Part XIC access regime was enacted to prevent. [C-I-C].

A mobile network operator should not be permitted to capture a natural monopoly in coverage (part of which has been funded by taxpayer subsidies), use that coverage to extract monopoly rents, [C-I-C], then bundle that natural monopoly with its retail offering in such a way that no other mobile network operator can effectively compete.

Moreover, it is curious that Telstra claims that only a monopoly can drive efficient investment and that competition would undermine investment incentives. As VHA evidences in this submission, such claims are patently absurd. As a monopoly, Telstra's incentives to invest in upgrading its regional infrastructure are limited. Some 5 years since 4G was launched in metropolitan areas, Telstra only announced that it would deploy 4G into the mobile monopoly areas after the ACCC commenced this declaration inquiry.

In 2004, the ACCC concluded that all the statutory requirements for declaration of roaming were met. However, declaration did not occur due to the existence of commercial arrangements. In 2016, the situation is very different. No commercial roaming arrangements exist for the Telstra monopoly areas, and Telstra has publicly stated that it will not countenance such arrangements.

When monopolies behave like monopolies, regulators should act. Telstra's stance is harmful to all Australians, particularly those living in regional Australia. Declaration will promote competition and realise a substantial efficiency dividend, delivering potentially billions of dollars in long-term welfare gains.

The 10 key points in this submission

In this submission, VHA makes the following ten key points:

1. Australia is uniquely susceptible to natural monopoly

Australia has one of the largest land areas of any country in the world and one of the lowest population densities.¹ Australia's vast geography and very low population density mean that Australia is uniquely susceptible to market failure caused by natural monopoly in regional areas of Australia.

It is no coincidence that domestic roaming has been regulated in virtually every western economy with a large land area and areas of low population density (eg the USA, Canada, New Zealand, France and Spain).² However, none of these countries have a population density as low as Australia even on average, let alone in regional areas. The market failure in Australia is commensurately greater and the need for regulatory intervention commensurately more acute.

In Australia, Telstra's mobile network monopoly is extreme by global standards. Telstra holds a monopoly over an astounding 60% of the mobile coverage area in Australia. Telstra's network is now 1.4 million km² or 2.4 times larger than its nearest rival. Much of this area comprises part of the natural monopoly. In such areas, no other mobile operator can profitably invest to duplicate Telstra's infrastructure and effectively compete.

2. Telstra's mobile monopoly has been entrenched by subsidies

In the areas of lowest population density, Telstra's monopoly has been funded by extensive direct and indirect taxpayer subsidies. Telstra is denying access to the mobile network partly built with those public subsidies. By doing so, Telstra is capturing the benefit of those public subsidies exclusively for its own private use.

[C-I-C] In the absence of contiguous coverage, MNOs cannot effectively bid for most subsidised sites. While Telstra has received some \$2 billion in direct and indirect (eg USO) subsidies since 2006, VHA has received only \$41 million, roughly 2% of the Telstra total amount.

Over time, the continuing flow of subsidies to Telstra has fuelled a vicious cycle. Each incremental subsidy to Telstra extends the natural monopoly area, maximising the prospect of Telstra keeping future subsidies for itself. Telstra then denies access to the subsidised infrastructure, ensuring it is most likely to receive the vast bulk of further subsidies. Even under Rounds 1 and 2 of the Mobile Blackspots Programme, the most competitive subsidy programme in recent history, 75% of the funded sites are Telstra sites. This vicious cycle can only be broken by the declaration of roaming.

By analogy, Telstra is acting as the gatekeeper for natural monopoly infrastructure in regional Australia. Notwithstanding taxpayer funding, Telstra keeps that coverage exclusively only for Telstra

¹ Australia has a surface area of 7.6 million km² and 3 people per km² on average, but with most of the population concentrated in a few major urban centres, dropping well below 1 person per km² in regional areas.

² The countries that have regulated mobile roaming include the USA, New Zealand, Canada, France, and Spain and regulated roaming has been recommended by the regulator in Norway. Only the USA and Canada have a land area anywhere near Australia.

customers. Telstra then charges its customers a premium to access that coverage. That premium allows Telstra to continue to out-invest its competitors including in new subsidy schemes that require co-contributions.

3. Telstra's market power spills beyond the natural monopoly footprint

The powerful economic impacts of the natural monopoly extend well beyond the geographic area of the natural monopoly itself. Mobile consumers that value coverage will have little choice but to choose Telstra, even if they do not live in, or frequently travel to, the monopoly coverage area. These 'spillover effects' exacerbate and dramatically magnify the natural monopoly problem.

Telstra has a long history of leveraging its natural monopoly through advertising that emphasises the extent of its coverage. The 'spillover effect' evident from Telstra's advertising has led to a softening of competition well beyond Telstra's coverage monopoly. Telstra has tilted the competitive playing field away from price competition and into an aspect of non-price competition in which Telstra faces no effective competitive constraint.

Telstra has then bundled its natural monopoly coverage with contestable coverage. No other MNO can compete this with coverage bundle. By Telstra's own evidence, some 71% of the customers churning to Telstra do so for coverage. Telstra is not subject to any effective competitive constraint on coverage.

The 'spillover effect' and bundling of market power enables Telstra to set premium prices at well above competitive levels. In doing so, Telstra is capturing a monopoly rent from its regional natural monopoly and exaggerating its market power in contestable markets; insulating itself from effective competition.

This pricing dynamic has enabled Telstra to generate persistently high margins. Some of these profits are used by Telstra to perpetuate its position through investments in advertising, in rent-seeking behaviour and in pursuit of government subsidies to further accentuate Telstra's monopoly coverage.

4. Uniform national pricing places no effective constraint on Telstra

Telstra claims that its policy of uniform national pricing allows the benefit of metropolitan competition to flow into regional Australia, irrespective of Telstra's extra-ordinarily high market shares (and regional HHIs as high as 7,600). We disagree with this claim and provide proof to refute this claim.

We provide evidence of the vast scale of the price premium that Telstra can extract from Australian mobile consumers (an astonishing \$1.4 billion each year).

We provide evidence that Telstra is not effectively constrained by competition in metropolitan Australia. Given the importance of coverage to consumer choice and given Telstra is not subject to effective competitive constraints on coverage, Telstra has market power even in metropolitan Australia.

We provide evidence that Telstra's uniform pricing is in fact an infectious "transmission mechanism" which is the reverse of Telstra's claim. Telstra sets its pricing to optimise its revenues across all retail mobile markets. As such, Telstra's uniform pricing allows Telstra to leverage its market power in regional Australia to extract a monopoly rent from all Australian consumers.

We provide evidence that there also appears to be regional price discrimination, irrespective of uniform pricing. This same conclusion was reached, expressly, by one of the recent Regional Telecommunications Reviews.

5. [C-I-C]

[C-I-C] Telstra is denying the only means by which its rivals can effectively compete. By doing so, Telstra is engaging in the classic exclusionary behaviour by a vertically-integrated natural monopoly that the Part XIC access regime was enacted to prevent.

VHA does not agree that a MNO should be able to capture a natural monopoly in coverage (part of which has been funded by public subsidies), use it to extract monopoly rents, [C-I-C], then bundle that natural monopoly with its retail offering in such a way that no other MNO can compete.

6. Coverage-based competition will continue to impose an effective competitive constraint

We acknowledge that coverage is normally a feature of mobile competition. However, declaration will have no impact on effective coverage-based competition. Declaration will have no impact in the existing areas of competitive coverage between the three MNOs, comprising 95.6% of the Australian population. After declaration, the MNOs will continue to race to deploy new mobile technologies in the competitive coverage areas.

Where declaration does impact is in those areas of Australia that are already not subject to effective coverage-based competition. In Telstra monopoly areas, there is no ability to deploy competitive infrastructure, so rival MNOs cannot compete on coverage or even credibly bring the threat of potential investment. In these areas, Telstra is not subject to effective coverage-based competitive constraints.

Telstra can bundle this natural monopoly coverage (which is not contestable) with contestable coverage in the competitive areas. By adopting this bundling strategy, Telstra can taint effective coverage-based competition with ineffective 'competition' derived from natural monopoly. Control of a natural monopoly is not an appropriate basis for retail competition.

Declaration will have the important benefit of preventing Telstra from leveraging its natural monopoly by eliminating Telstra's natural monopoly as a form of competitive coverage differentiation. Substitution to other forms of competition will deliver real improvements in the quality and intensity of competition and will properly restrain Telstra's market power.

7. Declaration of roaming will have no adverse impact on investment

A firm that does not face coverage competition has limited incentive to invest in coverage and to upgrade its technologies within the coverage monopoly area. Telstra already holds a coverage monopoly in regional Australia. Mobile services in the Telstra monopoly areas lag behind those of metropolitan Australia. According to Telstra's public coverage maps, regional consumers at the edge of its network receive slower network speeds and only 3G services.

It has now been 5 years since Telstra launched 4G services in metropolitan areas to compete with VHA and Optus. However, it was only last month, under threat of this ACCC declaration inquiry, that Telstra finally announced it will invest in upgrading to 4G in the Telstra monopoly areas. Declaration will therefore not remove competitive investment incentives in regional Australia, because such competitive investment incentives are already weak.

Declaration will also deliver meaningful competition for government subsidies, removing Telstra's stranglehold over regional mobile investment. Roaming will provide the contiguous coverage which is fundamental to winning subsidies for incremental coverage. Declaration of roaming will enable government subsidies to become properly contestable, enabling other MNOs to invest. Roaming will therefore facilitate investment by other MNOs and promote greater infrastructure sharing.

8. The international experience demonstrates that roaming promotes competition and investment

In the countries that have mandated roaming, there is no evidence that regulation has undermined investment incentives in those markets. If the access price is set at an efficient level (an exercise in which the ACCC has substantial experience and expertise), there is no reason to believe that incentives would be undermined in Australia. Access pricing is the key to efficient investment.

Indeed, many of the ACCC's regulatory colleagues and policy makers in other jurisdictions have concluded that mandatory roaming promotes competition and encourages efficient investment incentives. For example, the US Federal Communications Commission noted in its landmark 2011 decision to extend regulated roaming in the USA from voice to voice and data services:³

"In this Order, we promote consumer access to nationwide mobile broadband service by adopting a rule that requires facilities-based providers of commercial mobile data services to offer data roaming arrangements to other such providers on commercially reasonable terms and conditions..."

The rule we adopt today also serves the public interest by promoting investment in and deployment of mobile broadband networks, consistent with the recommendations of the National Broadband Plan"

Industry Canada (now Innovation, Science and Economic Development Canada), when introducing mandatory roaming in 2008, clearly concluded that mandatory roaming would both promote competition and ensure incentives for investment:⁴

"The intent of the policy is to encourage the deployment of advanced networks that provide the greatest choice of basic and advanced services available at competitive prices to the greatest number of Canadians."

9. Declaration of roaming will promote competition and consumer choice

When monopolies behave like monopolies, regulators should act. Telstra has aggressively stated that it will not provide roaming access to the Telstra monopoly area. No other MNO can provide roaming services in the natural monopoly area. Declaration of roaming is the only appropriate outcome.

Unlike in 2004, no commercial roaming arrangements exist for roaming in the Telstra coverage areas. Even if Telstra were to offer roaming at this late stage to dissuade the ACCC from declaration, Telstra will no doubt seek to preserve that component of its coverage that arises from its natural monopoly –

³ See FCC 11-52, Second Report and Order, 7 April 2011, https://apps.fcc.gov/edocs_public/attachmatch/FCC-11-52A1.pdf.

⁴ See Gazette Notice DGRB-002-08 – conditions of Licence for Mandatory Roaming and Antenna Tower and Site Sharing and to Prohibit Exclusive Site Arrangements, <http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08890.html>.

so is not contestable. The existence of commercial agreements should not dissuade the ACCC from acting to address the natural monopoly problem.

The mobile market is past “the tipping point” where declaration is necessary. Declaration of roaming is the only way to break the vicious cycle which sustains Telstra’s monopoly coverage, ability to extract disproportionate price premiums, and allows Telstra to capture government subsidies which further extend and entrench the natural monopoly.

Declaration will promote competition, and realise an efficiency dividend, delivering potentially billions of dollars in long-term welfare gains. Declaration of roaming will have substantial direct benefits for consumers and businesses in regional Australia. Given the importance of mobile services to the Australian economy in the 21st century, declaration would also have substantial indirect benefits to consumers and businesses throughout Australia.

Mobile services should be a key driver of the economy and society, promoting productivity, growth, innovation and connectivity. The lack of choice for regional Australia, and the consequences of spillover impacts throughout the rest of Australia, are major barriers to these benefits being realised. This situation can and should be remedied through the declaration of domestic roaming services.

10. No commercial roaming arrangements exist for the Telstra monopoly areas

In 2004, the ACCC concluded that roaming met all the requisite criterion for declaration, and only refrained from declaring a roaming service given that commercial roaming arrangements were already in place at that time or came into place under regulatory pressure during the inquiry.

The situation in 2016 is very different to 2004. Telstra is the clearly dominant MNO and its market shares across all mobile markets are high while its market share in regional Australia is increasingly extreme. A substantial market asymmetry exists.

In fact, the gulf between Telstra’s coverage and other MNOs’ coverage means that the case for declaration is more clear and compelling today than it ever was in 2004. Telstra no longer has and publicly refuses to enter into any commercially agreed roaming arrangements.

As a vertically-integrated firm with market power arising from its mobile coverage monopoly, Telstra has clear incentives to deny the wholesale supply of roaming to impede retail competition.

The ACCC has a real opportunity to resolve a perennial policy concern

The current situation will not self-correct. The extent of Telstra’s monopoly coverage means that the market has gone well past a ‘tipping point’ beyond which Telstra’s dominance cannot be challenged by other firms. Telstra has captured a natural monopoly and can choreograph the future of regional competition in its favour. Telstra can also capture most regional government subsidies, compounding its market power.

VHA urges the ACCC to declare roaming in regional Australia. A real opportunity exists to the ACCC to resolve a perennial policy concern and break a vicious cycle driven by natural monopoly. In the absence of regulatory intervention, regional Australians will be left significantly worse off. The long-term economic and social implications for Australia of allowing this vicious cycle to continue could be very severe indeed.

Vodafone Hutchison Australia Pty Ltd

5 December 2016

Conclusions

VHA supports the declaration of domestic mobile inter-carrier roaming under Part XIC of the *Competition and Consumer Act 2010 (Cth)* in those areas of Australia with less than 3 mobile networks.

Such declaration would be in the long-term interests of end users (LTIE) of mobile telecommunications services, particularly those located in regional Australia.

The key points VHA makes in this submission in support of declaration are as follows:

1. Differences in geographic coverage are preventing competitive and efficient outcomes

Differences in geographic coverage are preventing competitive and efficient outcomes. These adverse impacts arise from a market failure caused by natural monopoly.

- Mobile market competition is failing regional Australia. Regional consumers are captive to Telstra and have little or no practical choice of mobile provider. Telstra's market share in regional areas ranges from market dominance to absolute monopoly. This market failure is continuing to worsen, is unique to Australia, and raises a profound policy challenge.
- The source of this market failure is Telstra's absolute monopoly over an astounding 1.4 million square kilometres, comprising 60% of Australia's mobile coverage area. The monopoly confers an insurmountable coverage advantage to Telstra that distorts competition throughout Australia's telecommunications markets. Telstra's monopoly has a particularly severe detrimental impact on regional Australia.
- Telstra's monopoly is structural, arising from the 'natural monopoly' characteristics of mobile networks in areas of large land mass and low population density. Telstra's monopoly has been compounded by economies of scale and scope, government subsidies, cross-subsidies and network effects. As evidenced by VHA in this submission, it is not economic or efficient for a rival MNO to invest in the natural monopoly areas.
- The area affected by the natural monopoly extends well beyond the geographic area of the natural monopoly itself. Telstra has bundled its natural monopoly coverage with contestable coverage. Mobile consumers that value coverage will have little choice but to select Telstra as their provider of mobile services. These 'spillover effects' exacerbate and dramatically magnify the natural monopoly problem.
- VHA agrees that an MNO should be able to differentiate itself based on non-price factors, including coverage. However, VHA does not agree that an MNO should be able to capture a natural monopoly, [C-I-C], then bundle that natural monopoly with its retail offering in such a way that no other MNO can compete.
- [C-I-C] Telstra is behaving anti-competitively, as VHA demonstrates in this submission.

- Supply of roaming will not occur in the monopoly areas absent declaration. [C-I-C]. Declaration of roaming is therefore appropriate in all regional areas with less than 3 mobile networks.

2. Declaration will promote competition

Declaration will promote competition in the markets for supply of mobile services:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would promote competition. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- The retail market is segmented into regional and metropolitan areas. On the demand side, a regional consumer cannot realistically travel into a metropolitan area to make a mobile call. On the supply side, very substantial barriers to market entry and supply-side substitution exist in regional Australia.
- Competition is inherently regional, as evidenced by extreme market share differences. Price discrimination can occur in practice in metropolitan areas, including via targeted marketing, different call plans, and handset subsidies. Regional consumers are often captive to Telstra given coverage considerations and hence have little practical choice.
- Australia's mobile markets are highly concentrated with very high HHIs. Under the Merger Guidelines, the ACCC indicates that levels of HHI of more than 2,000 will start to raise competition concerns. In some areas of regional Australia, the HHI is as high as 7,600.
- Competition is perceived as relatively effective in metropolitan areas, but is soft by global standards. In regional areas, competition is very soft and the competitive constraints on Telstra are not effective. Within this environment, Telstra has leveraged its market power.
- Coverage-based competition is not effective where it is distorted by natural monopoly. Telstra can bundle its natural monopoly coverage (which is not contestable) with contestable coverage in the competitive areas. Telstra can taint effective coverage-based competition with ineffective 'competition' (or the absence of it) from natural monopoly. Control of a natural monopoly is not an appropriate basis for retail competition.
- Declaration will have the important benefit of preventing Telstra from leveraging its natural monopoly by eliminating Telstra's natural monopoly as a form of competitive coverage differentiation. Substitution to other forms of competition will deliver real improvements in the quality and intensity of competition and will properly restrain Telstra's market power.
- Telstra has set prices across the mobile market at a significant premium to VHA and Optus. Telstra sets its pricing to optimise its revenues across all retail mobile markets. Metropolitan competition has been insufficient to constrain Telstra's market power in order to prevent Telstra from extracting a monopoly rent, as evidenced by the \$1.4 billion retail mobile price premium.

- Irrespective whether the markets are defined as national or regional, declaration will promote competition. In the words of section 152AB(4), declaration will remove an obstacle to non-Telstra end-users gaining access to regional telecommunications services.

3. Declaration will achieve any-to-any connectivity

Declaration will achieve any-to-any connectivity in regional Australia:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve any-to-any connectivity. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- Any-to-any connectivity is particularly important to regional Australia. In the absence of declaration, non-Telstra end-users are simply not able to communicate (other than 000 emergency calling) when they are in the Telstra monopoly areas. This has major adverse economic and social implications.
- The various Regional Telecommunications Reviews have repeatedly highlighted the critical importance of mobile telephony services to end-users living in remote areas of Australia. Mobile services are fundamental to their socio-economic development, including for education, health and safety, families and communities, and business. In this submission, VHA provides evidence that mobile services are generally considered a more essential service than fixed line services in regional Australia.
- Some regional end-users may not be willing or able to pay the price premium Telstra demands, and therefore may undersubscribe to mobile services which will adversely affect the statutory criteria of achieving any-to-any connectivity.

4. Declaration will encourage efficient investment and use

Declaration will encourage the efficient use of, and investment in, regional mobile infrastructure:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve efficient use of, and investment in, infrastructure. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- The declaration of roaming will promote competition. Greater competition will create the necessary conditions for achievement of allocative, productive and dynamic efficiency gains. In turn, this will provide an efficiency dividend. Criterion 'c' (promoting competition) drives criterion 'e' (achieving efficient investment and use) in section 152AB(2).
- In the natural monopoly areas, by definition it is not efficient for access seekers to invest. Declaration will achieve efficient sharing of mobile network infrastructure in those areas.

Roaming is the form of network sharing that delivers the most efficient use of infrastructure while also promoting competition.

- Outside the natural monopoly areas, declaration will be a catalyst in a positively reinforcing causation cycle. Declaration promotes competition by enabling access seekers to grow market share. Sustainable investment will occur by access seekers when they achieve sufficient market share. Such investment will promote long-term facilities-based competition.
- In relation to access providers, the emotive debate over the impact of declaration on Telstra's investment incentives is a mere distraction. Indeed, it is a curious position to claim that only monopoly can drive efficient investment and that competition would undermine investment incentives. The Australian Competition Tribunal has recognised that, if access prices are set at an efficient level, this will automatically achieve efficient investment by access providers.
- In this manner, access pricing is the key to unlock the efficiency dividends derived from competition. If access prices are set efficiently, the Australian Competition Tribunal has held that this will maintain incentives for access seekers and access providers to efficiently invest, thereby preserving build/buy decisions.
- Declaration will not apply in the existing areas of competitive coverage between the three MNOs, comprising 95.6% of the Australian population. After declaration, the MNOs will continue to race to deploy new mobile technologies in the competitive coverage areas. Declaration will have no impact on such coverage-based competition as a driver of investment.
- In those areas where Telstra holds a coverage monopoly, Telstra has little practical incentive to invest. Telstra's track record of investment in the monopoly areas is not as exemplary as Telstra would have the ACCC believe. We assume that the ACCC will seek further detailed evidence in this regard. As Telstra is not constrained by coverage-based competition in the natural monopoly areas, it follows that competition is not a driver for Telstra to invest in those areas.
- Scrutiny of Telstra's assertions is therefore warranted. The natural monopoly areas are currently predominantly 3G, not 4G, 5 years after Telstra launched 4G in metropolitan areas. Regional investment lags investment in metropolitan Australia. Network quality in regional Australia has been criticised in various public inquiries. Telstra continually claims that it requires subsidies to further invest.
- Pursuant to government regional policies, Telstra has received some \$2 billion in direct and indirect subsidies over the last decade to deploy telecommunications services, predominantly in regional Australia. These subsidies create a "snowball effect". With each incremental subsidy Telstra has extended its coverage monopoly making it even less likely that other MNOs can compete effectively.
- Telstra is [C-I-C] thereby free-riding on Australian taxpayers for Telstra's own commercial gain. Declaration will deliver contiguous coverage and unlock real competition for incremental

subsidies. This will enable other MNOs to invest in regional Australia, finally bringing competitive drivers to incremental investment.

- Even if potentially adverse impacts on investment were identified, the service description (or any Access Determination) can be structured to eliminate any such effects. However, VHA submits that appropriate access pricing is the key to achievement of efficient investment.

5. Declaration of roaming is in the long-term interests of end-users

In conclusion, declaration will promote the long-term interests of end-users of mobile services in Australia, particularly those end-users living in regional Australia:

- Declaration will ensure that Telstra's premium pricing is subject to effective competition by neutralising Telstra's bundling of contestable and non-contestable services. Given the scale of Telstra's price premium, the magnitude of the long-term welfare gains to end-users are most likely in the many billions of dollars.
- Declaration will deliver long-term socio-economic benefits to Australians living in regional communities, to those Australians who either travel to or through regional areas, and even those who do so rarely, but nevertheless value regional coverage.
- Competition will stimulate investment and deliver efficiency dividends. Efficient sharing of infrastructure will occur. Genuine competition for regional mobile subsidies will occur. Access seekers will be able to grow market share to invest. Innovative solutions to deliver mobile services in low density areas of regional Australia will become possible.

Each of these points are addressed in detail in **Part A** of this submission. VHA has also provided detailed answers to each of the ACCC's specific questions in **Part B** of this submission.

By way of supporting evidence, VHA has provided a range of supporting evidence in **Part C** of this submission. VHA has also provided a number of independent expert and economic reports in **Part D** of this submission.

Structure of this submission

VHA's submission comprises four parts:

- **Part A** sets out VHA's submission on the two questions raised by the Discussion Paper, namely;
 - (a) whether differences in geographic coverage between the mobile network operators (**MNOs**) are impacting on competitive and efficient outcomes; and
 - (b) whether declaration of roaming is in the long-term interests of end-users (**LTIE**).
- **Part B** sets out VHA's response to each of the ACCC's 48 specific questions.
- **Part C** contains a range of supporting evidence, including evidence that Telstra is behaving anti-competitively and an analysis of international best practice on roaming.
- **Part D** contains various independent expert reports on key issues arising from the Discussion Paper, as referenced in VHA's response in Part A and Part B.

VHA is happy to meet with the ACCC to discuss any aspect of this submission.

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1. Cause of the coverage difference

The two central questions asked by the ACCC in its Discussion Paper are:

- (a) whether the differences in geographic coverage provided by the three mobile networks are impacting competitive and efficient outcomes in mobile markets; and
- (b) whether declaration of a mobile roaming service would be in the long-term interests of end users (LTIE).

This first section of VHA's submission addresses the first of these two questions.

To answer the first question, this submission identifies why the current difference in geographic coverage exists, namely due to the impact of population density on mobile network economics.

Consistent with the ACCC's conclusions in its Discussion Paper, the differences in geographic coverage can be attributable to the existence of a natural monopoly in regional Australia. This natural monopoly has spillover effects that impede competitive and efficient outcomes in all mobiles markets, but with a particularly strong adverse effect on regional Australia.

This section of the submission identifies the nature and scope of the natural monopoly, then explains the mechanism by which the spillover effects occur.

(a) The natural monopoly problem in regional Australia

Australia has one of the lowest population densities in the world

One of the fundamental challenges faced by all MNOs in the Australian market is the extremely large land mass (7.6 million square kilometres) and low population density (3 people per square kilometre). Australia has one of the lowest population densities of any country in the world. Only a few places such as Antarctica, Greenland, Mongolia, Western Sahara and Namibia have lower population densities.

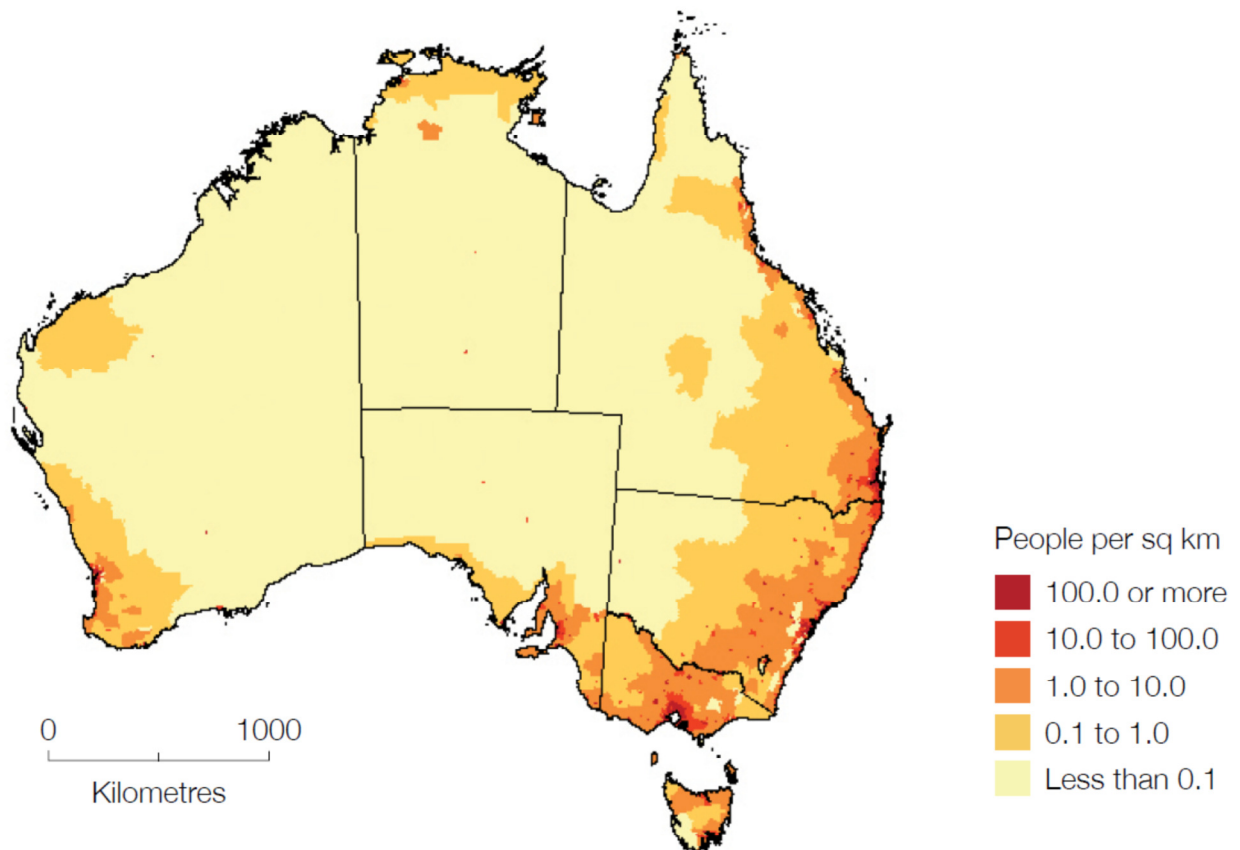
Moreover, the Australian population is concentrated in a few major urban centres. The actual population density in regional Australia can therefore be very low indeed.

No other markets in which Vodafone operates have such adverse geographic characteristics. By way of example:

- Australia has nearly 3 times the geographic area of the next largest Vodafone market, being India. However, while Australia is 2.7 times the size of India, Australia (at 23 million people) has less than 2% of India's population (at 1,252 million people). India has an average population density 133 times the average population density of Australia, and therefore 400 or more times the population density of regional Australia.
- The next most sparsely populated Vodafone market is New Zealand, but New Zealand still has a population density that is some 17 times greater than Australia.

The Regional Telecommunications Review in 2015 (Shiff Review) included the following graphic to illustrate the population density in regional Australia:

Figure 1: Population density – June 2014



Source: ABS, 3218.0 – Regional Population Growth, Australia, 2013–14

These substantial differences have contributed to a structural problem in which the population density required to profitably deploy multiple competing mobile networks in much of regional Australia simply does not exist. Poor mobile network economics exist in Australia to an extent unprecedented in other Vodafone markets around the world.

The following image illustrates just how extreme Australia is by reference to the other 25 markets in which Vodafone operates globally:

Australia has very low population density

Vodafone Australia vs other Vodafone Opcos

Rank	Country	Land Area (sq. Km)	Australia is X times larger	Pop Density / sq. km
1	Malta	316	24,156.9x	1,321
2	Netherlands	33,893	225.2x	407
3	India	2,864,021	2.7x	385
4	United Kingdom	241,930	31.6x	262
5	Germany	348,672	21.9x	226
6	Italy	294,140	26.0x	202
7	Qatar	11,586	658.9x	175
8	Czech Republic	77,247	98.8x	133
9	Hungary	89,608	85.2x	115
10	Portugal	91,470	83.5x	106
11	Romania	229,891	33.2x	103
12	Turkey	769,632	9.9x	101
13	Albania	27,398	278.6x	98
14	Spain	498,980	15.3x	93
15	Egypt	995,450	7.7x	88
16	Ghana	227,533	33.5x	84
17	Greece	130,647	58.4x	84
18	Kenya	569,140	13.4x	78
19	Lesotho	30,355	251.5x	68
20	Ireland	68,883	110.8x	65
21	Tanzania	885,800	8.6x	51
22	South Africa	1,214,470	6.3x	43
23	Democratic Republic of the Congo	2,267,048	3.4x	30
24	Mozambique	786,380	9.7x	30
25	New Zealand	262,443	29.1x	17
26	Australia	7,633,565		3

- Providing a good network performance across such a huge landmass poses a challenge
- Distance is also a key factor. For e.g. The distance across Australia is > 3,500 km



Commercial in confidence

Low population density impacts on the economics of mobile network build

In metropolitan areas, the size of the market within a given geographic area is sufficiently large to support several competing mobile networks. Each of these can achieve the minimum efficient scale. For this reason, we see these metropolitan areas characterised by infrastructure-based and facilities-based competition between competing mobile networks.

However, in many regional areas the low population density and large distances mean that the size of the market is not large enough to support more than one competing mobile network. In these areas, with increasing returns available, it is not possible for more than one mobile network to operate at minimum efficient scale. For this reason, we see many regional areas of Australia characterised by

supply at minimum efficient scale by one supplier (usually Telstra), and other networks at sub-scale or no supply.

Beyond metropolitan Australia, the economics of mobile network build in Australia are particularly challenging. In many areas of Australia, mobile network build is simply uneconomic for the level of population density. Significant government subsidies have been provided to encourage investment.

The following table illustrates the relative coverage of the different mobile networks relative to population coverage and geographic coverage:⁵

Competitors	Incremental Area (km²)	% of Coverage Area	Incremental Population	% of Population
VHA, Optus and Telstra	606,394	25%	22,853,639	95.6%
Optus and Telstra (duopoly)	381,536	16%	617,402	2.6%
Telstra (monopoly)	1,426,476	59%	247,948	1%
Totals	2,414,406	100%	23,718,989	99.2%

As evidenced by the table, Telstra has monopoly coverage over some 60% of the total mobile coverage area in Australia. Moreover, this coverage area provides coverage to some 250,000 incremental mobile consumers (although the number of consumers affected is vastly higher for the ‘spillover’ reasons identified later in this submission). Accordingly, a low number of consumers are being supported over a very large coverage area, starkly illustrating the issue of population density.

VHA has evidenced the impact of population density on its investment decisions by sharing with the ACCC the way VHA makes its investment decisions in regional Australia. VHA’s investment model and explanatory material has been provided to the ACCC with this submission and are contained in Part B

⁵ Note that Optus and Vodafone may have some unique coverage. For the purpose of this table, this coverage has not been included as it is relatively trivial. The coverage is based on all of 2G, 3G and 4G coverage.

of this submission. VHA has also requested Compass Lexecon to audit this investment model in its independent report, as provided in Part D of this submission.

Consistent with international best practice in infrastructure investments, VHA's investment decisions are based on an NPV analysis, involving the discounting of the positive and negative cash flows associated with the investment by a risk-adjusted discount rate. VHA applies this NPV analysis to individual towers, or clusters of towers, depending on the nature of the investment opportunity. If the discounted amount is positive, then it is profitable for VHA to invest.

Compass Lexecon comments in its report:⁶

"The technique used is the orthodox technique of analyzing future cash flows as appropriately discounted by a risk-adjusted discount rate. This technique analyses investment costs and the future cash flows arising from these investment costs, in order to determine whether or not the investment is economically viable based on the net present value (~~NPV~~) of the investment. This general approach is the most orthodox and most widely used technique to determine whether or not an investment or similar economic decision is viable . I am satisfied that it is appropriate in this context."

"In conclusion, based on the information provided, I am satisfied that the model represents an appropriate examination of the issue of whether or not it would be economically viable for VHA to construct the infrastructure required to duplicate Telstra's mobile telecommunications services in the Representative Areas."

The NPV of an investment is a function of certain key determining variables, namely population density, estimated market share over time, geographic location (and hence transmission backhaul costs), and tower rent (or build) costs. VHA's modelling demonstrates the sensitivity and relative importance of each of these factors.

[C-I-C]

- **Revenues** - In the Telstra monopoly areas, the population density is very low. VHA's ability to gain a sufficient market share over time is impeded by customer inertia and network effects, meaning it has limited scope to achieve a revenue base sufficient to justify investment in a new mobile tower. VHA's market share declines to zero in much of regional Australia, whereas Telstra's market share increases to 100%.

⁶ Dr Derek Ritzmann, *Domestic Mobile Roaming Declaration Inquiry Expert Report*, 25 November 2016, pages 9 and 10.

- **Costs** - VHA faces high co-location (tower rental) costs from Telstra that are comparable to tower build costs. VHA also faces very high backhaul costs (even following the ACCC Final Access Determination in relation to the DTCS in April 2016), noting these comprise a high proportion of costs. Economies of scope and scale mean that VHA's cost structure is higher than Telstra's.
- **Subsidies** - Telstra has also benefited from subsidies, including significant direct and indirect government subsidies. However, there are also implicit cross-subsidies arising from Telstra's ability to utilise backhaul transmission and other assets such as regional exchanges from its existing fixed network deployment at close to zero incremental cost. Much of such infrastructure was itself subsidised by historic USO funding, comprising natural monopoly infrastructure in the fixed network.

In essence, this means that it is simply not economic for VHA to deploy mobile network infrastructure to get even close to, let alone to match, the same geographic extent as Telstra. In essentially all the Telstra monopoly area, it is NPV negative (and often very substantially NPV negative indeed) for VHA to invest. Moreover, VHA faces similar economics in much of the duopoly area.

VHA further note that its analysis is likely to be conservative for many reasons, and does not take into account any potential competitive response from Telstra or Optus. In those areas where VHA has invested, local competition has intensified. As identified in this submission, retail mobile competition does have an important localised dimension in Australia.

Telstra's natural monopoly is a policy concern, not a legitimate cost advantage

VHA's analysis is confirmed by the comments of the Regional Telecommunications Review in 2008 (Glasson Review), which commented (at page 128):

"The cost of extending coverage of the network includes the cost of the tower, power, access roads, radio transmission equipment and 'backhaul' connection to the network. There are also other works that can have a substantial impact on the costs of building additional mobile telephone infrastructure, such as access to electrical power and road access to sites. In particular, the Committee notes that new roadwork presents opportunities to provide civil engineering works to reduce the cost of mobile network extension.

A commercial decision whether to make the investment necessary to extend coverage will require an assessment of whether the additional revenues received as a consequence of the investment will cover the costs. However, for additional terrestrial mobile phone base stations, the likelihood that revenues will be sufficient to cover costs is small. This is because for each additional base station installed there will be fewer additional people within that base

station's footprint able to make calls who could not do so before. The cost of additional base stations is also high because of the need to provide adequate backhaul."

Telstra may say in response to VHA that their ability to invest is a legitimate result of Telstra's lower cost structure. If this were the case, we would expect to see more of a patchwork quilt of coverage where some MNOs had captured the first mover advantage in some areas, but not others. In such circumstances, there would be real commercial incentives for the MNOs to enter reciprocal roaming arrangements to mutually improve their coverage.

In some of the countries that have decided not to mandate domestic roaming, such investment symmetry has occurred and regulatory intervention has not been necessary or appropriate. However, this result is not the case in regional Australia. Investment in regional Australia has been highly asymmetric.

The substantial asymmetry between the MNOs is further illustrated by comments in the Regional Telecommunications Review in 2014. The Report of the independent committee commented (at page 2):

"Telstra has mobile equipment on about 9,600 sites, Optus on 7,400 and Vodafone on 6,700. Telstra owns about two thirds of its sites and has a 48 per cent share of the mobile tower market, compared to Optus' 11 per cent and Vodafone's three per cent. Telstra also has the largest backhaul network in Australia and in many parts of regional Australia, is the only carrier with infrastructure. Accordingly, in many parts of regional Australia, Telstra is the sole mobile network provider".

The question arises then, is this any cause for policy concern or regulation? Is it appropriate that Telstra has a monopoly over some 60% of the mobile coverage area of Australia? It is appropriate that there is either a monopoly or duopoly over some 75% of the mobile coverage area of Australia?

VHA submits that the answer to this question is that Telstra's overwhelming dominance in regional Australia raises profound policy concerns.

Low population density causes a natural monopoly in regional Australia

The ACCC comments (at page 30 of the Discussion Paper): “...the ACCC generally considers that declaration is likely to promote the LTIE where infrastructure facilities are enduring bottlenecks and exhibit natural monopoly characteristics”. VHA considers that this comment is the key to the current debate. There is a clear market failure deserving of regulatory intervention.

The importance of regulating circumstances of natural monopoly was highlighted by the Productivity Commission in 2001 in its analysis of the application of the declaration criteria in Part XIC for the Telecommunications Competition Review. The Productivity Commission commented (at page 267), for example: “*Unlike Part IIIA, Part XIC does not limit the scope of a competition test in any way. Rather, the existing competition test implies that a sustainable natural monopoly would be declared...*”

The difficulties arising from natural monopoly are extensively documented in the economic literature, as well as much of the policy material underpinning the enactment of Australia’s various access regimes. The concept of natural monopoly has also been the subject of very extensive judicial consideration, even at the High Court of Australia level. Overwhelmingly, this material concludes that regulatory intervention in circumstances of natural monopoly is appropriate and often imperative.

So the question arises, do mobile networks in regional Australia have natural monopoly characteristics such that regulation should be applied?

The ACCC has itself recognised in the Discussion Paper that the deployment of mobile networks in regional Australia has natural monopoly characteristics. VHA agrees with the initial analysis of the ACCC set out in pages 14 to 16 of the ACCC’s Discussion Paper.

In 2014, the Regional Telecommunications Review also independently highlighted the natural monopoly characteristics of mobile telecommunications in regional Australia. The Report of the independent committee commented (at page 4):

“However infrastructure-based competition becomes more difficult in areas where there is insufficient traffic and higher costs. This reflects the natural monopoly character of parts of the telecommunications market, and prompts different policy responses”.

In the case of regional Australia, the natural monopoly (and hence market failure) is caused by the inability of the mobile telecommunications market in much of regional Australia to sustain more than one mobile infrastructure competitor (i.e., the regional market has natural monopoly characteristics). The natural monopoly is exaggerated by certain key features of mobile network economics, including network effects, inertia to churn, and economies of scope, scale and density.

Given the critical importance of this issue to the declaration inquiry, VHA requested leading global economics consultancy Compass Lexecon (via Dr Derek Ritzmann, previously a principal economist at the ACCC) to independently advise on the following questions under the conditions set out for expert witnesses by the Federal Court Rules:

“Is the supply of mobile telecoms services in regional Australia subject to a natural monopoly?

If so:

- (1) what are the salient features (including geographic scope) of this natural monopoly?
- (2) are the natural monopoly areas contestable in the absence of regulation?
- (3) what are the key implications for efficient investment in, and use of, regional mobile infrastructure?”

Compass Lexecon has reached the following independent conclusions:⁷

“I conclude that the supply of mobile telecommunications in regional Australia is likely to be a natural monopoly in those areas with thin populations spread over wide areas. This conclusion is based on my examination of the supply costs and demand profiles for mobile telecommunications services in representative regional areas of Australia. More broadly, there is likely to be a strong general relationship between the economic viability of duplication of those facilities in a geographic area and the population density of that area. This means that, in addition to the natural monopoly areas, there are also areas where the duplication of facilities is theoretically feasible but where infrastructure-based entry is unlikely to be economic (and therefore unlikely to emerge in practice); this is due to the high sunk fixed costs of entry and the requirement to capture large market share for viability which give rise to very high risks of entry. Infrastructure-based competition is unlikely to emerge in these natural monopoly and non-contestable areas.”

“It is my opinion that the natural monopoly areas are not contestable in the absence of regulation. On the information I have, I conclude that these areas are only capable of sustaining one infrastructure-based service provider having essentially the entirety of user demand in those areas, and may need subsidies to sustain even one infrastructure-based supplier. The results of the analysis above lead me to conclude (as already discussed) that

⁷ Dr Derek Ritzmann, *Domestic Mobile Roaming Declaration Inquiry Expert Report*, 25 November 2016, pages 4 and 13.

these areas are natural monopolies that are not likely to be capable of sustaining two or more sets of mobile telecommunications infrastructure.”

The analysis behind these conclusions is set out in the Compass Lexecon report.

In undertaking its analysis, Compass Lexecon has also independently considered whether the economic modelling undertaken by VHA is accurate and makes appropriate assumptions. Compass Lexecon has confirmed that this is indeed the case.

VHA commissioned a report by Frontier Economics in April 2016 titled “*Competition in regional mobile markets*”. The report analyses the financial modelling undertaken by VHA and reaches various conclusions. Frontier Economics conclude:

- “In essence, this means that it is not economic for Vodafone (or any other competitor) to deploy mobile network infrastructure to the same geographic extent as Telstra for all realistic modelling assumptions used by Vodafone.”
- “In conclusion, we find credible evidence of market failure in Australia’s mobile markets in the Telstra-only mobile network areas. This market failure is caused by the inability of the mobile telecoms market in these areas to sustain more than one mobile infrastructure competitor. These regional markets have natural monopoly characteristics, or, at the least, it is uneconomic for competitors to duplicate infrastructure in these areas.”

In summary, the natural monopoly characteristics of mobile network investment in regional Australia mean that it is not economic for more than one mobile network to exist in much (if not all) of the Telstra mobile monopoly area, notwithstanding the cost benefits derived from tower sharing and co-location.

Any investment by a competitor of Telstra in the natural monopoly areas would be inherently NPV negative, so would be loss making and would not pass global norms for prudent investment. Any such investment would also be economically inefficient and wasteful.

This means that Telstra’s historic arguments that VHA should ‘just invest’ or that VHA is ‘free riding’ are patently absurd. VHA cannot economically deploy a mobile network over an additional coverage area of 1.8 million square kilometers (increasing VHA’s current coverage by a factor of four). This is particularly the case in areas where the demographics can only economically support one or two mobile networks - and those one or two networks already exist.

Simply put, Telstra’s natural monopoly is not contestable.

Natural monopoly is a source of market failure deserving of regulation

As the ACCC recognises in its Discussion Paper, a ‘natural monopoly’ is a well-recognised instance of market failure. The problems with ‘natural monopoly’ are documented extensively in the economic literature and provide the foundation for Australia’s approach to access regulation. In the 2016 book *Access Regulation in Australia*, the authors comment, for example (at page 22):

“Given the cost structure relative to the total market demand, economists consider it to be more economically efficient to permit a natural monopolist to supply an entire market and then subject the firm to access regulation, as opposed to seeking to facilitate a market structure in which several smaller firms compete in the relevant market [Ref: Baumol & Blinder, 2009].

Where a natural monopoly exists, effective competition will not be possible. This is because any new entrant will face higher average costs than the incumbent monopolist and will therefore be unable to compete effectively. It is for this reason that natural monopolies are often subject to access regulation. The primary economic objective of access regulation of natural monopolies is to mimic the price and service outcomes that would occur in a workably competitive market. In other words, access regulation is designed to procure workably competitive market outcomes where competition is not possible”.

VHA agrees with these comments. However, this is not a scenario where the natural monopoly encompasses the entire market. Rather, the natural monopoly affects only a part of the market. The part of the market is very large by geographic area, with a comparatively small number of people living within it. As identified later in this submission, this has implications for the appropriate scope of the regulatory solution, meaning regulation should not be applied across the whole market, but confined to the regional areas of Australia.

As the ACCC will be aware, the concept of ‘natural monopoly’ has been the subject of extensive litigation in Australia in the context of the application of the Part IIIA access regime in the Act. The concept has also been given detailed recent consideration by the Productivity Commission and by the government itself, leading to the current proposed reforms to Part IIIA. The upshot of this analysis is that natural monopolies give rise to a market failure as they cause significant harm to the competitive process and to investment, as well as the long-term interests of consumers. The ACCC will already be aware of this extensive literature and hence it is not repeated here.

Vertical integration of the natural monopoly emphasises the need for access regulation

The ACCC’s reference to an ‘enduring bottleneck’ in the Discussion Paper, recognises the real risks created where a natural monopoly is vertically-integrated. As the ACCC identified in its Discussion

Paper, 'upstream' wholesale access to the Telstra mobile network in the monopoly areas is essential for the existence of 'downstream' retail competition.

In such circumstances, a vertically-integrated firm, such as Telstra, will have every incentive to raise barriers for new entry by raising the price of, or even denying access to, wholesale services to impede its competitors from competing in downstream retail markets. Simply put, any supply by Telstra at wholesale is likely to have a detrimental impact on Telstra's retail revenues given the commensurate increase in retail competition that would occur. In such circumstances, Telstra's retail business would be sheltered from competition and would generate higher margins than would otherwise be expected to occur.

As the Australian Competition Tribunal commented in *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010)(at paragraph 8.3):

"A firm operating as a natural monopoly is, in one sense, efficient. It can supply market demand at a lower cost than two or more firms could. But when there is no competition, there can, and usually will, be market failure.

Firms with natural monopoly characteristics often exhibit poor economic performance: i.e. there can be market failure. We accept that in some markets a firm with natural monopoly characteristics will not have much market power. Another supplier may emerge and, at least for a time, trade profitably. At the other end of the scale, a firm with natural monopoly characteristics can, and often does, set prices above marginal cost.

Another instance of market failure in the case of industries characterised by a natural monopoly is the likelihood of strategic behaviour by the monopolist to deter entry and to protect its monopoly position. This may entail building excess capacity and other spending of resources in socially wasteful ways.

Although a natural monopoly involves a production condition that it is less costly to produce output via a single firm, a monopolist may not have the incentive to keep production costs down: i.e. it may not produce efficiently. There is also the possibility that a monopolist firm will not, as would occur in a competitive market, adopt innovations in production and product. That is, a monopolist is not so much concerned with quality, the adoption of innovations, and investment in research and development as would be a firm facing rivalry from other firms.

This brings us to the "essential facility" problem. The problem arises when a firm is vertically integrated: i.e. where the firm occupies successive levels in the supply chain that leads from raw materials to the final consumer. Indeed, within boundaries which are constantly shifting due to technological change, many firms produce for their own account goods and services that could be acquired from other firms. The negotiating and administering of contracts by

which a firm can acquire inputs involves costs. It may be more efficient (i.e. less costly) for a firm to produce some or all its inputs.

Sometimes technological interdependence implies that vertical integration is more efficient than if two different firms were involved in the production of the relevant product. But it need not be interdependence that results in efficiency; it can arise simply from the limitations on, and the costs of, dealing with a second firm.

Although vertical integration brings about efficiencies, it has great potential for adverse effects on competition and therefore on the allocation of resources. There is no doubt that vertical integration can create or raise barriers to entry. Either forward or backward (downstream or upstream) integration by all incumbent firms will require potential competitors to enter two stages of the supply chain simultaneously if the incumbents will not supply new entrants with product at one stage of the process. This increases the capital necessary for entry and the managerial skills required to operate efficiently. The capital input is particularly significant if it would be sunk (irretrievable) if entry fails. Forward (downstream) integration can facilitate the raising of price above marginal cost. Of course, this would not happen if the downstream industry were competitive.

An extreme case of market dominance exists where the vertically integrated firm is a network industry or a natural monopoly (e.g. controls a facility which has natural monopoly characteristics). Assume that access to the facility is necessary to compete in a dependent (upstream or downstream) market. It is these facilities which are referred to as essential facilities. Where a vertically integrated monopolist controls the essential facility, vertical integration will not be social welfare enhancing. This is because the rational profit-maximising firm will take full advantage of all output-restricting and profit-enhancing opportunities in forward or backward markets. At the extreme, management may withhold supply of the good or service produced by the essential facility. “

VHA submits that this is precisely what is happening in the present circumstances. Specifically:

- Telstra’s monopoly is structural, arising from the ‘natural monopoly’ characteristics of mobile networks in areas of low population density. Telstra’s monopoly has been reinforced over many years by direct and indirect government subsidies, cross-subsidies and network effects. The economics of these areas mean that it is simply not economic for a rival MNO, such as VHA, to invest.
- [C-I-C] As VHA demonstrates in Part C of the submission, Telstra is acting in contravention of both section 46 and section 151AJ(2) of the Act .

- More specifically, Telstra can profitably supply roaming services at wholesale and already does so in other contexts including offering international roaming to end users in Australia from mobile operators in other countries. If Telstra were a stand-alone wholesale business, then roaming would be supplied.
- However, by supplying roaming at wholesale, Telstra would be removing a structural barrier which currently prevents its retail competitors from competing effectively with Telstra at retail. More specifically, those retail competitors would have access to the same natural monopoly coverage as Telstra and hence could match Telstra's geographic coverage to compete.
- Telstra is therefore denying access to a wholesale service (being a service that would overcome the natural monopoly) to prevent its competitors from competing at retail.

While VHA has not focused on the wider implications of natural monopolies for the purposes of this submission, VHA does submit that many of the problems that one expects with natural monopolies appear to be exhibited by Telstra's mobile network in regional Australia. For example:

- Notwithstanding Telstra's assertions that it has invested substantially in mobile networks in regional Australia, the reality is that investment into regional Australia has lagged investment into metropolitan Australia.
- In the 40% of the mobile coverage area that is subject to some degree of mobile network competition, Telstra has deployed 4G services.⁸ However, such services have apparently not yet been deployed into the areas of Australia within the Telstra monopoly areas.⁹
- Telstra's announcement that it would invest in 4G the Telstra monopoly areas occurred only once this declaration inquiry was announced. Telstra has sought to use this as leverage against declaration by suggesting it would not undertake this 4G investment if declaration occurred. (However, VHA assumes that the superior economics of 4G coverage are most likely the key driver for this investment, so it would actually occur regardless)

VHA does not have access to evidence to determine the extent to which investment by Telstra in the 60% of its mobile coverage area that is not contestable, is matched to the investment by Telstra in the 40% of its coverage areas that is contestable. Based on VHA's observations, there is a marked disparity of technology and quality. The ACCC may wish to further investigate these issues.

⁸ Telstra publically claims its 4G network currently reaches 98% of the population. Optus publically claims its mobile network reaches 98.5% of the population.

⁹ VHA has been unable to independently verify the precise extent of this investment in the time frame given by the ACCC to respond to this current inquiry. The ACCC will likely have better information than VHA on this issue.

(b) Spillover effects exacerbate the natural monopoly problem

The natural monopoly affects competition in a much broader geographic area

Telstra may argue that the Telstra monopoly area only affects 250,000 mobile end-users, hence roughly 1% of the population, so the issue identified above is not economically significant. However, there is an additional and important nuance to the analysis of natural monopoly in the mobile network context. Consumers of mobile services will also value coverage in areas where they do not reside.

In the case of mobile networks, the geographic area affected by natural monopoly is not confined to the area of the natural monopoly itself. Rather, the competitive effect is broad and affects competition throughout the Australian mobiles market. The broader spillover effect of the natural monopoly has the potential to affect all mobile subscribers in Australia that attribute a value to coverage, as identified below. Most mobile consumers attribute a value to coverage.

VHA refers to these broader effects in this submission as 'spillover effects'. These spillover effects exacerbate and dramatically magnify the natural monopoly problem.

VHA considers that some of the key transmission mechanisms for the spillover effect are as follows:

- First, regional consumers are exposed to the impact of the natural monopoly over the course of each year in those circumstances where they may travel within regional Australia, including between regional centres. As such, they inherently prefer the MNO controlling the natural monopoly. This issue is discussed further below.
- Second, the impact of coverage on consumers has been emphasised and overstated by Telstra in its advertising in the context of its 'coverage claim'. Telstra has sought to leverage its natural monopoly by pointing out that it is the only MNO able to provide coverage in the Telstra monopoly areas, even though such areas only directly affect 1% of the population. This emphasis on coverage has then become part of Telstra's overall strategy of retail network differentiation and an ingrained feature of consumer choice.
- Third, because coverage has become part of Telstra's overall strategy of network differentiation (and has assumed a disproportionate importance in consumers' minds because of a decade of intense advertising), the spillover effect associated with the natural monopoly has permeated throughout the mobile market in Australia. This means, for example, that a metropolitan consumer may value the Telstra network because of its natural monopoly in coverage in regional Australia, even though that metropolitan consumer may never travel into the natural monopoly area at any point in their lifetime.

- Fourth, Telstra has bundled its natural monopoly coverage (and its monopoly coverage more generally) with its contestable coverage. At the same time, Telstra has denied other MNOs from accessing the natural monopoly coverage. In this manner, Telstra has retained exclusivity in coverage in circumstances where it is not economically possible for any competitor to replicate that coverage. Telstra has then marketed that exclusivity to subscribers.

VHA has not had sufficient time in the period given for VHA to respond to the ACCC's discussion paper to undertake an exhaustive economic analysis of all transmission mechanisms for the spillover effect. VHA assumes that further transmission mechanisms may exist, including potential bundling of handsets, service plans, fixed services and the full range of other Telstra services. Such effects will further exacerbate the concerns identified above

In practical effect, Telstra's mobile coverage gives it monopoly power over some 60% of the mobile coverage area in regional Australia. Telstra can then use that market power to dominate the broader supply of mobile services in regional Australia.

VHA agrees with the proposition that a MNO should be able to differentiate itself based on non-price factors, including speed, quality of coverage, and depth of coverage. Vodafone itself has relied on such competitive differentiation to compete in other markets. VHA assumes that Telstra will highlight this fact in its submission.

However, VHA does not agree that a MNO should be able to capture a natural monopoly, [C-I-C], then bundle that exclusive natural monopoly with its retail offering in such a way that no other MNO can compete. Such an approach means that competition based on coverage is ineffective because it is tainted by natural monopoly. In Australia, coverage-based differentiation has ironically become a mechanism for the exercise of market power.

To be clear, competition based on coverage is a normal and legitimate type of non-price competition in markets around the world. However, competition based on coverage where such coverage bundles a natural monopoly is not a legitimate type of competitive differentiation and is the antithesis of competition.

Economic analysis of the spillover effect

Given the critical importance of spillover issues to the declaration inquiry, VHA requested leading global economics consultancy Compass Lexecon (via Dr Derek Ritzmann, previously a principal economist at the ACCC) to independently advise on the following questions under the conditions set out for expert witnesses by the Federal Court Rules:

“If a natural monopoly exists in areas of regional Australia, what impact (if any) is that natural monopoly having on the supply of mobile services in Australia outside the natural monopoly areas?”

To the extent any impact arises:

- (1) what is the nature of that impact and the causal mechanism by which that impact arises?**
- (2) how is that impact affected by the existence of a uniform national price?**
- (3) what are the long-term welfare implications for end-users?”**

Compass Lexecon has reached the following independent conclusions:¹⁰

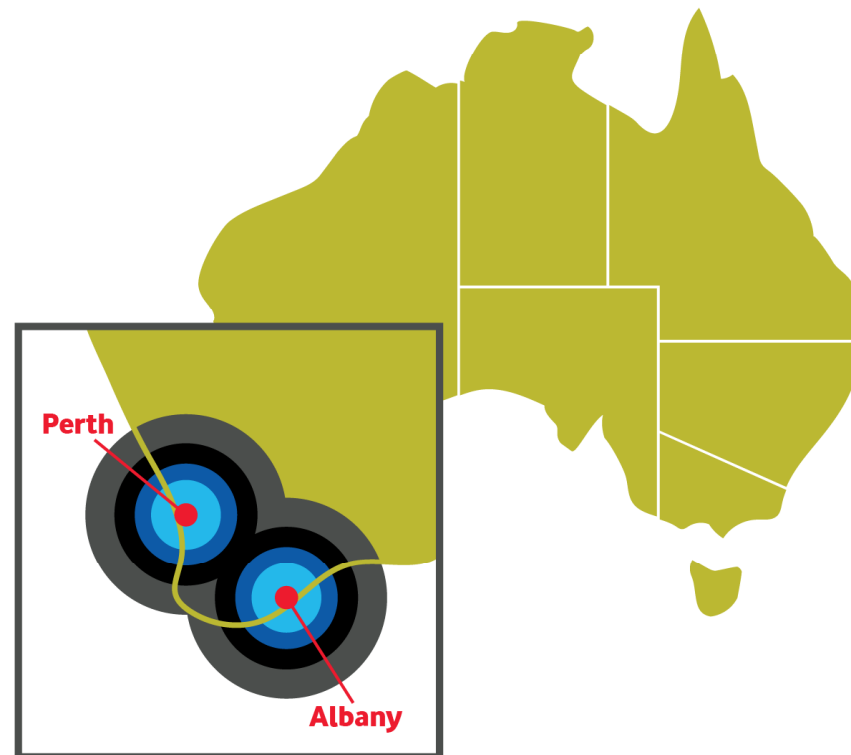
“Moreover, there are likely to be competition spillover effects from the natural monopoly and non-contestable areas into the potentially competitive, genuinely contestable areas. Customers who require regional coverage must choose a provider who can supply coverage in the entire “bundle” of regions. The consequent horizontal bundling or tying effect helps Telstra to leverage its market power from the natural monopoly and non-contestable areas into the contestable areas. This bundling mechanism for leveraging of market power, well recognized in the literature, softens competition in the contestable areas, including likely in urban areas. Telstra’s uniform national price acts as a transmission mechanism to exacerbate this effect. An enhancement of competition in the natural monopoly areas would therefore also likely enhance competition in the competitive areas.”

The analysis behind these conclusions is set out in the Compass Lexecon report.

¹⁰ Dr Derek Ritzmann, *Domestic Mobile Roaming Declaration Inquiry Expert Report*, 25 November 2016, page 4.

Conceptual representation of the coverage issue

-  **Competitive areas**, where there are currently three competing mobile networks with coverage, namely Telstra, Optus and VHA.
-  **Duopoly areas**, where there are currently only two competing mobile networks with coverage, normally Telstra and Optus.
-  **Contestable monopoly areas**, where there is only one mobile network with coverage, but it would be theoretically possible to have more than one competing network if a market entrant could gain a sufficiently high level of market share to enable competitive build. This area is almost always Telstra only.
-  **Natural monopoly areas**, where it is not economically viable for there to be more than one mobile network. This area is almost exclusively Telstra only.
-  **Subsidised areas**, where it is not economically viable for there to be any mobile networks and mobile coverage has been achieved only with the benefit of government subsidies. This area is almost exclusively Telstra only.



Coverage as a spillover mechanism, reinforced by network effects and inertia to churn

As identified above, VHA considers that the way 'coverage' has been viewed by consumers and marketed by Telstra has resulted in coverage becoming one of the most important transmission mechanisms for the spillover effect.

Regional consumers are exposed to the impact of the natural monopoly over the course of each year in those circumstances where they may travel within regional Australia, including between regional centres. As such, they inherently prefer the MNO controlling the natural monopoly, namely Telstra.

In the Regional Telecommunications Review in 2014, for example, the Report of the independent committee commented (at page 13):

“For example, users in regional areas are more likely to... travel long distances and spend extended periods of time outdoors, relying on mobile services for communication and safety”

The coverage issue has been conceptually depicted in the diagram above (noting the precise areas are indicative for the purposes of illustration only).

As demonstrated in this diagram, Australian mobile coverage comprises:

- **competitive areas**, where there are currently three competing mobile networks with coverage (red), namely Telstra, Optus and VHA;
- **duopoly areas**, where there are currently only two competing mobile networks with coverage (light blue), normally Telstra and Optus; and
- **monopoly areas**, where there is currently one mobile network with coverage (dark blue, black and grey), normally only Telstra.

The table earlier in this submission identified the coverage areas and population of each of these areas. This coverage and population was based predominantly on current 3G coverage. As yet, the 4G footprint in Australia is not co-extensive with the level of 3G coverage and (as far as VHA is aware), 4G services are not provided in the monopoly areas.

The monopoly areas further comprise:

- **contestable monopoly areas** (dark blue), where there is only one mobile network with coverage, but it would be theoretically possible to have more than one competing network if a market entrant could gain a sufficiently high level of market share to enable competitive build; and
- **natural monopoly areas** (black and grey), where it is not economically viable for there to be more than one mobile network.

VHA has not been able to estimate the relative size of the natural monopoly area for the purposes of this submission, but VHA assumes that the ACCC would be able to make information requests of the MNOs sufficient to identify this area. VHA assumes that the natural monopoly area would comprise a very large proportion of the Telstra monopoly area.

The natural monopoly areas further comprise:

- **non-subsidised areas** (black), where mobile coverage has been achieved in the natural monopoly coverage area without any government subsidy; and
- **subsidised areas** (grey), where mobile coverage has been achieved in the natural monopoly coverage area with the benefit of a legacy or current government subsidy.

VHA has not been able to estimate the relative size of the subsidised area for the purposes of this submission, but VHA assumes that the ACCC would be able to make information requests of the MNOs sufficient to identify this area. VHA assumes that the subsidised area would comprise a very large proportion of the natural monopoly area.

Compass Lexecon reached a similar independent conclusion in its analysis of the various zones of competition in the Australian mobiles market. A more detailed analysis of the salient economic characteristics of these zones can be found in section 3.2 of the Compass Lexecon report.

Hypothetically, in the diagram above, one can assume there are two ‘islands’ of high population density, namely Perth and Albany in this diagram. During the year, the mobile consumer may travel between those two islands. In doing so, the regional consumer will pass from the competitive area, into the duopoly areas, then into the Telstra monopoly area. If that regional consumer is a VHA or Optus customer, their coverage will drop out for the period they were in the monopoly area. The coverage inconvenience (whether actual or perceived) would normally be sufficient for that consumer to prefer Telstra.

Moreover, even though the consumer may spend 95% of their time in the competitive area, the mere existence of the possibility that they may travel into the Telstra monopoly area will lead a substantial proportion of consumers to prefer Telstra or presume that they have no choice but to choose Telstra.

In regional Australia, access to mobile communications may also have an important ‘safety’ component, so be regarded as critical by regional consumers to a far greater extent than is the case in metropolitan Australia. An absence of coverage may even be perceived as potentially life threatening in some low population density areas even though any handset of Optus and VHA has the capability to make a ‘000’ call on Telstra’s network as it already ‘roams’ for the purposes of emergency calls.

In turn, this means that the natural monopoly issue has the potential to have a dramatic disproportionate impact on competition in regional areas. The nature of the ‘islands’ of coverage and the potential adverse impact of coverage on regional consumers can be identified from a comparison

of the network coverage areas of the different networks in various areas of Australia. The precise coverage maps are treated as commercially sensitive by each of the carriers, but high level coverage maps can be located on the websites of each of the carriers. VHA has provided some examples to the ACCC as part of its evidence in Part C of this submission.

Advertising has reinforced and exaggerated the impact of coverage

The question arises as to the magnitude of the spillover effect. Just how important is coverage to mobile consumers in Australia?

[C-I-C]

As discussed below, coverage is generally regarded as important by consumers in metropolitan Australia and critical by consumers in regional Australia. VHA has also provided further evidence of this in VHA's response to the ACCC's questions in **Part B** of this submission.

Telstra's focus on advertising its coverage claim is not efficient given that it is tainted by natural monopoly. Moreover, the overstatement of the effect of this coverage has been highlighted previously in independent reports as a cause for policy concern. In effect, customers are being misinformed as to the extent of coverage and the utility of that coverage to them.

The Regional Telecommunications Review in 2008 (**Glasson Review**) commented, for example (at page 127):

"This is clearly apparent with providers' marketing messages seeking to win custom by giving the impression that their mobile networks provide extensive coverage. While consumers generally understand that terrestrial mobile coverage is not in fact 'everywhere', the impression given is that coverage is far more extensive than it really is."

At page 139, the independent report also commented:

"In the Committee's view, use of population coverage in publicity material is fuelling consumer expectations that terrestrial mobile phone coverage is much more extensive than it actually is. This has resulted in serious disappointment with coverage performance, particularly in regional Australia. In our opinion basing references to coverage on populations, and/or on the use of an external antenna, leads consumers to believe that coverage, and hand-held terrestrial mobile phone coverage are more extensive than it is.

The Committee has received legal advice from the Department of Broadband, Communications and the Digital Economy, that the Committee is entitled to consider and make findings about the accuracy and completeness of information provided to consumers about mobile phone coverage, but that it should not conclude that a breach of the law may

have occurred. The Committee makes no finding or suggestion of a breach of the law in respect of this matter.

The Committee notes that the Trade Practices Act 1974 prohibits corporations in trade and commerce engaging in misleading conduct, and that the Australian Competition and Consumer Commission is responsible for enforcing this legislation.”

The OECD also commented in its report *Wireless Market Structures and Network Sharing* in January 2015:

“The Australian Government’s 2011-2012 Regional Telecommunications Review identified a lack of adequate mobile voice and broadband coverage as the issue of greatest concern to regional communities. It found that while population coverage was claimed to be 99%, there were large areas without coverage or with inadequate service, as well as persistent ‘black spots’. It also found that many areas were only served by a single MNO.”

There are many examples where Telstra has sought to blur the distinction between the impact of coverage and other features of non-price competition, including in claims that Telstra has the ‘best’ network and ‘most reliable’ network. Telstra designs these advertisements so that they are not misleading consumers in contravention of Telstra’s legal obligations, but they certainly overstate and obfuscate the underlying issues in a manner that comes very close to doing so.

VHA has provided in **Part B** of this submission and in response to the ACCC’s questions more detail of the extent to which Telstra has focussed on coverage as a differentiator of its network, including various examples.

[C-I-C]

Importance of coverage to regional consumers

As identified by the Regional Telecommunications Review in 2014, mobile services are regarded as more important to Australians living in regional areas than to Australians living in metropolitan areas. The report of the independent committee comments (at page 13):

“It is noteworthy that regional Australia is trending towards becoming mobile centric. In general, consumers are increasingly choosing mobile services as their primary means of communications... A recent survey by the ACMA indicated that there was a higher level of use of mobile technologies in regional Australia than in urban areas...The proportion of exclusively mobile users in regional areas is 50 per cent higher than in capital cities...”

And at page 26:

“For many remote communities, mobile technologies are the preferred mode of

communication and there is often a preference for pre-paid rather than post-paid billing services.”

As numerous consumer surveys have demonstrated over the years, Australian consumers attribute significant value to geographic mobile coverage when selecting their mobile carrier. As the Regional Telecommunications Review in 2014 highlighted (at page 14):

“It is not surprising then that almost 80 per cent of submissions to the Review commented on the importance of mobile coverage in regional Australia”.

And a key conclusion in the Executive Summary (at page ix) was as follows:

“Submissions to the Review confirmed that the quality and extent of mobile coverage was a major concern of people in regional Australia. Regional Australians have a higher dependency on mobiles than their urban counterparts because of the broader geographic range within which many conduct their working and everyday live”

By way of example, in the 2012 Sinclair Review, a key conclusion is set out in the Executive Summary (at page ix) as follows:

“The predominant concern raised with the committee by regional Australians is the adequacy of mobile voice and broadband services. This issue was raised in every regional consultation and in around two-thirds of the submissions we received. The committee accepts that there are commercial limits to expanding mobile network coverage, but it is equally clear there is strong unmet demand in regional Australia for an expansion of the mobile coverage footprint.

More than ever, people are demanding broadband through mobile devices. Mobile communications are expected to play an increasingly important role in enabling participation in the digital economy. As well, these devices are increasingly used for social engagement and interactions, so mobile coverage is now a key factor in attracting and retaining staff in rural and remote areas, particularly younger workers.”

Indeed, the importance of mobile coverage in rural and regional Australia has been the specific subject of several independent telecommunications service inquiries and independent regional telecommunications inquiries and reviews over the last 15 years, including the Besley Review (2000), Estens Review (2002), Glasson Review (2008), Sinclair Review (2012), and the Shiff Review (2015). A recurrent theme of all these reviews is the importance of coverage in rural and regional Australia.

Importance of mobile coverage is illustrated by Telstra’s conduct

[C-I-C]

In a media article of 28 February 2014, Telstra CEO at the time David Thodey indicated, for example, that “*Telstra plans legal action if the government supports calls by rivals SingTel-Optus and Vodafone Hutchison Australia to open up Telstra’s network in rural and regional areas*”.¹¹

[C-I-C]

An example is provided by legal proceedings commenced by Telstra in February 2014: *Telstra Corporation Ltd v SingTel Optus Pty Ltd* [2014] VSC 35.

In those proceedings, Telstra took legal action against Optus and alleged misleading advertisements relating to Optus mobile coverage. Optus had claimed in the advertisements in question that there was less than 1% difference between the reach of either network, comparing Optus’ own population coverage of 98.5% to Telstra’s 99.3%.

Telstra claimed that the Optus advertisements were “false, misleading and deceptive” given Telstra’s network “reached 2.3 million square kilometres of Australia (28% of the landmass) compared to Optus’ 1 million square kilometres”.

Telstra was quoted as stating that Optus’ claim was: “*plainly false. The difference in geographic coverage is literally many hundreds of thousands of square kilometres. It’s a reality anyone venturing beyond cities or using their phone in back bedrooms and car parks understands.*”¹²

[C-I-C]

Evidence of the market distortions created by Telstra’s monopoly

[C-I-C]

Telstra’s monopoly coverage in regional Australia (and greater geographic coverage overall) therefore confers significant market power on Telstra, particularly in regional and remote areas of Australia. The Glasson Report (2008) commented:

“...in remote areas where there is terrestrial mobile phone coverage, it is more likely that there is only one carrier. This not only means people in these areas are denied choice of supplier, it also means that customers of businesses in these areas are unable to make calls unless they purchase a service from that one carrier...”

[C-I-C]

¹¹ See <http://www.theland.com.au/story/3579418/telstra-could-sue-over-network/>.

¹² See <http://www.itnews.com.au/news/telstra-wins-legal-battle-over-optus-ads-372659>.

Telstra's increasing market dominance is also adversely affecting Optus' and VHA's ability to effectively compete. In the ACCC's March 2015 report, the ACCC commented (at pages 30 and 31):

"For the fourth consecutive year Telstra increased its share of the retail mobile market while VHA's market share fell. Overall, this means that the gap between Telstra and VHA has increased from a 10 per cent difference in June 2010 to a 27 per cent difference in June 2014. Over the same time, Optus' share of the market has also decreased, falling 3 percentage points since June 2012 to 27 per cent in June 2014."

"...gains in the last few years are more likely to have resulted from Telstra's ability to differentiate the quality of services on its mobile network from the other MNOs, which is also reflected in Optus' more recent market share losses. Factors that may have contributed to this include, Telstra being the first of the MNOs to begin providing 4G mobile services and the greater geographic coverage of Telstra's 3G and 4G networks."

VHA has addressed the differences between regional and metropolitan competition, and the evidence of the resulting distortions to competition in the retail mobiles markets, later in this submission in the context of VHA's submission on LTIE.

(c) Natural monopoly is self-perpetuating and unassailable

Government subsidies have compounded Telstra's natural monopoly over time

Telstra has received a disproportionate amount of government funding which has entrenched Telstra's monopoly. In VHA's experience, Australia is unique in terms of the extent of financial support provided to Telstra as incumbent:

- No other market in which Vodafone operates has a history of such significant government subsidies being given to the incumbent mobile operator. This has resulted in vast differences in network coverage between Telstra and its mobile competitors, hence giving Telstra a monopoly over some 60% of the Australian mobiles market by coverage.
- Over the last ten years, some \$2 billion in subsidies have been provided to Telstra to support its mobile network expansion, effectively creating a \$2 billion barrier to entry that has entrenched Telstra's monopoly position in regional and rural areas. This does not include additional USO subsidies, public safety contracts, monopoly fixed line and wholesale (e.g. transmission) rents and other funding flows. The public funding has meant that Telstra has had an unmatched financial ability to extend its coverage beyond that of any other operators.
- VHA has provided further information on the disproportionate funding of Telstra's network in its response to ACCC Q1 in **Part B** of this submission.

- In other countries, VHA has not seen public subsidies on this scale being given to an incumbent in circumstances where the incumbent has had the ability to capture the exclusive benefits of those subsidies. Those subsidies have then been used to compete against non-government funded operators – in effect to deny consumers the very benefits of infrastructure deployment that the public funding sought to address.

As VHA has identified in its response to ACCC Q1, the government subsidies are generally only offered for those sites that offer contiguous coverage with Telstra's existing network. The sites are generally not contiguous with VHA's and Optus' existing mobile networks. As such, the funding is only of practical utility to Telstra. This means that, over time, Telstra has received the vast bulk of the subsidies. In turn, this has further extended Telstra's coverage and entrenched its monopoly position. As such, government funding has disproportionately benefited Telstra and, over time, has entrenched and extended Telstra's regional network monopoly.

A complete solution to this issue would be for Telstra to offer roaming in those areas where it has a network monopoly. In doing so, VHA and Optus would achieve coverage that was contiguous with the subsidised sites. It would then be rational for VHA and Optus to tender for the government subsidies as they would have contiguous coverage to the subsidised sites.

However, as identified in VHA's response to ACCC Q1, [C-I-C] Telstra to capture the bulk of the government subsidies, therefore further reinforcing, extending and perpetuating its market power. By denying the supply of roaming, Telstra is impeding third party MNO competition for government subsidies, hence Telstra can then act as the monopsonist recipient for most of those subsidies. Telstra has therefore captured the bulk of all government subsidies for itself and on highly favourable terms.

[C-I-C]

VHA considers that there has been a significant policy failure in regional Australia for the last decade, ultimately delivering very poor competitive outcomes indeed to consumers to regional Australia. Each independent government inquiry report has recommended that action is taken, but ironically this has resulted in yet further subsidies being provided to Telstra, further exacerbating the problem.

Over time, the continuing flow of subsidies to Telstra has fuelled a vicious cycle. Each incremental subsidy to Telstra extends the natural monopoly area, maximising the prospect of Telstra keeping future subsidies for itself. Telstra then denies access to the subsidised infrastructure, ensuring it alone can bid for further subsidies. This vicious cycle can only be broken by the declaration of roaming.

Telstra's position is unassailable as it will have a continual first mover advantage

Telstra's advantage stems from a history of government ownership and investment in assets that were non-commercial and has included large cross-subsidies from urban to regional areas. Telstra inherited

an extensive taxpayer-funded core and transmission network. Since its privatisation, it has also received substantial direct subsidies for its mobile network, subsidies from NBN payments and ongoing subsidies through the Universal Service Obligation (USO).

The USO subsidies have had a particularly pernicious effect on competition. A large portion of the funding for the USO is raised through a levy on Telstra's competitors – that is, Telstra's competitors are taxed, enabling Telstra to socialise the cost of its infrastructure while privatising the “supernormal” benefits it reaps from that infrastructure.

Subsidies aside, the consequences of Telstra's first mover advantage are also profound:

- Telstra has captured economies of scale, scope and density in its mobile networks in rural and regional areas to a greater degree than competitors.
- Governments have reinforced this initial dominance by awarding funding to Telstra to further extend and deepen its network coverage.

Telstra's ability to raise the price of upstream inputs and therefore create barriers to entry for competitors (for example through high regional transmission pricing) have further exacerbated these dynamics. Regulation has been largely ineffective in addressing the advantages of Telstra in either its transmission networks, or through enforcing policies to extinguish or mitigate coverage advantages.

While the ACCC has now reduced the default price of regional transmission by up to 78 per cent, its decision demonstrates that Telstra's competitors were paying five times the fair price for transmission services. Telstra's historic pricing has foreclosed competition in areas where it otherwise might occur and, in places where competitors did take a service, effectively further subsidising Telstra's regional mobile network investment. This has occurred for some two decades.

Telstra's strong position in regional mobile markets gives it a material cost advantage. However, a question for the ACCC is whether such advantages could be reduced over time in the absence of any intervention? Could changes in technology, for example, impose a constraint on Telstra's market power? In VHA's view, this is highly unlikely. Telstra's first mover advantages will mitigate against self-correction, and will in fact reinforce Telstra's dominance.

This factor can be illustrated with an example. Consider an area with a very low population density and limited non-Telstra infrastructure in place. If there is a desire to extend existing mobile coverage within this area, Telstra's existing infrastructure means that it will have an overwhelming cost advantage in doing so. Competitors must incur substantial sunk costs to extend their networks to the edge of Telstra's existing network, whereas Telstra has already incurred (or been subsidised for) these sunk costs. That is, the incremental costs of Telstra extending its network will be far less than competitors

because competitors have limited capacity for sharing their existing infrastructure with their new infrastructure.

Further, we note that this advantage holds even if the state or federal governments contribute funding to network extension, and insist on competitive tendering for the extension. The scale and scope advantages of Telstra resulting from being the first mover means that it has a very strong prospect of winning these tenders.

The competition policy concern is that, over time, the current situation may continue to worsen as Telstra leverages its pre-existing market coverage, market share and market premium to continue to reinforce its market dominance in regional Australia. There is ample evidence that this has occurred over the last decade. The market failure may well have reached a tipping point and become self-reinforcing. Future technological developments and release of spectrum may help in theory, but in practice appear equally likely to reinforce dominance as undermine it.

In conclusion, there is unequivocal evidence of market failure in Australia's mobile markets in the Telstra-only mobile network areas. This market failure is caused by the inability of the mobile market in these areas to sustain more than one mobile infrastructure competitor. These regional markets have natural monopoly characteristics; hence it is uneconomic for competitors to duplicate infrastructure.

(d) Conclusions

Differences in geographic coverage are preventing competitive and efficient outcomes. These adverse impacts arise from a market failure caused by natural monopoly.

- Mobile market competition is failing regional Australia. Consumers are captive to Telstra and have little or no practical choice. Telstra's market share in regional areas ranges from market dominance to absolute monopoly. This market failure is continuing to worsen, is unique to Australia, and raises a profound policy challenge.
- The source of this market failure is Telstra's absolute monopoly over an astounding 60% of Australia's mobile coverage area. The monopoly confers an insurmountable coverage advantage to Telstra that distorts competition throughout Australia's retail mobiles markets. This monopoly has a particularly severe impact on regional Australia.
- Telstra's monopoly is structural, arising from the 'natural monopoly' characteristics of mobile networks in areas of low population density. Telstra's monopoly has been compounded by government subsidies, cross-subsidies and network effects. As evidenced by VHA, it is not economic or efficient for a rival MNO to invest in the natural monopoly areas.
- The area affected by the natural monopoly extends well beyond the geographic area of the natural monopoly itself. Telstra has bundled its natural monopoly coverage with contestable

coverage. Mobile consumers that value coverage will choose Telstra. These 'spillover effects' exacerbate and dramatically magnify the natural monopoly problem.

2. Impact of coverage on market outcomes

As identified at the start of Section 1 of this submission, the two central questions asked by the ACCC in its Discussion Paper are:

- (a) whether the differences in geographic coverage provided by the three mobile networks are impacting competitive and efficient outcomes in mobile markets; and
- (b) whether declaration of a mobile roaming service would be in the LTIE.

This section of VHA's submission continues to address the first of these two questions.

The previous section identified that differences in geographic coverage can be attributable to the existence of a natural monopoly in regional Australia. This natural monopoly has spillover impacts to impede competitive and efficient outcomes in all mobile markets, but with an adverse effect on regional Australia.

This section now considers some of the competitive and efficiency outcomes of this natural monopoly, although a more detailed analysis is undertaken in the context of the LTIE analysis in the remainder of this submission. This section also addresses the implicit question asked in the ACCC's paper, namely whether this is the type of issue to which Part XIC access regulation should be applied. Should the ACCC intervene?

VHA highlights that Telstra has captured a natural monopoly, then bundled that exclusive natural monopoly with its retail offering in such a way that no other MNO can effectively compete. [C-I-C].

(a) Natural monopoly is being leveraged to Telstra's benefit

Adverse impact on competitive and efficient outcomes

There are many ways in which the existence of the natural monopoly and the spillover effect associated with the natural monopoly are being leveraged by Telstra such that the resulting geographic differences between the networks are adversely impacting on competitive and efficient outcomes.

For the purposes of this submission, VHA engaged international telecommunications expert Richard Feasey to provide an independent report on various issues arising from the current mobile declaration inquiry. A copy of Richard Feasey's report is set out in **Part D** of this submission.

Richard Feasey relevantly commented in relation to the adverse effect on competitive and efficient outcomes:¹³

“I find that the case for declaring a domestic roaming service in the geographic areas where Telstra enjoys a monopoly position is compelling. A vertically integrated monopolist does not have incentives to facilitate competition in downstream markets, except under conditions which do not apply in this case. Telstra’s refusal to supply roaming in this part of its network footprint confirms that it will not do so absent regulation.

I consider that competition in Australia’s retail mobile markets is ineffective as a result of Telstra’s refusal to supply roaming. A relatively small number of consumers in regional Australia have no choice of supplier at all, since Telstra is the only firm to offer them coverage. A much larger number of consumers in suburban and urban areas which appear to be competitive are also ‘captive’ to Telstra because they value network coverage which neither of Telstra’s rivals, Optus and Vodafone, is able to offer today. Both sets of ‘captive’ customers pay too much for their mobile services as a result. Another group which also values coverage simply cannot afford it at the prices charged by Telstra today.”

The analysis behind these conclusions is set out in Richard Feasey’s very detailed and comprehensive paper. To reduce the length of this submission, this analysis is not repeated here.

As the ACCC identifies in its Discussion Paper, several government reviews have been conducted over the years into the provision of telecommunications services in regional Australia. These reviews have highlighted the problems caused to regional consumers by the supply of mobile telecommunications services by only one mobile operator. Some of the conclusions from the three most recent reviews are set out below.

The Regional Telecommunications Review in 2008 (**Glasson Review**) commented as follows (at page 137):

“However, in remote areas where there is terrestrial mobile phone coverage, it is more likely that there is only one carrier. This not only means people in these areas are denied choice of supplier, it also means that customers of businesses in these areas are unable to make and receive calls unless they purchase a service from that one carrier.

Finding 2.1.9: In areas where there is only one network supplier, the availability of roaming becomes more significant in providing choice of supply.

¹³ Richard Feasey, *Issues arising in relation to the ACCC’s domestic roaming declaration enquiry*, November 2016, paragraphs 4-5.

Finding 2.1.10: Travellers to regional areas who have a service from a provider that does not have coverage in that area cannot use their mobile phone despite their expectation and despite the existence of coverage provided by another network operator.”

The Regional Telecommunications Review in 2014 (**Shiff Review**) commented as follows (at page 14):

“Roaming arrangements between operators (at least in areas where only one network was offered coverage) would similarly capture additional traffic and thereby improve the revenue opportunities at any given site. However, the Committee recognises that this may not be welcomed by mobile operators who have invested in non-urban coverage to enhance their competitive advantage”.

The Regional Telecommunications Review in 2012 (**Sinclair Review**) commented as follows (at page 47):

“To support better outcomes for consumers in regional areas open-access arrangements for other carriers to tower infrastructure and/or domestic roaming arrangements should be a feature of the program. The committee’s preference is for commercially-negotiated agreements, but if they do not eventuate or are not effective, mandated arrangements should be put in place under the guidance of the ACCC.”

VHA also notes the ACCC’s own comments from its annual telecommunications report released in April 2016:

“Competition in less densely populated areas remains more subdued given the challenges of extending networks in areas with low demand. Consumers in some regional areas have benefited to an extent from the level of competition in national retail mobile and fixed markets, as prices are consistent nationally. Further, competition has, to some extent, been a factor that has led operators to invest in networks and improve services in some regional areas. However, for many consumers in regional, rural and remote areas there are still issues in receiving communications services that meet their needs, as the choice of providers and service coverage are often limited.”

The higher prices paid by regional consumers relative to metropolitan services have been recognised in the regional telecommunications reviews. For example, in the Regional Telecommunications Review in 2008 (Glasson Review), the Committee highlighted (at page 130) that Telstra was the only provider in some regional areas and that Telstra was charging a higher price for data in regional areas than other mobile carriers were charging in metropolitan areas:

“Regional areas also face higher prices for mobile data. This is because mobile data services from the only provider offering this service in regional areas are more expensive than mobile data services available from other providers with networks that have a more limited geographic reach. The table below sets out some examples”

This fact was then recorded as Finding 2.1.5 of the final independent report:

“Finding 2.1.5: Mobile data service prices are effectively higher in regional Australia because in many areas the only provider offering services does so at a higher price than other providers in urban areas.”

VHA submits that this finding remains correct today. Moreover, this price gap has widened and regional consumers are captive to an MNO that is charging a very significant price premium nationally. Essentially, regional consumers have had no practical choice but to pay Telstra's excessive prices if they require access to extensive regional coverage.

Telstra may argue that it is providing a 'premium coverage service' and hence consumers should pay more for that service. Telstra may also argue that such a service involves a higher cost and hence it is appropriate that consumers pay more to enable Telstra to recover that higher cost. However, the reality is that regional consumers have no practical choice of provider. [C-I-C]. Telstra is therefore forcing consumers to pay for a service without giving them any choice.

VHA is also highly sceptical that Telstra does, in fact, face higher costs - as one of the reasons that Telstra has captured the natural monopoly is because of Telstra's ability to leverage backhaul transmission at close to zero incremental cost. Surely Telstra would have lower costs?

Telstra's premium for greater coverage is a classic monopoly rent

As part of the evidence submitted by VHA in support of this submission, VHA has sought to quantify in rough terms the magnitude of the potential gains that could be delivered to mobile end-users if declaration of roaming were to occur. Obviously, this is a challenging task in circumstances where VHA has limited information regarding Telstra's network and operations. This task may be better undertaken by the ACCC itself.

However, the starting point for VHA's analysis was to identify the nature and extent of the premium price that Telstra charges in the mobiles market in Australia. VHA therefore re-engaged the expert economists that historically prepared a report for VHA on these issues, namely The CIE.

The CIE's updated report is provided to the ACCC as Part D of this submission. The CIE relevantly comment as follows:¹⁴

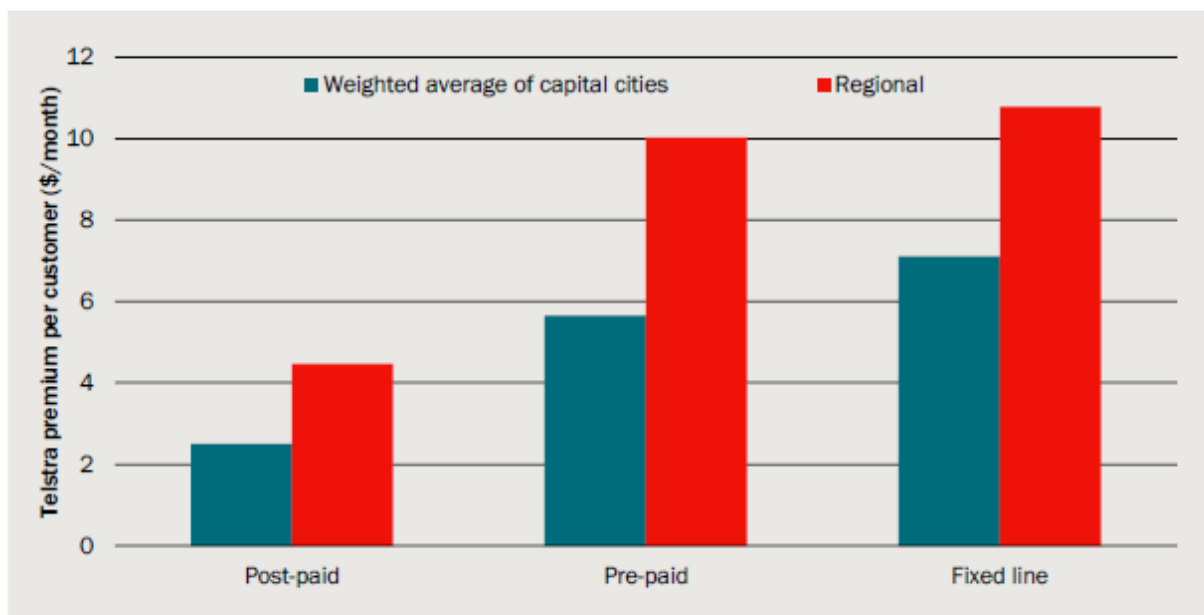
- “The price premium paid by a Telstra customer is \$10 per month for a post-paid mobile plan, \$5 per month for a post-paid SIM-only mobile plan or mobile broadband plan, \$17 per month for a pre-paid mobile plan and \$18 per month for fixed line services.

¹⁴ The CIE, *Telstra's Price Premium - The premium paid by consumers for fixed and mobile services*, November 2016.

- This premium amounts to a total of \$1.4 billion extra paid each year for Telstra mobile phone services and \$1.8 billion extra paid each year for Telstra fixed line services above the average price charged for the same services by other carriers.
- To put the premium paid by Telstra customers into perspective, it is equivalent to a 14 cent per litre increase in fuel prices.
- The level of price premium for the incumbent in the Australian market does not appear in overseas markets we have considered in previous analysis (The CIE, 2015). This suggests that structural issues are limiting the ability for competition to drive down market prices.
- In regional areas, Telstra's premium has a greater impact because Telstra holds a greater proportion of mobile services market share and a greater proportion of services are pre-paid rather than post-paid.

Chart 1 shows Telstra's premium per customer for capital cities compared to regional areas. The premium per post-paid, pre-paid and fixed line customer is substantially higher in regional areas mainly because Telstra has greater market share in regional areas.

1 Comparison of Telstra's premium for mobile and fixed line services between capital cities and regional areas



Data source: The CIE.

The premium for mobile services is higher than similar analysis conducted by The CIE in 2015. In 2015, the Telstra premium for post-paid mobile services was estimated at \$9 per month per plan. The overall Telstra price premium has slightly increased since that study because of

greater customer numbers and the inclusion of pre-paid services in the analysis that have a higher premium.”

The CIE’s conclusions are confirmed by the ACCC’s own comments in its annual telecommunications report released in April 2016. The ACCC comments that Telstra is apparently charging a premium price, but without any loss of market share in doing so. In fact, Telstra increased market share. The ACCC comments (at page 29):

“Telstra has gained 5 per cent of the market since 2011, despite their products being priced at a premium. This suggests that many consumers perceive that Telstra’s network is of superior quality, and offers greater coverage, and are therefore willing to pay more for their services.”

Given Telstra’s network is of the same quality as VHA’s network (and arguably Telstra’s network has suffered greater quality issues than VHA’s in the past year), this suggests the critical determinant of Telstra’s premium and its growth in market share is Telstra’s perceived greater coverage.

Price discrimination occurs notwithstanding uniform national price

While the ACCC has highlighted the existence of a uniform national price, the reality of retail mobile competition in Australia is that there are a myriad of different call plans and price points. This issue is explained in the report by The CIE identified above.

These call plans and price points may be offered to different types of customers in different circumstances, including with selective offers and so-called ‘below the line’ discounting.

As the Productivity Commission highlighted in its detailed Telecommunications Services Review in its review of *Telecommunications Competition Regulation* in 2001 (page 131):

“Mobile service providers compete in terms of multidimensional service plans. For example, plans can differ in relation to length of contract period, handset prices, connection charges, monthly access fees, call charges, and special options such as voicemail and short messaging services. Call charges in turn can depend on the flagfall charge, charge per time interval, time of day, distance, and whether or not a call is made to another customer on the same network.”

Notwithstanding that this comment was made over a decade ago, it remains equally applicable today.

In this market environment, it is comparatively easy for a mobile operator such as Telstra to price discriminate on a practical basis, even though its pricing is ostensibly nationally uniform. Telstra could, for example, selectively target a discounted offer only at VHA customers, knowing that such customers are generally not located in regional Australia.

VHA has provided further detail on these issues in **Part B** of this submission, including various examples and supporting evidence. VHA has also addressed these issues in further detail later in this submission in the context of its analysis of market definition.

Telstra's regional monopoly is softening metro competition

VHA submits that the existence of Telstra's regional monopoly is softening metropolitan competition. In Compass Lexecon's independent report, Compass Lexecon comment as follows:¹⁵

"The asymmetry in regional coverage abilities, entrenched by regional natural monopoly, is likely to lead to a softening of competition by two causal mechanisms.

First, it will lead to a softening of competition for consumers located primarily in the natural monopoly and non-contestable locations, as those consumers only have one service provider to choose from in their primary location. This is the well-understood mechanism by which monopoly leads to restrictions in output and increases in price relative to a more competitive counterfactual, leading to a decrease in consumer welfare.

Second, and perhaps even more importantly, it will lead to a softening of competition in the other, potentially competitive and contestable locations. These are the spillover effects into other markets of relevance to this section. This second mechanism, which I will call the "***horizontal bundling effect***", is the transmission of a lack of competition in the natural monopoly areas into other, potentially contestable, adjacent areas, and to some extent even into the highly dense urban areas."

Compass Lexecon's analysis and explanation of the horizontal bundling effect is set out in detail in the Compass Lexecon report.

Compass Lexecon ultimately conclude as follows:¹⁶

"An important consequence of this effect is that the transmission mechanism is likely to consist, at least in part, of a transmission of higher prices in remote local natural monopolies into higher prices in regional centers and cities.

Moreover, the existence of a uniform national price may exacerbate this anti-competitive transmission mechanism of higher prices from remote to urban areas. It may be argued in other circumstances that uniform national pricing can transmit competitive pricing from urban to remote areas. However, in this instance, it is more likely that a uniform national price will

¹⁵ Dr Derek Ritzmann, Domestic Mobile Roaming Declaration Inquiry Expert Report, 25 November 2016, page 17.

¹⁶ Dr Derek Ritzmann, Domestic Mobile Roaming Declaration Inquiry Expert Report, 25 November 2016, page 22.

transmit non-competitive pricing from natural monopoly areas into potentially competitive areas – this is the anti-competitive “leveraging of market power” consequence of this bundling effect. The horizontal bundling mechanism, with its accepted foundations in the economic literature and acceptance in legal precedent, would suggest that the transmission mechanism is most likely to be from remote natural monopolies into competitive markets, with the consequence of higher prices in competitive markets.

In my opinion, the likelihood of this effect taking place implies that some, or all, of Telstra’s “price premium” may in fact be attributable to a softening of competition for Telstra’s product through a horizontal bundling effect. There are substantial consumer groups who require regional coverage in a mixture of contestable areas and natural monopoly areas. For these consumer groups, the bundle of different regional coverage that Telstra can offer is essentially the only offering they can choose – Telstra therefore has a high degree of market power over these consumers, even if their primary location is in an urban area. These consumers, through the horizontal bundling mechanism and a uniform national price, are the transmission mechanism for higher-than-competitive prices from natural monopoly areas into potentially competitive areas.”

VHA agrees with these conclusions. The key point is that Telstra’s bundling of its contestable coverage with its non-contestable coverage is leading to an overall softening in competition in metropolitan Australia. Given that competition in metropolitan Australia is important in determining the level of the uniform national price, this is conferring market power on Telstra across all mobile markets in Australia, enabling Telstra to charge a price that is well above competitive levels.

(b) [C-I-C]

(c) Part XIC is the appropriate regulatory instrument

Part XIC is a policy instrument designed to regulate natural monopolies

Part XIC by its nature is an access regime that is intended to regulate natural monopolies in telecommunications. The ACCC will be very much aware of the genesis and intended application of Part XIC, so VHA does not provide any quotes to illustrate this point. However, the ACCC’s own August 2016 guidelines, for example, comment:

“This was important given the existence of a highly integrated incumbent, in combination with the characteristics of the telecommunications infrastructure which can be natural monopolies and therefore inefficient to duplicate. In light of these potential barriers to entry, obtaining access to the incumbent’s network, or other natural monopoly networks, via declaration was seen as an important step in developing competition within the telecommunications sector.”

As identified earlier in this submission, the current behaviour by Telstra and the current vertically-integrated natural monopoly feature of the mobile market in the Telstra monopoly areas, mean that this is the precisely the type of scenario to which Part XIC was supposed to apply.

However, it is also true that access regulation has wider objectives beyond the regulation of natural monopolies. These objectives are set out in the *Telecommunications Act 1997 (Cth)* and provide further colour and context to the LTIE test in Part XIC of the Act, including (as set out in section 3(1) of the former Telecommunications Act) providing a regulatory framework that “*promotes the availability of accessible and affordable carrier services that enhance the welfare of Australians*”.

In the Explanatory Memorandum to the *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010*, the government also commented:

“The Government’s key objective is to promote an open, competitive telecommunications market to provide Australian consumers with access to innovative and affordable services. The telecommunications access regime in Part XIC of the Competition and Consumer Act 2010 and the telecommunications-specific anti-competitive conduct regime in Part XIB are two essential means of accomplishing this objective.”

VHA considers the current proposed declaration under Part XIC is consistent with these stated statutory objectives.

VHA also understands that the ACCC recently supported the government in the repeal of the competition notice regime in Part XIB. Behind the scenes, the existence of that regime has been an important constraint on Telstra’s conduct, even if the ACCC has rarely invoked that regime in recent times. The repeal of that regime will remove an important regulatory brake.

This means that in the absence of declaration of roaming under Part XIC and in the absence of the threat of a competition notice under Part XIB, the only other alternative to regulate Telstra is to resort to litigation. The difficulties in using litigation to regulate a telecommunications monopoly are well-known and are evidenced by the failure of New Zealand’s so-called ‘light handed’ approach to the regulation of Telecom New Zealand in the period to 2001.

Regulation of roaming under Part XIC is a much more effective regulatory response. With the repeal of the Part XIB regime, such access regulation becomes even more critical. Regulation of roaming is, in effect, the *quid pro quo* for the repeal of Part XIB.

International practice supports the declaration of roaming in Australia

As the ACCC has indicated in its Discussion Paper, several countries have decided to mandate domestic roaming, hence there is significant and irrefutable international precedent for such regulation. VHA has analysed the circumstances in which domestic roaming was and wasn’t declared

in **Part C** of this submission. VHA has also responded in detail on the international issues by setting out case studies for several jurisdictions in **Part C** of this submission. In summary:

- In many mature competitive wholesale markets around the world, mobile operators have reached commercial agreements involving roaming or extensive active infrastructure sharing or both. Australia is one of the few markets in the world where the largest mobile operator has not done so.
- In the countries with low population density, regulatory/political pressure has normally been required to create incentives for commercial negotiations between operators. The level of regulatory intervention has normally been proportionate to the size of the identified market failure (arising from natural monopoly), consistent with competition policy principles. For reasons identified in detail below, VHA considers that regional and rural Australia is at the more severe end of the market failure continuum due to extremely low population density.
- In all cases in which national roaming agreements have been reached, the mobile operator has provided access to its full network footprint rather than attempting to artificially constrain the coverage provided to match the extent of its next nearest competitor (as is the case with wholesale mobile access in Australia). VHA is not aware of any MNO in any other market that has discriminated in making available its wholesale roaming coverage to other operators, or where an operator has selectively offered access only to contestable parts of its network. The ability of an MNO to do so is a clear indicator of, and consequence of, market power, not a feature of a competitive market.

Vodafone's position is that regulatory intervention (whether light-handed or otherwise) should only be considered where the market has failed. This position is, in effect, one of the central precepts of competition policy and is shared by the ACCC and other competition regulators.

Bearing these comments in mind:

- The countries that have decided not to regulate domestic mobile roaming services have done so largely because the regulators in those countries were confident that the market would deliver competitive outcomes in the absence of regulation. It is no coincidence that these have tended to be countries with smaller land area and/or much higher population density than is found in Australia. These countries include the United Kingdom, Ireland and Germany.
- Conversely, the countries that have decided to regulate domestic mobile roaming services have done so largely because the regulators in those countries were not confident that the market would deliver competitive outcomes in the absence of regulation. Again, it is no coincidence that these have comprise virtually all western economies with large land areas or areas of low population density. These countries include New Zealand, France, Spain, Norway, Canada and the United States.

As identified by VHA in its analysis in **Part C** of this submission, Australia clearly falls into the second basket of countries and overwhelmingly so.

VHA also notes that an analysis of the roaming situation in Australia was included in part of an independent OECD study in January 2015. In the OECD report “*Wireless Market Structures and Network Sharing*”, the OECD considered the question whether roaming should be provided by Telstra for that part of the mobile network for which Telstra has historically received government subsidies. The OECD commented (at page 29):

“For its part, Telstra has invested a considerable amount in providing the widest coverage in Australia and views this as a matter than should be left to the market. It strongly opposes any suggestion that it should be made to share existing facilities or that public investment should dictate open access policies. In relation to the first objection, this is a challenging area for regulators as an important consideration in many countries is whether facilities can be economically replicated. A decision in favour of a dominant player may assign consumers in those areas to a monopoly... **Nonetheless, most countries have taken the decision that any public investment should be associated with open access requirements rather than benefit a single provider**”. *(emphasis added)*

ACCC's previous conclusions in 2004 and their relevance in 2016

Relevant to the application of Part XIC to roaming is also the fact that roaming was considered for declaration twice previously by the ACCC, namely in 1999 and 2004.

In November 1997, the ACCC commenced a declaration inquiry into domestic mobile inter-carrier roaming between existing and new mobile networks:

- The declaration inquiry was the first inquiry ever undertaken by the ACCC under the Part XIC telecommunications access regime.
- The Minister had formally requested the declaration inquiry in the context of the imminent auction of new 900MHz and 1800MHz spectrum. The Minister was seeking to provide potential bidders “with as much certainty as possible” and to encourage market entry.
- In March 1998, the ACCC announced that it would not declare mobile inter-carrier roaming:
 - (a) In relation to Telstra’s analogue AMPS network, roaming was already required to be provided by Telstra as a carrier licence condition at that time. In any event, Telstra’s AMPS network was scheduled for closure at that time.
 - (b) In relation to existing and potential new digital networks, the ACCC considered that sufficient commercial incentives existed for the mobile carriers to provide roaming without recourse to regulation. The ACCC also considered that declaring roaming may

have an adverse impact on network investment incentives for the deployment of mobile networks using the new 900MHz and 1800MHz spectrum.

- However, the ACCC indicated that it would monitor the market and could intervene if Telstra, Optus or VHA refused to provide roaming services on their existing GSM networks.

In this manner, the ACCC decided not to intervene in 1998 primarily because commercial arrangements were regarded as working effectively.

In April 2003, the ACCC commenced a wide-ranging review of the regulation of Australian mobile services. One aspect of that review was the potential for declaration of domestic mobile inter-carrier roaming:

- The ACCC indicated that it had received one confidential complaint that a carrier had refused to supply domestic inter-carrier roaming services to another carrier. The ACCC had received a “small number of informal approaches” requesting regulation of roaming services. The ACCC had also received a “small number of complaints” from consumers who wished to use their handsets to roam onto other networks.
- In December 2004, the ACCC announced that it would not declare mobile inter-carrier roaming:
 - (a) In relation to GSM roaming, the mobile carriers had indicated they were content with their ability to acquire roaming services from each other on reasonable terms.
 - (b) While Telstra was the only provider of CDMA roaming services, the ACCC concluded it was inappropriate to impose greater regulation on Telstra at that time.

(In 2004, Telstra was also subject to a carrier licence condition to provide roaming access in relation to certain government funded sites in regional areas. This carrier licence condition subsequently expired and no longer exists in 2016.)

- In 2004, the ACCC therefore came very close to declaring a roaming service. The ACCC considered that each of the criteria for declaration were satisfied. However, the ACCC ultimately decided not to declare roaming given an absence of any complaints that roaming was being supplied and given evidence that current supply arrangements at that time were sufficient.
- However, the ACCC did require Telstra to provide quarterly information to the ACCC over the next 2 years to enable the ACCC to assess whether the terms of supply of domestic CDMA roaming were reasonable. The obligation was imposed via a record keeping rule that required Telstra to summarise for the ACCC the terms of all CDMA roaming agreements.

In this manner, the ACCC again decided not to intervene in 2004 primarily because commercial arrangements were regarded as working effectively. As such, there was no benefit in declaration.

The situation in 2004 is very different to the situation in 2016. Telstra is the clearly dominant MNO and its market shares across all mobile markets are high while its market share in regional Australia is increasingly extreme. A substantial coverage asymmetry now exists between the networks. Telstra is denying the supply of wholesale roaming to maintain an artificially high retail price, containing a substantial component of monopoly rent.

(d) Conclusions

Differences in geographic coverage are preventing competitive and efficient outcomes. These adverse impacts arise from a market failure caused by natural monopoly.

- VHA agrees that an MNO should be able to differentiate itself based on non-price factors, including coverage. However, VHA does not agree that an MNO should be able to capture a natural monopoly, [C-I-C], then bundle that natural monopoly with its retail offering in such a way that no other MNO can compete.
- Supply of roaming will not occur in the monopoly areas absent declaration. Even in the duopoly areas, the risk of co-ordinated conduct is very high. Declaration of roaming is appropriate in all regional areas with less than 3 mobile networks. In 2004, the ACCC came very close to declaring a roaming service. The ACCC considered that the criteria for declaration were satisfied. However, the ACCC decided not to declare roaming given that commercial roaming arrangements were already in place.
- The situation in 2016 is very different to 2004. The market has consolidated from four mobile operators down to three. Telstra is the dominant MNO and its market shares in regional Australia are now very high. A substantial market asymmetry exists. [C-I-C]
- The current situation will not self-correct. Telstra has captured a natural monopoly and can choreograph the future of regional competition in its favour. Telstra can also capture most regional government subsidies, compounding its market power. In the absence of regulatory intervention, regional Australians will be left significantly worse off.
- VHA urges the ACCC to declare roaming in regional Australia. A real opportunity exists to the ACCC to resolve a perennial regional policy concern. The long-term economic and social implications of not doing so for regional Australia could be very severe indeed.

3. Declaration promotes wholesale competition

The remaining sections of VHA's submission, including this section, address the question whether declaring a mobile roaming service would be in the LTIE.

Under section 152AB of the Act, the ACCC must have regard to the extent to which declaration is likely to result in the achievement of the following objectives:

- (a) the objective of promoting competition in markets for telecommunications services;
- (b) the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users; and
- (c) the objective of encouraging the economically efficient use of, and the economically efficient investment in, the relevant mobile infrastructure.

This section of VHA's submission addresses the first of these three mandatory relevant considerations, namely the extent to which declaration is likely to result in the achievement of the objective of promoting competition in markets for telecommunications services.

This section focusses on the first set of markets, namely the markets in which roaming services are supplied (i.e., the wholesale markets).

For the convenience of the ACCC, VHA has adopted the conceptual framework set out in the ACCC's Part XIC declaration guidelines, as issued in August 2016. VHA has also commented whether it agrees with the ACCC's conclusions from the Discussion Paper.

In this section, VHA identifies that there is a very high risk of co-ordinated behaviour in the roaming market, therefore declaration should apply to all geographic areas in regional Australia with less than 3 mobile networks. By mandating supply, declaration will promote competition between the access providers in circumstances of duopoly (as well as replicating competitive outcomes in circumstances of monopoly).

(a) Market in which roaming is supplied

On page 20 of the ACCC's Discussion Paper, the ACCC has defined the market as the "*market for wholesale mobile roaming services which MNOs supply to each other*". The ACCC later refers to as the "*wholesale mobile roaming market*". VHA adopts the same nomenclature.

VHA generally agrees with the ACCC's proposed market definition, subject to the comments on the geographic and product dimensions of that market, as identified below.

The ACCC's market definition proposed in 2016 is also broadly consistent with the approach adopted by the ACCC in 2004.

Geographic dimension of the wholesale mobile roaming markets

VHA makes the following key points in relation to the geographic dimension of the wholesale mobile roaming markets and submits that the geographic scope of the relevant market is regional:

- VHA submits that the market being considered by the ACCC should be the market for the supply of wholesale domestic mobile inter-carrier roaming services in the *regional* areas of Australia. The supply of roaming in metropolitan Australia is not sought by any MNO as each MNO already has coverage in metropolitan Australia. The market in which roaming is currently sought is therefore inherently regional.
- In the previous declaration inquiry in 2004, the ACCC adopted a national definition largely because the ACCC had not received sufficient information indicating otherwise. The ACCC commented (at page 25):

“In some instances, GSM domestic inter-carrier roaming services are provided on a national basis (e.g. the Vodafone/Hutchison roaming agreement), whereas in others they are only provided in discrete geographic areas (e.g. the Telstra/Vodafone roaming agreement for roaming on particular highways in Victoria and Tasmania). While the competitive dynamics are likely to differ in geographic areas where there are less than three GSM networks, the Commission has not received sufficient information to enable it to delineate geographic markets based on the level of competition in each area. Consequently, the Commission has treated GSM domestic inter-carrier roaming services as being supplied in a national market”.

- VHA submits that in the context of this declaration inquiry, geographic differences are an important nuance of market definition and the ACCC has sufficient information to define a regional market. In the present circumstances, the only roaming services being sought are services provided in regional Australia, and specifically in all ‘two carrier’ areas. In those areas, insufficient competition exists to lead to unsatisfactory commercial outcomes (i.e., there is market failure).
- VHA's various comments in the next session of this submission explain why the retail market should be considered segmented into regional and metropolitan areas. VHA's comments apply equally to the wholesale mobile roaming market. (Please see VHA's analysis of the retail mobiles markets set out in detail below).

However, ultimately the geographic dimension of the market makes little difference to the ACCC's analysis or conclusions at the wholesale level. After all, Telstra clearly has a monopoly.

Product dimension of the wholesale mobile roaming market

VHA also makes the following observations regarding the *product* dimension of the wholesale mobile roaming market:

- Roaming services are supplied as a bundle, comprising voice, data, SMS and MMS. The services are intended to provide an end user with the same experience as if the end user were still a customer connected to their home network. This means that roaming services are intended to be supplied seamlessly between networks without, for example, calls being required to disconnect and without interrupting messages announcing that a customer is moving between networks.
- Roaming services are supplied on a technology neutral basis, including with regard to the underlying radiofrequency spectrum, hence multi-band handsets are intended to be given the capability to roam across different spectrum bands. Moreover, 4G handsets are intended to be permitted to roam onto 3G as well as 4G. This means that there are no separate product markets for different technologies or spectrum, rather roaming is treated as encompassing all of this.
- Other forms of infrastructure sharing, such as tower co-location, are not an effective substitute for roaming in the Telstra monopoly areas. Roaming is a form of active network sharing. Tower sharing and co-location are forms of passive network sharing. They are very different concepts. VHA has addressed this issue in detail in **Part B** of this submission in response to the ACCC's specific questions on this point.

(b) State of competition in wholesale mobile roaming market

The ACCC has observed in its Discussion Paper (on page 21) that the wholesale roaming market would “not appear to be competitive”. VHA agrees with this conclusion. It is self-evident. Telstra has a monopoly over most of the area in which roaming is sought.

Specifically, the only entities that can supply roaming services in the wholesale mobile roaming market are the MNOs. In those areas where VHA seeks to acquire roaming services, there are either only one MNO (hence there is a monopoly), or only two MNOs (hence there is a duopoly). The ACCC has recognised this in the Discussion Paper.

VHA submits that the current state of competition in the wholesale market is an important issue that ultimately influences the appropriate scope of the declared service, namely that declaration should not just apply to the monopoly areas, but also the duopoly areas. VHA has addressed this issue in further detail below.

VHA has provided details of the roaming arrangements it has in place and the status of any negotiations (to the extent confidentiality considerations permit) in VHA's response to ACCC Q 11, 12 and 13 as set out in Part B.

Geographic areas with only one MNO able to supply roaming – the monopoly areas

For those regional areas where there is only one MNO:

- Because of its monopoly power, Telstra has absolute discretion whether it will supply roaming in the Telstra monopoly areas. Telstra is unconstrained by regulation or by competitive forces.
- This monopoly power arises because of Telstra's control over the natural monopoly as well as the spillover implications of this natural monopoly in depressing the market shares of VHA and Optus so that they cannot invest in areas periphery to the natural monopoly (as identified earlier in this submission).
- Telstra has absolute market power. Indeed, it has monopoly power in the absence of regulation.

Geographic areas with only two MNOs able to supply roaming – the duopoly areas

[C-I-C]

VHA requested telecommunications expert Richard Feasey to provide an independent report addressing the following issue, directed at the duopoly areas:

“What could be the regulatory basis for the ACCC declaring a domestic roaming service which encompassed areas where both Telstra and Optus may currently have coverage (or where Telstra and Vodafone or Optus and Vodafone might do so), as well as in areas where there is only a single, monopoly network provider, generally Telstra?”

Richard Feasey's detailed independent report is set out in Part D of VHA's submission. Richard Feasey concluded:¹⁷

"A declaration which required Telstra to provide domestic roaming on its monopoly network only (i.e. in those areas where only Telstra provides coverage today) would not alleviate these concerns. Telstra might face more effective competition from Optus, but Vodafone would still not be an effective competitor since consumers will not accept coverage in some areas but not others. Knowing this, Telstra would have strong incentives to withhold the supply of roaming in undeclared duopoly areas (i.e. where both it and Optus provide coverage, but Vodafone does not) and Optus would similar incentives. It is important that the ACCC recognises this complementarity between the supply of domestic roaming in the monopoly areas and supply in duopoly areas, and that the scope of the declaration encompasses both."

Richard Feasey's analysis behind this conclusion is set out in detail in his expert report. To reduce the length of this submission, his analysis is not repeated here, but please refer to the relevant part of his expert report.

(c) Impact of declaration on wholesale mobile roaming market

Declaration of roaming will replicate the price and service outcomes that one would expect to see in a workably competitive market for the supply of wholesale mobile roaming services. [C-I-C].

In the duopoly areas, VHA considers that the declaration of roaming would lead to competition for the supply of wholesale mobile roaming services that would not otherwise exist:

- [C-I-C]
- On the contrary, the supply of roaming would be viewed as a contestable wholesale service that can generate wholesale revenue for Telstra Wholesale or Optus Wholesale, respectively. VHA would therefore expect to see competition between Telstra and Optus for the supply of roaming to VHA in the areas where their respective network footprints overlap.

In conclusion, declaration will not only promote competition in downstream markets (as discussed in the next section), declaration will also promote competition between Telstra and Optus for the supply of roaming in those geographic areas where their respective mobile networks overlap. Declaration therefore has the potential to address imperfect competition in the wholesale roaming market itself.

[C-I-C]

¹⁷ Richard Feasey, *Issues arising in relation to the ACCC's domestic roaming declaration enquiry*, November 2016, paragraph 6.

VHA would also expect that the mandated supply of roaming may lead both Optus and Telstra to explore arrangements for the efficient sharing of infrastructure in regional Australia. Such arrangements would be highly beneficial to regional Australia and have been recommended in the various Regional Telecommunications Reviews. Such arrangements could be innovative and include fixed wireless providers, such as NBN Co.

(d) Conclusions

Declaration of roaming will promote competition in the duopoly component of the wholesale market for roaming services.

[C-I-C]

In both the monopoly and duopoly components of the market, mandated supply will also replicate competitive outcomes.

4. Declaration promotes retail competition

This section of VHA's submission continues to address the first of the three mandatory relevant considerations in section 152AB, namely the extent to which declaration is likely to result in the achievement of the objective of promoting competition in markets for telecommunications services. This section addresses those markets that are affected by the declaration of roaming (i.e., the retail markets, sometimes also known as the 'dependent markets').

In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would promote competition. While market circumstances have changed, the ACCC's analysis is correct. This ACCC's conclusion from 2004 remains equally applicable today

VHA agrees with much of the ACCC's approach to market definition, but considers that the retail mobile markets should be defined to recognise the important distinction between regional and mobile competition. The retail market is segmented into regional and metropolitan areas. On the demand side, a regional consumer cannot realistically travel into a metropolitan area to make a call. On the supply side, very substantial barriers to entry exist in regional Australia.

Moreover, notwithstanding uniform national pricing, significant price discrimination occurs in practice, including via below-the-line discounts, targeted marketing, different call plans, and handset subsidies. While prices are ostensibly national, competition is inherently regional, as evidenced by huge market share differences.

VHA's view of the current state of competition is more pessimistic than the ACCC's view. Australia's mobile markets are highly concentrated with very high HHIs. Competition is perceived as relatively effective in metropolitan areas, but is soft by global standards. In regional areas, competition is very soft and the competitive constraints on Telstra are not effective. Within this environment, Telstra has leveraged its market power.

Telstra has set prices across the mobile market at a significant premium to VHA and Optus. In doing so, Telstra is engaging in profit maximising behaviour to extract a monopoly rent. Metropolitan competition has been insufficient to constrain Telstra. Irrespective whether the markets are defined as national or regional, declaration will promote competition by removing a barrier to entry caused by natural monopoly.

Coverage-based competition is not effective where it is distorted by natural monopoly. Substitution to other forms of competition will deliver real improvements to the quality and intensity of competition.

(a) Markets in which declaration will affect competition

On page 21 of the ACCC's Discussion Paper, the ACCC has expressed a preliminary view that the relevant market that may be affected by declaration is the national retail market for mobile services.

VHA generally agrees with the ACCC's market definition, except the geographic scope of the markets. VHA has also identified below that several other markets are also indirectly relevant

Retail market for mobile services is geographically segmented

The ACCC has directed a specific question to the issue whether the relevant retail market is a national market, or whether there are separate regional markets for mobile services. VHA has provided a detailed response to this issue in **Part B** of this submission in ACCC Q10.

The geographic dimension of a market identifies the area within which substitution in demand or supply is sufficient for the product(s)/service(s) traded at different locations to be in the same market. Such demand and supply substitution, in conjunction with the salient features of competition and the resulting differences in market share and concentration, may lead to a conclusion that the retail markets are geographically segmented. As VHA identifies below, this is the case in retail mobiles.

Moreover, the tendency in mobile markets globally to set a uniform national price does not necessarily imply that competition is uniform nationally or that regional competition does not occur. Such pricing is a global convention and not a competitive outcome. It is driven as much, if not more, by the need to manage the complexity of pricing plans and IT /billing systems than other factors. Rather, regional competition occurs within the parameters of that price and influences the balancing of that price across markets.

VHA considers that the regionally segmented nature of competition in retail mobiles is illustrated by the following factors, which evidence a lack of supply-side substitution between metropolitan and regional areas:

- ***Supply-side substitution:*** Supply-side substitutability is a relevant consideration. If a firm such as Telstra were to increase its prices for regional mobile telecommunications services, could a mobile operator that was confined to metropolitan Australia quickly shift its resources to supply mobile services in regional Australia? The answer to this question is obviously not. Such supply-side substitution could not occur without substantial investment in deploying a mobile network in regional Australia to provide competitive mobile services. A provider of regional mobile services could exercise market power in a regional market with little practical risk of supply-side substitution
- ***Investment decisions are regional:*** [C-I-C]

- ***Spectrum is differentiated by region:*** As the ACCC will be aware, radiofrequency spectrum in Australia is segregated by the ACMA into different geographic zones. A phone travelling between different geographic zones may travel onto different radiofrequency ranges. There are different spectrum holdings by geography, which impact the capacity, and hence quality, of mobile services the carriers can offer in different areas. Different prices may have been paid in relation to the underlying radiofrequency spectrum, altering the cost structure for the supply of services in the area. The greatest difference is between metropolitan and regional spectrum.

VHA considers that the regionally segmented nature of competition in retail mobiles is illustrated by the following factors, which evidence a lack of demand-side substitution between metropolitan and regional areas:

- ***Demand-side substitution:*** If the hypothetical monopolist test is applied on a geographic basis to the supply of mobile services in Australia, it seems clear to VHA that consumers in regional Australia are captive to the supply of mobile services in regional areas. Regional consumers cannot realistically drive to metropolitan areas to make mobile phone calls or download mobile data. As such, a hypothetical monopolist supplying mobile services in regional Australia can profitably impose a small but significant and non-transitory increase in price (SSNIP). (The political unpalatability of a geographically deaveraged price is not a relevant consideration in the SSNIP analysis).
- ***Price differentiation:*** While the ACCC has highlighted the existence of a uniform national price, the reality of retail mobile competition in Australia is that there are a myriad of different call plans and price points. These call plans and price points may be offered to different types of customers in different circumstances, including with selective offers and so-called 'below the line' discounting. In this market environment, it is very easy for a mobile operator such as Telstra to price discriminate on a practical basis, even though its pricing is ostensibly nationally uniform. Telstra could, for example, selectively target a discounted offer only at VHA customers, knowing that such customers are generally not located in regional Australia. VHA has provided evidence in Part B of this submission.
- ***Variations in market share:*** The existence of significant variances in market share between different geographic locations in Australia provide clear evidence of the differences in competitive conditions in those locations. Those geographic differences have persisted over time. In turn, this leads to an inference that a firm can capture a greater proportion of consumers in one area and then retain those consumers over time. In turn, this also illustrates that there are very different patterns of market power within different regions of the Australian

mobiles market, suggesting they form different markets. The starkest distinction is between metropolitan Australia and regional Australia.

- ***Consumer preferences:*** Market surveys indicate that metropolitan consumers of mobile services have different needs and demands than regional consumers. The primary focus of regional consumers is on coverage because regional consumers are far more exposed to differences in coverage and hence far more exposed to the inconvenience of call drop out or poor reception. In contrast, metropolitan consumers are less focused on coverage. A market definition that treats these different purchasing patterns as homogenous fails to recognise important differences in the way mobile services are perceived by these different groups of consumers.
- ***Non-price competition:*** Related to the point above, a focus on a uniform national price also overlooks the extent of non-price competition between the mobile networks. This non-price competition has many dimensions but has a different focus between metropolitan and regional consumers. From a metropolitan perspective, for example, the 'best' mobile network is viewed as the one with the least congestion, greatest depth and building penetration, highest call clarity, and highest data speeds. However, regional consumers are much more focused on coverage.
- ***Calls are inherently geographic:*** A national approach to mobile services blurs the distinction between mobile calls and mobile plans. Mobile calls are subject to the geographic features of the location from which they are made. While mobile services in Australia are provided on a technology neutral basis, regional consumers receive later access to new technologies and hence lag metropolitan Australia in speed and quality of service. The Telstra monopoly areas, for example, have had 3G and not 4G services to date. A mobile call (or data download) made in metropolitan Australia is therefore not necessarily of the same nature or quality as a mobile call (or data download) made in regional Australia.
- ***Relevant focus is regional:*** The concerns in relation to regional roaming are concerns that arise primarily in relation to insufficient competition in regional Australia. The various government inquiries and reports have focused on the supply of mobile telecommunications services in regional Australia. A purposive approach to market definition would suggest that the ACCC should focus its analysis on the effect on markets in regional Australia.

VHA's response to ACCC Q10 in **Part B** of this submission provides further detail and evidence in relation to the various points identified above.

VHA also notes that there are a few other markets that the ACCC may wish to consider as part of its

analysis that have feedback loops into the retail market for mobile services, namely the market for the supply of subsidies by the Commonwealth and State governments. Given such markets are only indirectly relevant, VHA has not provided detailed information on those markets. However, the ACCC may wish to focus on the market for subsidies as one of the most important of the relevant markets that generate indirect competitive effects.

(b) State of competition in retail mobile services markets

The ACCC has directed a series of specific questions at the current state of competition in the relevant markets. VHA has provided detailed answers to these questions in its response to ACCC Q14, 15, 16, 17, 18 and 19 as set out in **Part B** of this submission.

VHA notes that where a dependent market is already workably or effectively competitive, access is unlikely to promote a material increase in competition. VHA submits that this is not the case in the retail mobile services markets, as the markets are not workably or effectively competitive, particularly in regional Australia. VHA has provided a wide range of evidence to demonstrate this.

As a starting point, in the Discussion Paper, the ACCC has speculated that competition for the supply of retail mobile services in the national mobile services market may be ‘relatively effective’. VHA assumes that the ACCC is referencing a state of competition that is less than workably or effectively competitive, hence there is room for competitive improvement. If this is the ACCC’s intent, then VHA agrees that there is very significant scope for competitive improvement. Moreover, declaration will facilitate this to occur.

In the decision *Re Duke Eastern Gas Pipeline Pty Ltd* (2001) 162 FLR 1, the Australian Competition Tribunal concluded that whether access will promote competition also critically depends on whether the access provider has market power that could be used to adversely affect competition in the dependent market(s). The Tribunal commented (in the context of gas pipeline transmission):

“Whether competition will be promoted by coverage is critically dependent on whether EGP has power in the market for gas transmission which could be used to adversely affect competition in the upstream or downstream markets. There is no simple formula or mechanism for determining whether a market participant will have sufficient power to hinder competition. What is required is consideration of industry and market structure followed by a judgment on their effects on the promotion of competition.”

VHA wishes to make five important points in this regard:

- First, the competitive intensity of the retail mobiles market in Australia is not as high as in other countries. As the ACCC has itself concluded, the retail markets are highly concentrated with high HHIs. The level of competition is consistent with the softer levels of competition that

one would expect in a three MNO market, as compared to a four or five MNO market. Competition in metropolitan areas of Australia is soft by global standards.

- Second, the competitive conditions for mobile services vary markedly across Australia. Competition is more intense in metropolitan areas, but much less intense in regional areas. A 'nationally averaged' view of competition fails to recognise the very different levels of competition in metropolitan and regional Australia. In regional areas, competition is very soft and the competitive constraints on Telstra are not effective.
- Third, Telstra's disproportionate market share and ability to leverage its natural monopoly means that the three MNOs are not competitively balanced. The market structure is highly asymmetric, weighted in favour of Telstra. As such, there is a clear market leader and hence a greater risk of softer competition than would normally be the case in a symmetric market structure. The competitive constraints on Telstra are weaker because of the asymmetry in favour of Telstra.
- Fourth, if the market were competitive, the type of price premium that is currently being sustained by Telstra would be competed away over time. We would expect to see a rise in prices by Telstra result in the market share of Telstra reducing over time. In fact, Telstra has both increased its prices and increased its market share, as evidenced by the ACCC's own comments in its annual reviews. Such an outcome is not consistent with a workably competitive market.
- Fifth, Telstra has sought to differentiate its network based on coverage, being an aspect of competition on which no other MNO can compete. Telstra has then used advertising to orient the market towards coverage-based competition. Telstra has also bundled contestable coverage with non-contestable coverage. In doing so, Telstra has focused non-price competition on a feature in respect of which competitive disciplines upon Telstra are very weak, if not non-existent, given Telstra's natural monopoly. Consequently, Telstra faces competition from VHA and Optus that is particularly soft.

VHA addresses each of these points in turn below.

Market for supply of retail mobile services is highly concentrated

In metropolitan Australia, there are three mobile networks, namely Telstra, Optus and VHA. Each of those networks supply services at wholesale to mobile resellers, but such mobile resellers are competitively insignificant. The primary competition occurs between the three MNOs.

Considerable debate has occurred internationally whether a three MNO market can deliver long-term sustainable competition relative to a four MNO market.

The ACCC itself grappled with this issue in 2009 when approving the merger of Hutchison and Vodafone to create VHA. The ACCC commented at that time in its Public Competition Assessment:

“The ACCC found that the proposed merger would lead to a significant increase in the level of concentration in the already highly concentrated retail market.”

However, the ACCC permitted that merger to occur on the basis that the merger created a stronger combined competitor with the ability to more effectively compete against Telstra. If the merger were not allowed to occur, the ACCC identified that both Hutchison and Vodafone would not survive as effective competitors. These conclusions are set out in the Public Competition Assessment published by the ACCC at the time.

This context is important as it illustrates that Telstra’s dominance in mobiles is not just a recent phenomenon. Even in 2009, some 7 years ago now, Telstra’s competitive strength was affecting the sustainable level of competition in the Australian mobiles market. As identified in this submission, this strength arose not from legitimate competition by Telstra, but from Telstra’s ability to leverage its control over the natural monopoly in regional Australia via its ‘coverage claim’.

By global standards, Australia’s mobile market is therefore now very highly concentrated. The key measure of market concentration in Australia and internationally, the Herfindahl-Hirschman Index (HHI) number, is at least 3,100 (for handset services) and at least 4,300 (for non-handset services). Under the Merger Guidelines, the ACCC indicates that levels of HHI of more than 2,000 will start to raise competition concerns.

In its report ‘*Wireless Market Structures and Network Sharing*’,¹⁸ the OECD in January 2015 analysed the issue of three MNO and four MNO markets in the various OECD economies. The OECD commented as follows:

“The report finds, as might be expected, that in countries where there are a larger number of MNOs, there is a higher likelihood of more competitive and innovative services being introduced. Particularly, a larger number of operators is often the source for innovative offers that challenge existing market wisdom and practices.

This does not mean that there is no innovation in markets with three operators, or that in such a market; one operator could not play the role of a challenger. In Portugal, for example, a premium offer, which includes 15 days of roaming to many European countries, has

commenced in a market with three MNOs. It is after all the intensity of competition that is the key and there is no “golden number” that ensures effective competition. Nonetheless, experience has demonstrated that this is more likely in a market with at least four MNOs”.

“A decrease in the number of market participants can increase profitability for market players through cost savings and a decrease in competitive discipline. Most regulators agree that two MNOs are too few to ensure sufficient competition, but whether three, four or five is the optimal number is heavily debated”

As part of its analysis of these issues, the OECD analysed the situation in Australia. The insights of the OECD are useful in illustrating the perceived softer state of competition in Australian retail mobiles from an international perspective, as follows:

“While price is only one element in assessing the value provided to a customer, others being quality of service, coverage and so forth, the clear trend in Australia has been for consumers to receive less included data in their mobile bundles. This has been true not only in MNOs, but notably with MVNOs following reduced wholesale competition... In February 2014, Boost Mobile, one of two resellers on Telstra’s 3G network, reduced the data allowance in its bundle, with unlimited voice and text, from 3GB to 2GB for the same price”.

“The reduction of MNOs in Australia has undoubtedly led to a less competitive and more concentrated mobile market.”

Therefore, while the retail mobile markets have historically been perceived as competitive from an Australian perspective, they are perceived as less competitive and more concentrated from an international perspective. This is also consistent with the international experience for mobile markets that have only three MNOs, rather than four.

VHA submits that this difference in perception may arise because most other telecommunications markets in Australia are very highly concentrated indeed. The retail mobiles market is therefore perceived by Australian standards as being more competitive than other markets and has been held out as the ‘gold standard’ for other Australian telecommunications markets. This may be wishful thinking. VHA’s submission is that a healthy reality check is required.

Competitive conditions vary markedly between metro and regional Australia

VHA considers that even competition in metropolitan areas of Australia does not necessarily meet the ACCC's description of 'relatively competitive' in the Discussion Paper. Intense competition does exist, but that level of competition is not sustained throughout the market and is sporadic in nature. Competition is perceived as relatively effective in metropolitan areas by Australian standards (with some segments exhibiting intense competition but other segments exhibiting much weaker competition), but is still soft by global standards

The level of competition in metropolitan Australia is generally consistent with the level of competition one would expect to see in an asymmetric three-MNO market. The level of competition is much softer than a 'highly competitive' market, but the metropolitan market overall is still 'relatively competitive'. This conclusion is important as it illustrates how Telstra has maintained a very significant price premium over and above Optus and VHA. Telstra is subject to insufficient competitive constraint in metropolitan markets and therefore can leverage its market power across all markets.

VHA submits that the situation in metropolitan Australia contrasts markedly with the situation in regional Australia. In regional Australia, Telstra is overwhelmingly dominant. This dominance in regional Australia arises because of the very high value that regional consumers place on coverage when selecting their mobile provider.

VHA explained the importance of coverage to regional consumers earlier in this submission. Telstra's ability to offer greater coverage arises from its ability to leverage its natural monopoly [C-I-C]. Telstra bundles its contestable coverage with its non-contestable coverage, as discussed further below.

The evidence for this situation is demonstrated by the relative network market shares of the different MNOs in different geographic regions around Australia [C-I-C].

[C-I-C]

VHA submits that these wide disparities in market shares between regional Australia and metropolitan Australia demonstrate that competition in regional Australia is not effective at all. Telstra is dominant and is not effectively constrained by VHA or Optus. Competition in regional areas is failing end-users living in those areas.

Asymmetry of competition in regional Australia is a cause for concern

While a three MNO market may deliver reasonable levels of competition in circumstances where the MNOs are of a similar size and competitive strength, this will typically not be the case where one of those MNOs is disproportionately larger than the other two.

As the ACCC will be aware, economic theory suggests that asymmetric concentrated markets normally provide worse competitive outcomes than symmetric concentrated markets. This result is factored into the HHI calculations by its squaring property, meaning the HHI is highly sensitive to competitive asymmetry. A much higher HHI results from a situation of asymmetry. [C-I-C]

If the market involved a large firm that was being subjected to competition by two smaller market entrants that were gradually winning market share, this could be viewed as a market where competition was still placing some constraint on the largest market participant. That largest participant would still have significant market power, but it would need to have regard to the risk of losing market share if it increased prices excessively.

Unfortunately, this is not the situation in regional Australia. As evidenced by the merger of Vodafone and Hutchison in 2009, as evidenced by the continued upward trajectory of Telstra's market share, and as evidenced by Telstra's premium pricing, the reality is that Telstra is not subject to effective competition in regional Australia.

Moreover, as the ACCC will be aware, telecommunications networks are susceptible to network effects and 'tipping' which means that the competitive playing field tends to be tilted in favour of the larger operators. Where an MNO has a larger share than other MNOs, it will benefit from those features of the market and consumers will tend to default to that larger MNO, all things being equal. The smaller MNOs will therefore need to compensate for that tendency by offering more attractive service plans or investing more to provide better coverage or service quality.

The difficulty faced by MNOs in regional Australia is that the asymmetry has been created by Telstra's ability to offer substantially greater coverage. The existence of a natural monopoly means that such coverage cannot be replicated by any other MNO. Telstra's denial of access to that natural monopoly means that this greater coverage will remain exclusive to Telstra in the absence of regulatory intervention.

Given all of the above, VHA submits that there is a failure of effective competitive competition in regional Australia that has been caused by Telstra's [C-I-C]. This failure is not self-correcting, but is rather self-perpetuating. Accordingly, this situation will continue to worsen over time unless and until regulatory intervention occurs.

Telstra's incentive and ability to maintain a significant price premium

VHA set out its analysis of Telstra's current price premium earlier in this submission by reference to the independent economic report undertaken for VHA by The CIE.

The evidence indicates that Telstra is currently charging a very substantial price premium across Australia, relative to the other MNOs. As such, Telstra is clearly a 'price maker' in the retail market, rather than a 'price taker'. Moreover, this premium has increased in the two years since VHA last commissioned The CIE to undertake the same analysis.

Telstra's premium, as well as Telstra's ability to increase that premium, suggests that Telstra has a significant degree of market power that is unmatched by Telstra's competitors.

As the ACCC itself comments in the Discussion Paper (at page 22):

"Telstra has been the clear leader in the national retail market for mobile services for several years. As illustrated in Figure 4.1, between June 2011 and June 2015, Telstra's market share for retail mobile handset services has grown from 40 to 45 per cent, while Optus' and BHA's market share has fallen. Telstra's advantage is even more pronounced for non-handset services (i.e., mobile broadband services provided using a tablet SIM, a wireless model or dongle), as show in Figure 4.2. For non-handset services, Telstra's market share has grown by 17 percentage points during the same five-year period".

While Telstra may claim that this premium arises because Telstra is somehow offering a 'premium' service, there is no evidence that this is correct. The basis for Telstra's quality claim is largely based on assertion. Moreover, Telstra has had some significant and very public network outages over the past year that suggest that Telstra's network reliability may, in fact, be lower than Telstra's claims purport.

Where Telstra does have a clear advantage over other MNOs is in relation to Telstra's geographic coverage. By denying access to its natural monopoly in regional Australia, Telstra has ensured it is the only MNO that can offer full regional coverage. As identified in earlier in this submission, such coverage is viewed as critical to regional consumers.

What does this mean for competition in the regional services market? As Telstra faces more inelastic demand for its services in regional Australia due to the importance of coverage to regional Australians, Telstra can and does maximise its profits by increasing its price. In doing so, Telstra is behaving in the same manner as a classic monopolist and is seeking to increase prices to maximise its producer

surplus and profits. As VHA and Optus cannot match Telstra's coverage, the competitor MNOs cannot effectively compete away this monopoly rent.

Impact of a uniform national price on competition in retail mobiles

This then raises a critical issue, as identified by the ACCC on page 24 of the Discussion Paper. Given that the mobile market (arguably) has uniform national pricing, shouldn't this mean that competition in metropolitan Australia constrains the price that Telstra can charge in regional Australia? The ACCC has pointed to the reasoning advocated by third parties that if the market price is uniform nationally, and if the market price is set by competition in metropolitan markets, doesn't this then act as a constraint on Telstra's ability to increase prices in regional areas?

VHA's considers that this issue is more nuanced. VHA makes two key points in relation to the uniform national price:

- First, if there is a uniform national price (even if susceptible to some hidden geographic variation), the level of competition in metropolitan competition is not sufficient to constraint Telstra's pricing to the same level as VHA and Optus. The generally softer nature of competition in metropolitan markets in conjunction with Telstra's role as the 'price maker' (and asymmetric power) has enabled Telstra to set prices in metropolitan areas that are higher than one would normally expect in a highly competitive market.

Because of Telstra's ability to charge a higher price in metropolitan Australia, in conjunction with an absence of competitive constraint in regional Australia, Telstra has set its national pricing in a manner that has enabled it to capture a monopoly rent in the market overall. Consumers in regional Australia have no choice but to pay this premium if they wish to have the full regional coverage that is so critical to them. Consumers in metropolitan Australia have been persuaded to pay more for Telstra services by advertising that has exaggerated the benefit of coverage to metropolitan consumers.

- Second, the concept of a uniform national price tends to overstate the uniformity of price and non-price offerings between regional and metropolitan Australia. In fact, geographic price discrimination appears to occur in the manner that mobile services are marketed by Telstra.

VHA highlights that the mechanisms for price discrimination can also be very subtle. Telstra may launch an offer into the market that is not open to existing Telstra subscribers. In doing so, Telstra is focusing that offer only at Optus and VHA subscribers in the knowledge that those subscribers are predominantly metropolitan. In this manner, Telstra can discriminate against regional consumers without appearing to do so.

VHA has provided further detail on these issues, including evidence, in **Part B** and **Part C** of this submission. However, VHA suggests that the ACCC may wish to investigate this issue further with each of the MNOS.

VHA believes that the evidence supports VHA's view of Telstra's pricing:

- As evidenced by the CIE report, Telstra's price premium across the mobiles market is very significant and is delivering Telstra an additional incremental rent of some \$1.4 billion per annum (and \$1.8 billion per annum for fixed line services). This is a huge figure by global standards and indicates that Telstra has one of the most profitable mobile phone networks of any mobile phone operator anywhere in the world. Telstra is pricing significantly above both VHA and Optus with apparent disregard for competitive constraints.
- In regional Australia, Telstra is dominant notwithstanding that parts of regional Australia may include areas that are not wealthy and are not so-called 'premium' mobile subscribers. Regional consumers are captive to Telstra and must pay whatever Telstra charges to obtain the mobile coverage they seek. The comments and anecdotes in the various regional telecommunications reviews illustrate that regional consumers are not happy to pay Telstra's so-called 'premium' (i.e., monopoly) rates.
- In metropolitan Australia, Telstra has a lower market share in those geographic areas than one would expect to be associated with more price sensitive consumers. Conversely, Telstra has a higher market share in those geographic areas than one would expect to be associated with less price sensitive consumers. This suggests to VHA that Telstra has sacrificed market share among the more price sensitive consumers in metropolitan areas in order to set higher prices across regional Australia and maintain its monopoly rent.

Coverage-based competition provides an ineffective competitive constraint

In the ACCC's report, the ACCC points to mobile coverage as a feature of non-price competition. However, VHA's view on this issue is very different. VHA views coverage-based competition as a form of coverage on which it is unable to effectively compete. VHA provides little or no constraint on Telstra's market power through coverage-based competition. Rather, coverage-based competition has been a means for Telstra to build a 'competitive moat' that cannot be challenged by Telstra's competitors. Coverage-based competition is ineffective as a constraint on Telstra.

VHA also considers that Telstra has intentionally sought to differentiate its network based on coverage, being an aspect of competition on which no other MNO can compete. Telstra has used advertising to orient the market towards coverage-based competition. VHA has set out in detail earlier in this

submission how such advertising has allowed Telstra to magnify the market impact of its natural monopoly and tilt the conditions of competition in its favour.

Telstra has also bundled contestable coverage with non-contestable coverage. Please see VHA's comments earlier in this submission regarding Telstra's bundling strategy. By bundling contestable coverage with non-contestable coverage, Telstra has created an integrated coverage bundle with which competitors cannot compete.

In doing all of this, Telstra has focused non-price competition on a feature in respect of which the competitive disciplines upon Telstra are very weak, if not non-existent, given Telstra's natural monopoly. Consequently, Telstra faces competition from VHA and Optus that is particularly soft. This explains Telstra's ability to sustain a substantial price premium even in circumstances where competition between VHA and Optus may seem intense.

So, is Telstra's strategy a legitimate one? VHA's view is that it is not. Telstra's strategy is, fundamentally, based on denying access to a natural monopoly that Telstra has captured (and that has been partly taxpayer funded) in order to impede effective retail competition.

(c) Impact of declaration on retail mobile services markets

As the ACCC has set out in detail in its Part XIC declaration guidelines, the focus of the analysis under section 152AB(2)(c) of the Act is on the objective of promoting competition in markets for telecommunications services.

The Australian Competition Tribunal held in *Sydney International Airport* [2000] ACompT 1 that this does not require evidence of an actual increase in competition. Rather, in the Tribunal's words, the notion of 'promoting' competition (at [106]):

"...involves the idea of creating the conditions or environment for improving competition from what it would be otherwise. That is to say, the opportunities and environment for competition given declaration, will be better than they would be without declaration."

The Australian Competition Tribunal also held in *In the matter of Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010) that when looking to the practical indicia that would lead to the conclusion that an increase in competition is promoted (at [1062]):

"...one is looking for a change that will force sellers to outsell, or attempt to outsell, their rivals in the relevant market, on pain of losing market share if they do not change their competitive strategy. One might also look for a stream of rivalrous initiatives that compel responses."

VHA considers that declaration of roaming will create the conditions for a very substantial improvement in *regional* competition in the retail mobile markets. Similarly, declaration will create

the conditions for an intensification and hence improvement of *metropolitan* competition in the retail mobile markets. In both instances, declaration will primarily impact Telstra and cause Telstra to alter its existing competitive strategy so that Telstra is less focussed on coverage differentiation and more focused on price competition and other forms of non-price competition.

Moreover, the fact that Telstra will cease a strategy based on coverage differentiation following declaration of roaming would result in an intensification of competition between the MNOs more generally. VHA and Optus will have a greater ability to win customers from Telstra and would engage in greater efforts to do so, leading to a “stream of rivalrous initiatives that compel responses” (in the words of the Australian Competition Tribunal).

In the following analysis, VHA has focussed on identifying the extent to which an improvement in competitive conditions would be created by the declaration of roaming, as is required by section 152AB(2)(c) of the Act. VHA also focusses on identifying the potential impact on the competitive strategy of the MNOs and the tendency for “rivalrous initiatives that compel responses”.

Net effect of declaration is to increase price and non-price competition

VHA submits that the net effect of declaration will be to increase price and non-price competition in the retail mobiles markets. However, the effect on competition does include a substitution away from one form of non-price competition to other forms of competition.

Specifically, VHA considers that there will be three immediate effects:

- ***Reduced non-price competition based on absolute coverage:*** First, a reduction in non-price competition will occur, to the extent that such competition is derived directly from an absolute coverage advantage in the areas beyond 98.2% of the Australian population. As the ACCC identifies in its Discussion Paper, non-price competition based on coverage will be reduced in Australia, as has occurred in other nations where roaming has been declared (such as New Zealand, the United States and Canada).

Importantly, coverage-based competition will **not** be eliminated. Coverage-based competition will continue to exist in the areas not subject to declaration, hence will continue to apply to the coverage areas involving 95.6% of the Australian population. The MNOs will continue to have incentives to race to deploy network upgrades in those areas.

The primary impact on declaration is on Telstra’s strategy of coverage-based competition based on an **absolute coverage advantage overall** beyond 98.2% of the Australian population. This absolute coverage advantage leverages Telstra’s natural monopoly (and the rival MNOs cannot invest in such areas in any event).

When VHA references ‘coverage-based competition’ in this submission, VHA is referring refer

to non-price competition based on Telstra's absolute coverage beyond 98.2%. Such non-price competition would be removed by declaration of roaming. VHA is not intending to refer to coverage-based competition within the 95.6% area, given such competition is not affected in any way by declaration and will remain after declaration.

This distinction is critical. The confusion on this issue is illustrative of the high level of misinformation surrounding coverage issues in Australia.

The question arises for the ACCC whether a reduction in coverage-based competition (beyond 98.2%)(is detrimental, or potentially beneficial. Telstra is likely to argue the former. However, VHA submits that the evidence supports the latter. VHA considers that a reduced focus on coverage-based competition (beyond 98.2%) will enhance competition and consumer welfare overall. Coverage-based competition (beyond 98.2%) is tainted by natural monopoly and does not currently provide any effective constraint on Telstra's market power.

The type of coverage based competition that will be affected by declaration of roaming in Australia is inherently about which MNO has the largest network, so is inherently about the level of coverage in the natural monopoly areas, being the mobile network coverage periphery (i.e., absolute coverage advantage beyond 98.2%). As such, when Telstra makes its coverage claim, Telstra is implicitly saying that consumers should use Telstra because Telstra has captured a regional natural monopoly and because Telstra has kept this natural monopoly exclusively for use by Telstra consumers.

In practical effect, Telstra is acting as the gatekeeper for the regional natural monopoly and is charging regional consumers a fee for admission through that gate. Telstra is also denying other MNOs access through that gate - hence is excluding its rivals, creating an exclusionary effect.

If the market were contestable, Telstra's ability to charge such an admission fee would be competed away over time. Telstra's competitors would have an incentive to invest in coverage to erode Telstra's coverage claim. However, the existence of this natural monopoly means that this is not possible.

This has three implications:

- First, Telstra's coverage (beyond 98.2%) is not a feature of non-price competition on which VHA and Optus can effectively compete with Telstra. As such, they do not seek to match Telstra. Telstra's dominance is so great that it acts as a deterrent to

coverage-based competition by Telstra's rival MNOs, thereby, ironically, blunting investment incentives in regional Australia.

- Second, Telstra's coverage creates a market distortion, arising from Telstra's control over a natural monopoly, that tips the competitive playing field in Telstra's favour. In regional Australia, that market distortion is overwhelming in magnitude and effect.
- Third, as identified above, Telstra is subject to particularly soft competition because any coverage-based competition (beyond 98.2%) is a form of competition in which it is overwhelmingly dominant. Coverage-based competition therefore provides little or no constraint on Telstra's market power.

The removal of non-price competition based on coverage (beyond 98.2%) will address these concerns. The market distortion created by Telstra's coverage claim will reduce. Telstra will lose its ability to leverage its monopoly and will become subject to other forms of competitive constraint that are more effective in constraining Telstra.

- ***Greater price competition in metropolitan and regional areas:*** Second, an increase in the intensity of price competition will occur (i.e., there will be a substitution to price competition). Telstra's ability to leverage its natural monopoly to command a market premium will disappear (i.e., Telstra will lose its 'competitive moat'), therefore Telstra will be more susceptible to price-based competition from VHA and Optus.

As the ACCC will be aware, economic theory generally regards price competition as more beneficial to consumers and economic efficiency than non-price competition. This is because price-based competition directly impacts on the determination of the market equilibrium price, such price then sending signals to determine the appropriate allocation and use of economic resources. Conversely, competition based on non-price competition may lead to competitive differentiation and firms exercising a degree of market power because of such competitive differentiation. Such differentiation is not necessarily optimal.

VHA estimates that reduction in Telstra prices caused by declaration may be substantial over the longer-term. VHA has analysed this issue in detail later in this submission, so does not further address the issue here.

- ***Greater non-price competition based on other features:*** Coverage is not the only dimension to non-price competition in mobile markets. Competition between MNOs has many non-price dimensions. Therefore, if one non-price dimension of competition is removed, competition will instead refocus on other non-price dimensions of competition, all things being equal. It is certainly not the case that competition will somehow disappear if one dimension of non-price

competition is removed. Competition is a fluid concept derived of the ingenuity of the competitors themselves.

More specifically, MNOs will seek to differentiate their mobile offerings by other means, including network quality, reduced congestion, coverage depth, handsets, retail plans, and data inclusions. More innovative offerings are likely, as evidenced by the global experience in more competitive mobile markets than currently exist in Australia. If Optus and VHA consider that a form of competition will be effective, they will engage in that form of competition – and this will certainly be the case if Telstra can no longer exercise market power by reason of coverage.

VHA considers that while price-based competition is likely to be immediate (within 6 months), non-price competition based on other features will evolve over time as the MNOs seek to reposition their respective strategies, plans and advertising (greater than 6 months out). The non-price effects are discussed further below.

Competitive effects are also medium-term and long-term in nature

VHA disagrees with the ACCC's characterisation in its paper of any competitive effects being 'short-term' in nature. In fact, competitive effects arise that are immediate, medium-term and long-term. VHA considers that there will be medium-term and long-term effects on the nature of competition in the retail mobiles market.

VHA considers that the medium-term effects are associated with the beneficial shift from ineffective coverage-based competition to other forms of non-price competition, as follows:

- ***Greater non-price competition based on network quality and depth.*** In the medium term, it will no longer be productive for Telstra to seek to advertise its network as having the best coverage, given that all the networks will have the same coverage due to roaming. VHA would therefore expect advertising to focus more on those aspects of mobile networks that are determinative of quality of service, including network depth and bandwidth, call congestion, and density. Such a shift in focus will in turn drive mobile network investment, increasing service quality. (Such a shift in focus will also remove the current coverage misinformation)

Moreover, Telstra will not wish mobile customers of VHA and Optus to have a worse experience when roaming on Telstra's network than they have on their home networks. Such an experience would lead them to denigrate Telstra and for Telstra to be perceived as the low-quality network. As such, there will be an incentive placed on Telstra to maintain a similar level of quality in the Telstra monopoly areas as elsewhere.

- ***Greater non-price competition based on handsets and retail plans:*** As well as features of non-price competition based on the underlying network, VHA would expect competition to increase in the retail offerings themselves, including the form and nature of retail plans and in the bundling of handsets and dongles. Without Telstra's coverage dominance, Telstra would need to meet competition from VHA and Optus, driving an intensification of competition.

VHA would also expect to see a greater number and variety of call plans being offered, including a range of call plans that are designed specifically to meet the different needs of regional consumers. In this manner, competition will result in real choice for regional consumers and they will be offered services that are more catered to their needs.

- ***Greater non-price competition based on innovative offerings:*** A greater focus on other dimensions of non-price competition is likely to drive greater product and service innovation. If the other MNOs see that Telstra is no longer dominant due to its coverage, they will have increased incentives to develop innovative offerings as such offerings will have a greater likelihood of winning market share.

VHA notes that other mobile markets around the world exhibit more innovation in product and service offerings that has been the case historically in Australia. Many examples of innovation in mobile offerings in other countries are set out by the OECD in its report *Wireless Market Structures and Network Sharing*. The key theme of the OECD's report is that such innovation is more likely to occur in more intensively competitive markets, as would be the case if Telstra's ability to differentiate its network based on coverage were removed.

VHA also considers that there are significant long-term beneficial competitive effects that occur from declaration, generally associated with an erosion of Telstra's mobile market dominance over time, as follows:

- ***Greater long-term competitive symmetry:*** The current asymmetry in the mobile market should start to self-correct. The source of the asymmetry is Telstra's natural monopoly. If Telstra is no longer able to leverage that natural monopoly, it will be susceptible to market share erosion. In turn, greater symmetry over the long-term will lead to an intensification of competition.
- ***Greater long-term sustainability of competition:*** Telstra is becoming so dominant in the regional mobiles market that the other MNOS are being crowded out by Telstra's dominance. As identified earlier in this submission, Telstra's dominance is self-reinforcing and will continue to increase. In the long-term, in the absence of government intervention, it is unlikely that the currently level of MNO competition in regional Australia will be sustainable.

Declaration will reverse this position and ensure that MNO competition is not only sustainable, but increases.

- ***Facilities-based competition:*** As identified in later this submission, declaration will lead to market share growth by access seekers. Outside the natural monopoly areas, investment is not occurring because access seekers do not have sufficient market share to justify an investment. Essentially, they are trapped in a 'Catch 22' scenario. Declaration enables access seekers to grown market share to a level at which they can invest.
- ***Self-reinforcing positive feedback loops:*** Investment by access seekers will promote greater facilities-based competition over the long-term, in turn promoting more competition that will drive further market share growth and further investment. Declaration is therefore a catalyst in a positively reinforcing causation cycle that occurs over time. Declaration will drive competition, which will drive investment, which will drive competition, which will drive investment, and so on.

In this manner, declaration has short-term, medium-term and long-term effects, all of which are consistent with the promotion of competition.

Protecting Telstra to preserve 'coverage-based competition' is not necessarily in the LTIE

As identified in earlier this submission, coverage-based competition has not been effective in constraining Telstra. Earlier in this submission, VHA identified two key concerns:

- ***No competitive constraint:*** Coverage based competition (beyond 98.2%) has been tainted by Telstra's natural monopoly and has become a mechanism for Telstra to exercise its market power, rather than a mechanism for competitors to constrain Telstra. The removal of such competition would not necessarily result in any decrease in competitive constraint on Telstra. In fact, it would enable the MNOs to compete in areas that did provide a competitive constraint on Telstra.
- ***Misinformation and inefficiency:*** Coverage-based competition has led to significant exaggeration and overstatement by the MNOs, creating a misleading impression for consumers. The actual utility of Telstra's greater coverage (beyond 98.2%) for most metropolitan consumers is marginal, so the advertising has created a serious level of misinformation among mobile consumers in Australia. In turn, this has resulted in consumers making purchasing decisions that have not necessarily been consistent with optimal economic outcomes, resulting in a distortion of pricing signals in the Australian retail mobiles markets.

In VHA's view, coverage-based competition (beyond 98.2%) has not necessarily been in the interests of end-users. Ironically, the removal of coverage-based competition could increase competition (as discussed above) and improve the efficiency of price signals in markets, thereby providing both price and non-price based efficiency dividends. In each case, the welfare of consumers in the long-term will unequivocally increase, hence the LTIE test would be met.

VHA has commented on the effect of coverage-based competition on investment later in this submission.

Removal of obstacles to regional end-users gaining access

As the ACCC will be aware, in considering the objective of promoting objective, section 152AB(4) requires that regard must be had (but not be limited) to the extent to which declaration will remove obstacles to end-users of retail mobile services gaining access to those services.

VHA considers that this is clearly the case in relation to the declaration of roaming services. Declaration will remove Telstra's [C-I-C], thereby providing end-users with access to roaming services on Telstra's network.

ACCC's comment regarding potential price increases is incorrect

The ACCC has commented in the Discussion Paper (at page 27) that "*although there is the potential for roaming to deliver lower prices for consumers, it is also possible that it may increase the retail price of mobile services overall*". The ACCC's reasoning is based on the theory that if VHA and Optus were to purchase roaming services, their costs would likely rise. VHA strongly disagrees with this conclusion for the following key reason:

- VHA's expectation is that the wholesale charges for roaming would be set below the retail market price. If this were not the case, then Telstra would be engaging in vertical price squeeze behavior and the pricing would be anti-competitive.
- VHA would be recovering all its roaming costs from the incremental retail revenues that VHA receives from end users that use the roaming services at standard retail rates. This means that all the incremental costs to VHA of acquiring roaming services are covered by the incremental retail revenues.

VHA had significant concern regarding the ACCC's comment that roaming could result in prices rising as VHA could not envisage how this could possibly occur. VHA therefore asked international telecommunications expert Richard Feasey to consider this issue as part of his independent report.

Richard Feasey concluded:¹⁹

“I therefore find it very difficult to envisage any circumstances under which average mobile prices paid would rise as a result of the declaration, other than in response to changes in consumer preferences which meant that more consumers valued coverage more than before or that a larger proportion of consumers could now afford to buy greater coverage. In either and both cases, those consumers who chose higher price tariffs would be doing so because it made them unambiguously better off. Of course, some individual consumers may find themselves on the wrong tariff or operator for their needs, but switching costs are relatively low in mobile and, to the extent that is a concern, it applies to both the factual (i.e. before the declaration) and the counterfactual (i.e. after) cases. Only if the ACCC thought that the declaration would allow all three operators to somehow collectively agree to withhold products which would otherwise better suit those who did not value coverage would the ACCC’s assumption hold. But if that is the case, then the effect of the ACCC’s declaration would be to reduce rather than increase retail competition and to facilitate tacit co-ordination amongst the three firms. That seems to me so far fetched as not to merit further consideration.”

Richard Feasey’s report is contained in **Part D** of this submission.

Positive feedback loops - greater competition for government subsidies

As identified in later in this submission, VHA submits that there are other markets that are affected by the declaration of roaming that may have potential positive feedback loops into the level of competition in the retail markets for the supply of mobile services.

If roaming services were supplied to other MNOS, those MNOs would then have contiguous coverage with new sites for which government subsidies were offered. At present, some 80% of sites for which subsidies are provided are not contiguous with VHA’s network, so are of no practical benefit to VHA. The existence of contiguous coverage would enable VHA to compete with Telstra (and potentially Optus) for government subsidies for those remaining 80% of sites.

The market for the supply of mobile subsidies is not necessary a relevant market for the purposes of the ACCC’s analysis given that it is not a market for the supply of telecommunications services. However, that market has flow-through implications for markets for the supply of telecommunications services. More specifically, it will promote greater sharing of infrastructure in the natural monopoly areas of Australia and potentially lead to more innovative solutions and less dependence on government for subsidies. The potential investment effects of such competition are discussed later in this submission.

¹⁹ Richard Feasey, *Issues arising in relation to the ACCC’s domestic roaming declaration enquiry*, November 2016, paragraph 85.

(d) Conclusions

Declaration will promote competition in the markets for supply of mobile services:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would promote competition. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- The retail market is segmented into regional and metropolitan areas. On the demand side, a regional consumer cannot realistically travel into a metropolitan area to make a mobile call. On the supply side, very substantial barriers to market entry and supply-side substitution exist in regional Australia.
- Competition is inherently regional, as evidenced by extreme market share differences. Price discrimination can occur in practice in metropolitan areas, including via targeted marketing, different call plans, and handset subsidies. Regional consumers are often captive to Telstra given coverage considerations and hence have little practical choice.
- Australia's mobile markets are highly concentrated with very high HHIs. Under the Merger Guidelines, the ACCC indicates that levels of HHI of more than 2,000 will start to raise competition concerns. In some areas of regional Australia, the HHI is as high as 7,600.
- Competition is perceived as relatively effective in metropolitan areas, but is soft by global standards. In regional areas, competition is very soft and the competitive constraints on Telstra are not effective. Within this environment, Telstra has leveraged its market power.
- Coverage-based competition is not effective where it is distorted by natural monopoly. Telstra has the ability to bundle its natural monopoly coverage (which is not contestable) with contestable coverage in the competitive areas. Telstra has the ability to taint effective coverage-based competition with ineffective 'competition' (or the absence of it) from natural monopoly. Control of a natural monopoly is not an appropriate basis for retail competition.
- Declaration will have the important benefit of preventing Telstra from leveraging its natural monopoly by eliminating Telstra's natural monopoly as a form of competitive coverage differentiation. Substitution to other forms of competition will deliver real improvements in the quality and intensity of competition and will properly restrain Telstra's market power.
- Telstra has set prices across the mobile market at a significant premium to VHA and Optus. Telstra sets its pricing to optimise its revenues across all retail mobile markets. Metropolitan

competition has been insufficient to constrain Telstra's market power in order to prevent Telstra from extracting a monopoly rent, as evidenced by the \$1.4 billion retail mobile price premium.

- Irrespective whether the markets are defined as national or regional, declaration will promote competition. In the words of section 152AB(4), declaration will remove an obstacle to non-Telstra end-users gaining access to regional telecommunications services.

5. Declaration achieves any-to-any connectivity

This section of VHA's submission addresses the second of the three mandatory relevant considerations in section 152AB, namely the extent to which declaration is likely to result in the achievement of the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users.

In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve any-to-any connectivity. While market circumstances have changed, the ACCC's analysis remains correct. This ACCC's conclusion from 2004 remains equally applicable today.

Any-to-any connectivity is particularly important in regional Australia. In the absence of declaration, non-Telstra end-users are denied the ability to communicate when they are in the Telstra monopoly areas. This has major adverse economic and social implications.

The Regional Telecommunications Review highlights the critical importance of mobile telecoms services to end-users living in remote areas of Australia. Mobile services are fundamental to the socio-economic development of regional Australia, including for education, health and safety, families and communities, and business.

Some regional end-users may not be willing or able to pay the price premium Telstra demands, and therefore may undersubscribe to mobile services which will adversely affect the statutory criteria of achieving any-to-any connectivity. In addition, while social justice considerations are not necessarily part of the ACCC's analysis, social justice is an important reason why the promoting of competition by declaration in regional areas is imperative.

(a) Any-to-any connectivity is achieved by roaming

Any-to-any connectivity is one of three statutory factors to which the ACCC must have regard when determining whether the declaration of roaming is in the LTIE.

As identified in the ACCC's Part XIC declaration guidelines (page 40), section 152AB(8) of the Act does give a specific meaning to the concept of any-to-any connectivity in Part XIC. That section provides:

“For the purposes of this section, the objective of any-to-any connectivity is achieved if, and 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, whether or not the end-users are connected to the same telecommunications network.”

VHA appreciates that there is some ambiguity in the application of the concept of ‘any-to-any connectivity’ to roaming services. This issue was considered in detail in the ACCC’s previous decision in 2004.

VHA appreciates also that the ACCC has discretion to give this factor less weight if the ACCC considers that roaming is simply an input into an end-to-end service. The Explanatory Memorandum to the *Trade Practices Amendment (Telecommunications) Bill 1996* confirms this expressly, as referenced in the ACCC’s previous decision in 2004.

However, VHA supports the ACCC’s previous view from 2004 that the concept of ‘any-to-any connectivity’ should be interpreted to include communications between roaming customers (which are supplied with a carriage service, namely roaming) and non-roaming customers (which are supplied with other carriage services). The roaming service is a ‘similar service’ to the other carriage services, as expressly referenced in section 152AB(8). Therefore, the supply of roaming services does achieve any-to-any connectivity between roaming customers and non-roaming customers on different networks. The supply of roaming services also achieves any-to-any connectivity between roaming customers on different networks.

The breadth of the intended interpretation of the words a ‘similar service’ is confirmed by the Explanatory Memorandum to the *Trade Practices Amendment (Telecommunications) Bill 1996* in the following terms:

“Reference to similar services is intended to enable consideration of the need for any-to-any connectivity between end-users of services which have similar, but not identical, functional characteristics, such as end-users of a fixed voice telephony service and end-users of a mobile voice telephony service, or end-users of internet services which may have differing characteristics”.

VHA also highlights that the application of the concept of any-to-any connectivity to roaming services was considered in detail in the ACCC’s previous declaration inquiry in 2004. In the ACCC’s analysis in 2004, the ACCC commented as follows:

“In the Commission’s view, on an ordinary reading of the legislation, any-to-any connectivity would seem to be relevant to the present case, because domestic inter-carrier roaming enables end-users to communicate with each other in circumstances when this otherwise would not be possible.

- Domestic inter-carrier roaming permits a subscriber to make calls when outside his or her network areas, thereby enabling the subscriber to communicate with other end-users.

- Moreover, when a subscriber is outside his or her network area, domestic inter-carrier roaming permits the subscriber to receive calls, thereby enabling other end-users to communicate with that subscriber.”

After an analysis of the Explanatory Memorandum, the ACCC ultimately concluded as follows: *“Accordingly, the Commission proposes to use the ordinary meaning of the concept of ‘any to any connectivity.’”*

VHA supports and endorses the ACCC’s interpretation. Moreover, VHA highlights that the concept of ‘any-to-any connectivity must be considered in light of a service that is being considered for declaration that may not otherwise be supplied. The focus of the question is therefore on whether, if the declared service is provided, that communications between end-users would be achieved, even though they are on different networks. This is clearly the case from roaming as VHA customers would not be able to communicate with anyone while they were in the Telstra areas unless and until they received a roaming service.

(b) Critical importance of roaming to regional Australia

As the ACCC’s conclusion from 2004 indicates, the concept of any-to-any connectivity is inherently related with the concept of coverage.

Roaming enables a customer that is located outside the footprint of their home network to achieve communications by utilizing the footprint of another network. In this manner, any-to-any connectivity is improved as that customer can communicate with anyone else in circumstances where they may not otherwise be able to.

As such, the achievement of any-to-any connectivity can be aligned with the government’s policy objectives of promoting greater mobile phone coverage in regional Australia. As identified earlier in this submission, coverage of mobile phone networks is a major concern for end-users living in regional areas.

VHA cannot do justice in this submission to the critical and fundamental importance of mobile telecommunications services to those end-users living in remote areas of Australia. A read of the Regional Telecommunications Review in 2014 is essential if the ACCC wishes to understand just how critical such services are to regional communities in Australia, including to health and safety, education, communities, families and business. There are many anecdotes in the report of the review committee that illustrate this point.

Some regional end-users may not be willing or able to pay the price premium Telstra demands, and therefore may undersubscribe to mobile services which will adversely affect the statutory criteria of achieving any-to-any connectivity. In addition, while social justice considerations are not necessarily

part of the ACCC's analysis, social justice is an important reason why the promoting of competition by declaration in regional areas is imperative.

As the ACCC has highlighted in the Discussion Paper, a review of the importance of communications to regional Australians has been undertaken by several reviews. All of those reviews have highlighted the critical importance of mobile coverage to regional Australians, as identified in earlier in this submission. In the Regional Telecommunications Review in 2008 (Glassons Review), for example, the report commented (at page 121):

“Mobile telecommunications issues, ranging from problems with handsets, coverage issues, and the absence of roaming were raised frequently with the Committee. This high level of interest is indicative of the importance that Australians place on the ability to be ‘in touch’ no matter where they are, and of the wider role mobile telecommunications plays in the lives of regional Australians across the country.”

VHA also highlights the absurdity of the current situation in regional Australia by reference to the level of mobile coverage provided to an international roaming customer travelling to Australia from outside Australia. An international roaming customer located in the United Kingdom that takes their mobile phone with them to Australia will be provided with an international roaming service by Telstra in the Telstra monopoly areas. However, a VHA domestic customer from Australia is denied access to the same coverage area.

(c) Absence of commercially negotiated arrangements

In 2004, the ACCC highlighted that the question was not whether roaming would further the achievement of any-to-any connectivity, but whether declaration would do so.

In 2004, the ACCC concluded:

“Roaming arrangements had been negotiated commercially in the absence of declaration and that the Commission had received no recent information to indicate that roaming was being withheld despite a request, or that carriers would cease supplying roaming services. Consequently, the Commission is not satisfied that declaration of the domestic inter-carrier roaming service will be likely to result in the achievement of any-to-any connectivity.”

As the ACCC is aware, the situation in 2016 is very different to the situation in 2004. No roaming agreements exist that give VHA access to the Telstra monopoly area.

[C-I-C]

(d) Conclusions

Declaration will achieve any-to-any connectivity in regional Australia:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve any-to-any connectivity. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- Any-to-any connectivity is particularly important to regional Australia. In the absence of declaration, non-Telstra end-users are denied the ability to communicate when they are in the Telstra monopoly areas. This has major adverse economic and social implications.
- The various Regional Telecommunications Reviews have repeatedly highlighted the critical importance of mobile telephony services to end-users living in remote areas of Australia. Mobile services are fundamental to their socio-economic development, including for education, health and safety, families and communities, and business.
- Pursuant to government regional policies, Telstra has received some \$2 billion in direct and indirect subsidies over the last decade to deploy mobile services in regional Australia. Telstra is [C-I-C], thereby free-riding on Australian taxpayers for Telstra's own commercial gain.
- Some regional end-users may not be willing or able to pay the price premium Telstra demands, and therefore may undersubscribe to mobile services which will adversely affect the statutory criteria of achieving any-to-any connectivity. In addition, while social justice considerations are not necessarily part of the ACCC's analysis, social justice is an important reason why the promoting of competition by declaration in regional areas is imperative.

6. Declaration encourages efficiency

This section of VHA's submission addresses the third of the three mandatory relevant considerations in section 152AB, namely the extent to which declaration is likely to result in the achievement of the objective of encouraging the economically efficient use of, and the economically efficient investment in, the relevant infrastructure.

In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve efficient use of, and investment in, infrastructure. While market circumstances have changed, the ACCC's analysis again remains correct. This ACCC's conclusion from 2004 remains equally applicable today.

The declaration of roaming will promote competition. Greater competition will create the necessary conditions for achievement of allocative, productive and dynamic efficiency gains. Promotion of competition in criterion 'c' in section 152AB automatically drives the achievement of efficiency criterion 'e', assuming access prices are set correctly, hence increased competition provides an efficiency dividend.

VHA has split the statutory objective into its two components, namely 'efficient use of' and 'efficient investment in'. Both are important in relation to roaming:

- In relation to efficient 'use of' - In the natural monopoly areas, it is not efficient for access seekers to invest. Declaration will achieve efficient sharing of such network infrastructure. Roaming is the form of network sharing that delivers the most efficient use while also promoting competition.
- In relation to efficient 'investment in' - Outside the natural monopoly areas, investment will occur by access seekers when they achieve sufficient market share. Declaration enables access seekers to grow market share by promoting competition. Investment by access seekers will promote greater facilities-based competition. Declaration is a catalyst in a positively reinforcing causation cycle.

In both cases, access pricing is the key to unlock the efficiency dividend. If access prices are set efficiently, the Tribunal has held that this will maintain incentives for access seekers to efficiently invest by preserving build/buy decisions.

From an access provider perspective, the emotive debate over the impact of declaration on Telstra's investment incentives is largely irrelevant. As the ACCC has itself recognised in 2004, if access prices are set at an efficient level, that this will automatically achieve efficient investment by access providers. Again, access pricing is the key.

In a situation of a coverage monopoly, Telstra has little practical incentive to invest. Telstra's track record of investment in the monopoly areas is not as exemplary as Telstra would have the ACCC believe. The natural monopoly areas are still predominantly 3G, not 4G. Investment lags behind metro Australia. Closer scrutiny may be appropriate.

Telstra's monopoly has historically enabled it to capture most government subsidies. Declaration will deliver competition for subsidies and will enable other MNOs to invest. In such circumstances, Telstra's threat not to invest and scaremongering is simply not credible. If anything, such threats demonstrate that Telstra does indeed have a monopoly stranglehold over investment in regional Australia and is prepared to use that power.

(a) Efficient use of infrastructure by access providers & seekers

VHA considers that declaration will encourage the efficient use of existing infrastructure by encouraging efficient sharing of active infrastructure in circumstances where sharing of passive infrastructure is either not economic (due to natural monopoly) or not yet economic (due to the market share required for investment).

In its inquiry into declaration of roaming in 2004, the ACCC reached the same conclusion. The ACCC commented in its conclusions (on page 56):

"Inter-carrier roaming encourages the economically efficient use of mobile network infrastructure".

As the ACCC will be aware, and as considered by the Australian Competition Tribunal in *Re 7-Eleven Stores Pty Ltd* (1994) ATPR ¶41–357, the use of infrastructure will be economically efficient where, from society's perspective, it:

- enables services to be provided at least cost – i.e., it is productively or technically efficient;
- ensures that services are provided to those who value them most highly – i.e., it is allocatively efficient; and
- preserves incentives for innovation and investment – i.e., it is dynamically efficient.

Where the provision of access results in the promotion of competition, it will also commensurately encourage the achievement of economic efficiency. To some extent, if the ACCC has reached a conclusion that declaration will promote competition, it follows that declaration will (over time) also deliver efficiencies in the use of infrastructure, provided that access pricing is set correctly.

Notwithstanding this theoretical conclusion, VHA sets out below the way in which VHA considers, practically, that declaration will result in the efficient use of infrastructure. VHA's analysis of the practice reinforces the theory.

The starting point for the question of efficient use is whether it makes economic sense to have multiple 'side-by-side' mobile networks in a situation of natural monopoly. Specifically, if the revenues from a geographic area are so low that they can only support one mobile network, does it make economic sense to have more than one mobile network? The answer is clearly not.

The ACCC makes the same point in its Part XIC declaration guidelines in the following terms (at page 45):

"In some instances, economic efficiency may be best served by increasing the use of existing infrastructure to supply the service, with duplication of infrastructure being inefficient and leading to higher costs for end-users..."

Accordingly, within the natural monopoly area, it is more economically efficient for the MNOs to share infrastructure and facilities, rather than seek to replicate them. VHA notes that this conclusion is supported by the global focus on sharing of mobile network infrastructure in uneconomic locations worldwide.

In November 2015, the World Bank published the report "*The economics and policy implications of infrastructure sharing and mutualisation in Africa*". That report commented:²⁰

"Infrastructure sharing is a crucial element in the organization of the telecommunications industry and has strategic importance for market agents trying to minimize costs and regulators aiming to maximize social welfare. Because of its importance, sharing may result from an agreement between operators or a regulatory intervention. Regulatory intervention has a fourfold justification: market failures in the provision of telecommunications services, the socially desirable redistribution of resources to give access to ICT services to deprived or isolated communities, market agent's rationality, and limited information."

Would mandated roaming encourage efficient use?

As part of the Compass Lexecon report, Compass Lexecon independently addressed the specific question whether mandated roaming would encourage efficient use of infrastructure. Compass Lexecon reached the following conclusions:²¹

²⁰ See: <http://pubdocs.worldbank.org/en/533261452529900341/WDR16-BP-Infrastructure-Mutualisation-Garcia.pdf>.

²¹ Dr Derek Ritzmann, *Domestic Mobile Roaming Declaration Inquiry Expert Report*, 25 November 2016, page 25.

“Mandated roaming would likely encourage the efficient use of the existing infrastructure. An important policy rationale of mandated access to facilities which are unlikely to be duplicated (such as natural monopoly facilities) is that this can promote service-based competition in the short run, thereby enhancing the economic welfare of end users. The principal mechanism in this is that the mandatory access promotes the efficient use of natural monopoly infrastructure by allowing the infrastructure to serve the entire demand base (through competition or otherwise), thereby promoting allocative and productive economic efficiency.

The areas in question are those areas where mobile telecommunications infrastructure is likely to constitute a natural monopoly and those areas where duplication of facilities is otherwise not feasible because of high entry barriers. This means that it is unlikely that the infrastructure will be duplicated. A widely accepted result in economics is that in situations of natural monopoly the most economically efficient result is for the set of natural monopoly infrastructure to be shared among all users, rather than to force or hope for the infrastructure to be duplicated.

The shared use of the infrastructure therefore leads to the most efficient use of that infrastructure from an economic perspective. The shared use of infrastructure means that the economies of scale (the central characteristic of the natural monopoly) in that infrastructure can be most efficiently and most fully exploited, leading to more efficient use of the infrastructure. When the access provider’s network is under-utilized, and there is sufficient excess capacity available to serve additional traffic (which is likely to be the case in the sparsely populated regions where a domestic mobile roaming could be declared) e.g. by way of roaming, the provision of roaming enables the access provider to explore economies of scale to a greater extent, which leads to more efficient use of its infrastructure.

The end result is greater static economic efficiency. The increased static (productive and allocative) efficiency due to the mandated access to natural monopoly facilities is broadly accepted in the academic literature and is reflected in the ACCC discussion paper to the Inquiry.”

However, the next question is: *what is the most economically efficient level of such sharing in the case of mobile telecommunications in regional Australia?*

The existing extent of mobile network sharing in Australia

As the ACCC identifies in its Discussion Paper, a significant amount of mobile network sharing already occurs in Australia. VHA has identified the existing extent of sharing in **Part B** of this submission.

The concept of ‘mobile network sharing’ includes roaming, and has been explained by the OECD in the following terms, including an identification of the different types of mobile network sharing:²²

“Mobile network sharing is the generic term for when mobile network operators (MNOs) share part of their networks together. The term is generally used for when larger parts of the network, such as antenna-sites and backhaul are shared, but can mean different things to different people. Networks can share many different elements with different competitors, or purchase it from third parties as a service (outsourcing), which can have the same effect as sharing... In general terms, there are four forms of network sharing:

- Passive sharing, e.g., sharing of sites, masts and antennae;
- Active sharing, e.g., Radio Access Network (RAN) sharing;
- Core network sharing; and
- Network roaming.”

The OCED’s classification is consistent with international best practice and can be applied to mobile telecommunications in Australia:

- ***Passive sharing (backhaul transmission):*** Significant sharing of backhaul transmission already occurs in regional Australia, typically via the leasing of capacity in existing backhaul transmission links owned by Telstra. In regional Australia, as the ACCC is aware, the absence of competition on the transmission routes has led to Part XIC access regulation of this transmission to encourage greater and more efficient sharing of such infrastructure.

[C-I-C]

- ***Passive sharing (co-location on towers):*** As the ACCC identified in its Discussion Paper, the facilities access regime in the *Telecommunications Act 1997 (Cth)* requires carriers to share space on their mobile towers with other carriers, leading to co-location of mobile antennae and base stations. VHA has identified in its response in **Part B** of this submission how the facilities access regime has been applied in practice, including the difficulties with the application of that regime.

²² OECD (2014), "Wireless Market Structures and Network Sharing", OECD Digital Economy Papers, No. 243, OECD Publishing, page 58.

VHA's submission is that the facilities access regime has been effective in promoting commercial arrangements for passive sharing where both carriers wish to share a tower. However, there are still various mechanisms that can be used by a carrier to impede access if it did not wish to share a tower (e.g., building a tower that can only host one occupant; reserving spare capacity on the tower for itself; over-charging for access; or locating a competitor at a lower height hence giving the competitor less geographic signal coverage).

- [C-I-C].
- ***Core network sharing (MVNOs and resale):*** Core network sharing can be more appropriately described as 'resale' or 'MVNO' arrangements. As the ACCC identifies in its discussion paper, each of the carriers have significant resale arrangements, including some large MVNOs. However, the market share of these MVNOs remains relatively low and they can be better perceived more as different brands offered by the three MNOs on their respective networks that are targeted at the other networks. The number of MVNOs does not alter the core competitive dynamic between the three MNOs given that the MVNOs are generally competitively insignificant in Australia.
- [C-I-C]

As identified above, two forms of mobile network sharing are already mandated in Australia, namely sharing of backhaul transmission (via the Part XIC access regime) and sharing of space on mobile towers (via the inter-carrier facilities access regime)

Benefits in sharing infrastructure in regional Australia via roaming

The essence of the debate over the declaration of roaming is that the other forms of mandated mobile network sharing identified above (i.e., transmission and co-location) do not overcome the structural and cost impediments faced by the MNOs to deploy competing networks in the Telstra monopoly areas.

[C-I-C]

VHA's definition of the natural monopoly areas therefore already factors in the maximum extent of mobile network sharing under the existing passive sharing regimes. A natural monopoly still exists even with maximum network sharing via passive sharing, hence passive sharing in the face of the natural monopoly would not deliver retail competition. Passive sharing cannot deliver retail competition in the Telstra monopoly areas. The question then arises: would other forms of mobile network sharing deliver such retail competition?

Of the remaining options for mobile network sharing identified above, the most viable (and possibly the only viable) option for the sharing of mobile networks in natural monopoly areas is via roaming. Under a roaming arrangement, the access seeker does not need to incur the costs of deploying its own facilities or leasing backhaul transmission, rather the access seeker can buy airtime on the access provider's network. This means the incremental costs of sharing the mobile network are very low. The access provider is fully compensated via the wholesale access charge for its network costs.

Applying this conclusion to the concepts of productive, allocative and dynamic efficiency:

- ***Productive efficiency:*** Roaming in the Telstra monopoly areas is the least cost means of delivering competition in those monopoly areas, so the use of roaming to promote competition will deliver the increased benefits of competition (including an efficiency dividend) while enabling mobile network sharing to occur on a least cost basis.
- ***Allocative efficiency:*** Roaming in the Telstra monopoly areas will reduce Telstra's market power in the manner described earlier in this submission. Accordingly, retail prices will reduce, hence the market will move towards a more allocatively efficient price equilibrium while the level of dead weight loss will reduce.
- ***Dynamic efficiency:*** The impact of roaming on investment incentives is discussed in more detail below. VHA's submits that the incentives for economically efficient investment are increased. Moreover, greater opportunity may exist for more innovative arrangements to be developed to serve the needs of regional Australia.

VHA notes that its submissions are consistent with the ACCC's previous conclusions in its analysis of the declaration of roaming in 2004. The ACCC commented (at page 48):

"By enabling greater competition in downstream markets, declaration would be expected to improve productive and dynamic efficient in these markets by giving service providers the incentive to find lower-cost means of producing goods and services in downstream markets, and by encouraging them to invest and innovate in ways that will ensure they produce goods and services of a chosen quality at the lowest possible cost in the future. Further, the Commission would expect allocative efficiency to be improved as it would be more likely that the final process paid for retail services by end-users will better reflect the efficient costs of provision of these services. In the language of paragraph 152AB(2)(e), declaration will be expected to result in the more efficient use of infrastructure used to supply the eligible service. Conversely, a decision not to declare would – on this reasoning – lead to less competition in downstream markets and a less efficient outcome".

[C-I-C], does not allow the most efficient use of the infrastructure, as the benefits of competition are removed from the efficiency equation. Moreover, it is well recognised in economic theory that a monopoly tends to be inefficient, resulting in such inefficiencies as so-called 'x-inefficiency'.

In the absence of declaration, [C-I-C], allocation and dynamic efficiency are lower than they would otherwise be. By declaring roaming, the ACCC will achieve the most efficient use of the infrastructure as well as bringing to bear the impact of competition to drive each of the three forms of efficiency.

Public policy considerations for government subsidies will be achieved

VHA has provided a detailed overview of its concerns in relation to government subsidies earlier in this submission. The provision of government subsidies to a single provider, namely Telstra is not efficient and is potentially highly distortive of competition when compounded over time. Declaration of roaming fixes this issue.

At present, government subsidies are subject to a requirement to provide mobile network sharing via tower co-location, but are not subject to any requirement to offer roaming. This is problematic in circumstances where the towers are being deployed in the natural monopoly areas, being areas where (by definition) tower sharing is not economic or efficient. In the natural monopoly areas, roaming is the most efficient form of network sharing and is one of the only economic means to achieve network sharing (other than a RAN sharing or communal network ownership arrangement).

Therefore, while the government thinks it is providing open access to the towers it has funded, the practical reality is that those towers would only ever support one mobile network operator given the poor economics (indeed natural monopoly economics) of the locations in which those towers are built. The funding is therefore being captured by a single MNO, namely Telstra.

A fairer solution from the governments' perspective would be to require Telstra to provide mobile roaming in relation to each government funded site (including those that have been historically government funded). Such a requirement would provide a more effective means of open access than a tower co-location requirement.

Historically, the Australian Government did indeed impose such a regulatory obligation on Telstra to provide roaming access to those sites in which it had received a government subsidy. Clause 23(4)(a) of the *Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997* required Telstra to offer mobile roaming for government funded sites in regional towns around Australia with populations of over 500 people. This obligation existed at the time of the last roaming declaration inquiry and expired in 2007.

However, the practical difficulty with this previous obligation is that it did not address the contiguous coverage issue. Accordingly, Telstra could offer roaming access to coverage on isolated government funded sites without offering roaming access to coverage on any contiguous sites. Ultimately, this meant a coverage gap would exist between the government funded sites and the other MNO's existing

networks. In the absence of Telstra offering a commercial roaming service to bridge the coverage gap, the roaming obligation was therefore of little practical utility to other MNOs.

VHA submits that the most equitable solution from a public policy perspective would have been to require Telstra to provide roaming access on all mobile sites that have historically been subject to government funding. Moreover, to require Telstra to also provide roaming on contiguous areas between those funded sites and the existing MNOs coverage footprint.

In this manner, the declaration of roaming would not only achieve the most efficient form of infrastructure use (and sharing) in the natural monopoly areas, but it would also achieve the most equitable solution from a public policy perspective in relation to government funded sites.

No material detriments in sharing active infrastructure in regional Australia

As far as VHA is aware based on its international experience, there are no material detriments arising from the sharing of infrastructure in regional Australia by roaming. VHA would be happy to discuss any detriments with the ACCC if any are identified (or make submissions on such issues), noting that such issues are relevant more to technical feasibility.

We expect most sites in the Telstra monopoly area to have low traffic volumes so the issue of congestion is highly unlikely to arise. The ACCC's comments in the Discussion Paper regarding seasonal peaks and additional volumes do not recognise that these are pre-existing issues (that would have already been addressed in dimensioning the sites by Telstra) and are therefore not materially affected by the supply of roaming. Market entry by VHA and Optus may grow the market, but it is also true that existing customers may migrate from Telstra, so traffic volumes overall may not significantly change.

In any event, as the ACCC points out, the standard access obligations in section 152AR of Part XIC do not apply where they may have the effect of preventing the access provider from obtaining a sufficient amount of the service to be able to meet the access provider's reasonably anticipated requirements, measured at the time when the request was made (see section 152AR(4)(b)). If a capacity constraint were to arise, the access provider has some ability to prioritise its own use, provided it was a 'reasonably anticipated requirement' at the time.

To some extent, capacity constraints are a potential 'red herring' in this declaration inquiry. They are unlikely to practically be affected by declaration. In any event, they are already addressed by the Act.

(b) Efficient investment by access seekers

VHA considers that declaration will encourage efficient investment in mobile infrastructure by access seekers by enabling access seekers to grow market share and hence ultimately invest in those areas where sharing of passive infrastructure is economic.

Efficient build/buy decisions and efficient incentives to invest

VHA notes that the focus of section 152AB is on encouraging 'efficient' investment, not just any investment. Ultimately, the ACCC is tasked to consider whether declaration of roaming would preserve efficient build/buy decisions.

The Australian Competition Tribunal reasoned in *Re Seven Network Limited (No 4)* (2005) ATPR 42-056:

“Encouraging investment by access providers may be at the expense of investment by access seekers that would otherwise occur. Efficient investment, however, implies the right mix. That is, efficient outcomes mean that optimal buy/build decisions are being made, as assessed from the perspective of end-users. By 'optimal' is meant providing the best outcome in terms of prices, quality and diversity.”

Again, as with efficient use, efficient investment is achieved partly by promoting competition. An intensification of competition will automatically lead to improvements in productive, allocation and dynamic efficiency, consistent with microeconomic theory. In this manner, promotion of competition will provide an 'efficiency dividend' if access prices are set correctly.

In the specific context of Part XIC, the ACCC is required by section 152AB(6) to have regard to various matters when determining the extent to which the objective of encouraging the economically efficient investment in infrastructure would be achieved. Relevantly, one of those mandatory considerations for the ACCC is “*the incentives for investment in the infrastructure by which the services are supplied*”.

The ACCC comments in the Discussion Paper (at page 8):

“When considering incentives for investment in infrastructure, we will consider how declaration may impact incentives for investing in existing infrastructure as well as how it may impact decisions about maintenance, improvement and extension of this infrastructure, and investment in new infrastructure.”

VHA submits that the concepts of efficient build/buy decisions and efficient investment incentives can be conflated, as they both relate to the investment decision-making process for an access seeker. The question is, ultimately, whether declaration of roaming will encourage efficient access seeker investment. Specifically, following declaration:

- would access seekers continue to have incentives to invest in those areas where it was efficient to invest; and
- would access seekers have incentives not to invest in those areas where it was not efficient to invest.

VHA submits that given that an access seeker's investment decision is practically based on an NPV calculation, the ultimate questions are:

- whether the promotion of competition, via declaration, will deliver an efficiency dividend in the form of additional incentives for access seeker investment; and
- more generally, whether declaration of roaming will ensure that the access seeker's calculation of the economics of build/buy remain aligned with the most economically efficient and optimal level of build/buy.

Efficiency dividend via promotion of competition

As identified in VHA's economic modelling, VHA's decision whether to invest is critically determined by the revenue that VHA receives from each cellular tower (or cluster of cellular towers where they form a contiguous unit).

Upon declaration of roaming, VHA will be able to more effectively compete with Telstra. In turn, this will lead to an intensification of competition. VHA's expectation is that it would be able to win market share from Telstra, particularly in regional areas where consumers are seeking greater choice and lower pricing than offered by Telstra.

By winning market share from Telstra, VHA will generate more revenue from each cellular tower in those areas where it has won market share. VHA's revenue forecasts for each cellular tower will also improve. As VHA's market share increases, the economics of deploying mobile infrastructure will therefore improve, as the NPV equation will have increasing revenue cash flows. Ultimately a point will be reached at which the forecast revenues exceeded the forecast costs and the site will become economic for deployment.

VHA refers to this concept in this submission as the 'efficiency dividend'. By declaring roaming, the ACCC will deliver increased competition that will ultimately drive increased investment in a positively-reinforcing causation cycle.

However, VHA highlights that, irrespective of the efficiency dividend, there will remain parts of the Telstra monopoly area that are not contestable at any market share, namely the natural monopoly areas. These areas will benefit from efficient sharing via roaming, as identified in the previous section above.

In the absence of declaration, VHA will have reduced incentives to invest. The ACCC itself recognised this with a comment in its annual telecommunications report in 2016:

“Competition between MNOs does not appear to have been sufficient to achieve coverage goals for parts of regional, remote and rural areas of Australia.”

Alignment of access seeker decision-making with optimal build-buy decisions

From an access seeker's perspective, the build vs buy decision involves a comparison of the costs of deploying a base station at a location (i.e., the 'build') as against the costs of acquiring a wholesale service at that location (i.e., the 'buy'). In circumstances where building the underlying infrastructure is cheaper than buying the wholesale service, build will occur.

In the context of mobile networks, the 'build' component includes significant existing mobile network sharing, including leasing of backhaul transmission and tower co-location costs. Both costs are subject to access regulation and hence these costs will deliver efficient price signals. The remaining costs of infrastructure deployment are market-based and not subject to access provider influence. In this manner, the costs in the 'build' decision should be efficient (irrespective of declaration) and will already be aligned with the optimal build vs buy decision point. Declaration will not alter this conclusion.

The 'buy' side of the equation is determined by access pricing. Generally, the higher the access price, the greater the incentive to build rather than buy. This means that, fundamentally, the effectiveness of the preservation of build vs buy decisions for access seekers will turn on the level of the access price. If the price is set too low, the access seeker will have an incentive to under-invest (as it will be cheaper to buy rather than build). If the price is set too high, the access seeker will have an incentive to over-invest (as it will be cheaper to build rather than buy).

VHA's submission is that, if the access price is set at an appropriate level, the availability of access regulation to deliver efficient backhaul costs and efficient co-location costs will ensure that build vs buy decisions are preserved and are efficient. This view is supported by previous judicial decisions, as well as previous ACCC analysis (including in 2004).

- In the current circumstances, the areas where roaming will be supplied comprise those areas where it is currently not economic for an access seeker to itself build. In a natural monopoly area, there is no practical risk of over-investment by access seekers, so no risk of excessive building, rather than buying.
- Moreover, even if there were a risk of over-investment (this is, in practical effect, a risk of over-build of Telstra infrastructure by a competitor), Telstra would not wish to set an access price that was so high that it encouraged over-build. Outside a natural monopoly area, the threat of competitive overbuild will act as a constraint on access pricing. In turn, excessive building should not occur.
- Conversely, the access provider would seek to set a price at a least at a level that enables the access provider to recover its costs. Those costs are comparable to the costs faced by an

access seeker. As such there is no practical risk of under-investment by access seekers as they would not be given a sufficiently low price that lead to excessive buying, not building.

The ACCC reached the same conclusion in its inquiry into the declaration of roaming in 2004, commenting (at page 53):

“To a large extent, creating the right incentive for service providers to make an efficient build/buy choice is a matter of determining appropriate pricing principles for the service”.

The ACCC also commented (at page 54):

“The potential for declaration of domestic inter-carrier roaming to dampen incentives for network deployment was a concern in the previous inquiry held by the Commission and has also been a concern for regulators in other jurisdictions. The Commission, however, can minimise the impact of declaration on investment incentives through its approach to access pricing”.

Would mandated roaming encourage efficient investment in infrastructure?

As part of the Compass Lexecon report, Compass Lexecon independently addressed the specific question whether mandated roaming would encourage efficient use of infrastructure. Compass Lexecon reached the following conclusions, confirming VHA's analysis set out above:²³

“Mandated roaming would also likely encourage the efficient investment in infrastructure. An important policy rationale for mandated access to facilities which are unlikely to be duplicated because of entry barriers is that mandatory access can foster facilities-based competition in the long-term, thereby further enhancing the long-term welfare of end users. The principal mechanism in this process is that mandatory access can promote efficient investment in natural monopoly infrastructure.

One important mechanism is that mandated access is likely to facilitate and encourage a movement over time towards sustainable facilities-based competition in areas where this is potentially feasible but faces significant barriers. The optimal development of, investment in, and upkeep of infrastructure over time is referred to as being “dynamically efficient”. For instance, the development of infrastructure towards facilities-based competition in telecommunications is understood by many regulators and economists to be a desirable and dynamically efficient means of achieving sustainable competition in the circumstances where this is feasible.

²³ Dr Derek Ritzmann, Domestic Mobile Roaming Declaration Inquiry Expert Report, 25 November 2016, pages 26-28.

However, there are markets where facilities-based competition is highly unlikely to develop of its own accord without regulatory or other intervention.

As outlined in Sections 3.2 and 3.3 of the Report above, there are areas of Australia characterized by natural monopoly, meaning that it is unlikely (and arguably undesirable from the perspective of productive efficiency) that facilities-based competition should emerge; the most efficient outcomes are likely achieved by accepting that there will only be one set of infrastructure and mandating access to that infrastructure.

However, as outlined, there are also areas of Australia where infrastructure-based competition is in theory feasible, but is in practice unlikely to emerge on its own. In these areas, mandated access is likely to encourage the long-term emergence of infrastructure-based competition in a manner that benefits the long-term interests of end users. As outlined in Sections 3.2 and 3.3 above, these areas are likely to be areas which are not natural monopolies (because in theory demand can be efficiently spread across two MNOs), but where such entry is nevertheless highly unlikely because of the insurmountable entry barriers created by the requirements to capture a large share of the market and the substantial ex ante uncertainty and risk that this creates.

A longer-term movement towards facilities-based competition can be assisted by some forms of temporary entry encouragement – this is the widely known “ladder of investment” concept. Mandated access regulation is commonly regarded in the economic literature as being an effective temporary entry measure which can encourage movements to longer-term sustainable facilities-based competition, with consequently strong pro-competitive prospects in the longer term. The mechanism is that the mandated access measure provides a “stepping stone” on the “ladder of investment” – the mandated access spurs market entry in a way that (1) increases competition in the shorter term, and (2) provides a “foot on the ladder” by way of entry-level market share, which in turn then enables future expansion of market share by way of infrastructure-based investment. By this mechanism, potential entrants are permitted to lease some network elements that are particularly difficult to replicate at the initial stages of competition, which in turn provides an impetus for them to invest in their own facilities some time later.

There are several specific mechanisms by which this broader process operates. Each of these mechanisms potentially encourages the efficient investment in infrastructure.

First, potential entrants face significant uncertainty and risk, which is a significant barrier to entry. Mandated access can mitigate this significant barrier to entry. Entrants typically face uncertainty regarding the state of demand or their own costs, which make the returns to their investments highly uncertain. Mandated access permits entrants to first enter a market based on services-based competition, which assists them to mitigate a significant proportion of their

entry risk. This can thereby sharply reduce the barriers to entry and thereby encourage the efficient investment in infrastructure.

Second, if entrants are able to access an incumbent's infrastructure (at appropriate wholesale access prices), this will enable entrants to develop their user base, e.g. by increasing consumer awareness of the new/differentiated services they offer. Moreover, this can also assist the access seeker to build its reputation, which can in turn expand potential demand by increasing consumers' willingness to pay for the new entrant's services. Equipped with a customer base, a rival may then be ready to undertake further, much more significant infrastructure-based investments. This further reduces the barriers to entry and encourages the development of longer-term sustainable facilities-based competition and thereby encourages the efficient investment in infrastructure.

Third, a further barrier to entry may arise from the information asymmetry whereby an incumbent has superior knowledge of the market and its characteristics due to its accumulated experience in the market over the years. Without acquiring comparable experience, potential entrants might not find facilities-based entry viable. However, a phase of service-based competition can give them a chance to invest in experience before investing in their own physical infrastructure. Again, this reduces barriers to entry and thereby facilitates the longer term development of sustainable facilities-based competition and thereby encourages the efficient investment in infrastructure. It is a process by which intra-infrastructure competition would in the longer run lead to an inter-infrastructure competition.

For these reasons, mandated access is likely to encourage the efficient investment in infrastructure by lowering barriers to entry to potential entrants, increasing the scope for economically viable infrastructure investment in the relevant areas, thereby expanding the scope for the development of future facilities-based competition. In my opinion this process is likely to encourage the efficient investment in infrastructure in a way that is likely to encourage dynamic efficiency in mobile telecommunications in regional Australia.

The conclusions expressed above are reliant to a significant extent on a commensurate access price being determined. There is an extensive economic literature on the methods for determining efficient access prices that preserve the efficient incentives for access providers (and in the long-term the incentives for access seekers) to encourage the outcomes described above. I have not been asked to consider the specific mechanisms of setting access prices and therefore do not discuss this further. However, I state clearly that the opinion expressed in this section, namely that mandated access can encourage the efficient use of and investment in infrastructure, is reliant on an appropriate access pricing level and structure which preserves the desirable incentives (such as the incentives for the access provider to upgrade its network, upgrade extend its network, and invest in cost-saving technology, and for the access seeker to invest in its own infrastructure in the long term) being determined."

Competition on coverage does not drive efficient access seeker investment

VHA notes that the ACCC's analysis on page 34 of the Discussion Paper appears to look at the incentives placed on access seekers through the prism of coverage. The ACCC comments that 'declaration will remove the need to compete on coverage'.

VHA submits that this conclusion is not correct (or overstated in its effect on efficiency) for the following key reasons:

- ***No impact on 95.6% of Australian population:*** The declaration of roaming will only apply to those areas with less than 3 mobile networks. This means that the networks will be competing on speed of deployment within the footprint covered by the existing three mobile networks (as is currently occurring for 4G services). Declaration has no impact whatsoever on network deployment competition within the 3-network footprint, currently covering 95.6% of the Australian population.

Please note that this point is critical. The Discussion Paper appears to conflate non-price competition based on absolute coverage beyond 98.2%, with non-price competition based on relative levels of deployment of upgrades and new technologies within the 95.4%. They are entirely different concepts. Coverage-based competition within 95.4% is not affected in any way by declaration and will remain. Declaration will only affect competition based on absolute coverage beyond 98.2%, which is inherently tainted by Telstra's natural monopoly in any event and wholly ineffective.

- ***Investment decisions are independent of coverage-based competition:*** VHA's decisions whether to invest are not driven by a desire to maximise population coverage beyond 98.2%. This would make no sense, as these areas are natural monopoly areas and have been captured by Telstra – so VHA cannot match Telstra beyond 98.2%. VHA's decisions whether to invest are rather driven by an NPV analysis of its incremental costs as against its incremental revenues. VHA will invest to a point where the investments become NPV negative at the hurdle discount rate set by VHA. Network economics rather than coverage-based competition are therefore the key determinant of investment for VHA, not coverage-based competition (beyond 98.2%).
- ***Wholesale revenues create incentives to invest:*** . The existence of wholesale roaming revenues will continue to drive network deployment outside the 3-network footprint, consistent with build-buy decisions. Again, if access prices are set correctly, then access seekers will continue to have an incentive to invest. These issues are addressed in **Part B** of this submission in response to the ACCC's specific questions.

- ***Other efficiencies beyond competition drive investment:*** Alternatively, the networks may prefer to deploy a new service if it generates an efficiency improvement above existing technologies so enables cost reductions to occur, as was the case of 3G in replacing 2G networks. Greater factors than competition alone drive network deployments, including cost savings and perceived revenue benefits. These issues are addressed in **Part B** of this submission in response to the ACCC's specific questions.

Any 'free-riding' is arguably by Telstra, not by VHA

In Telstra's media announcements, Telstra has made frequent reference to VHA seeking to 'free-ride' on Telstra's network investment. In economics, a 'free rider problem' occurs when those who benefit from resources, goods, or services do not pay for them, which results in an under-provision of those goods or services.

There is no free-riding problem in relation to roaming. VHA is not being provided with roaming for free by Telstra. Rather, VHA will be paying a wholesale access charge that compensates Telstra for the efficient costs of supplying roaming. That wholesale charge would be determined by the ACCC to ensure that efficient investment incentives were maintained. Telstra will be fully compensated.

Moreover, the infrastructure to which VHA is seeking access is infrastructure that it is uneconomic for VHA to build itself. The most efficient outcome is therefore sharing of Telstra's infrastructure, not investment by VHA to attempt to over-build Telstra's infrastructure, as implied by Telstra. Such over-building would certainly be uneconomic and would be likely fatal for any MNO that attempted it

The actual economic problem is one of exclusionary behaviour and discrimination by a vertically integrated natural monopoly. Telstra is denying access to its natural monopoly to preserve the monopoly profits that it can generate from its retail business at the expense of Australian consumers, and particularly consumers located in regional Australia.

If there is a free-rider problem, the free riding is arguably on the Telstra side at the expense of the Australian tax payer. Telstra is benefiting from very significant subsidies in relation to the extension of its mobile network, so Telstra is the entity that is benefiting from resources provided by government without paying for them. Telstra is then attempting to keep those publicly-funded resources exclusively for itself [C-I-C].

A *quid pro quo* of Telstra receiving extensive public funding to enable it to build its mobile network in the natural monopoly areas should be that Telstra is required to share access, in a meaningful way, to the natural monopoly infrastructure that it has built with that public funding. Public funding should mean public access, not exclusive private use.

(c) Efficient investment by access providers

As with efficient investment by access *seekers*, the issue of efficient investment by access *providers* ultimately turns on the level of the access price set by the ACCC.

Telstra's incentives can be addressed in the pricing set for roaming

The emotive debate over the impact of declaration on Telstra's investment incentives is somewhat misguided (and this appears to be a long-term Telstra tactic on all roaming regulatory issues). The Australian Competition Tribunal has already determined that if access prices are set at an efficient level that this will automatically lead to the achievement of efficient investment by access providers.

The ACCC itself comments in the Discussion Paper:

“An infrastructure operator's legitimate commercial interests relate to its obligations to the owners of the firm, including the need to recover the costs of providing services and to earn a normal commercial return on the investment in infrastructure. Allowing for a normal commercial return on investment provides an appropriate incentive for the access provider to maintain, improve and invest in the efficient provision of the service.”

Specifically, the Australian Competition Tribunal has held that, in general terms, efficient investment by an access provider in infrastructure will be achieved when the access provider is just able to recover the costs of such investment (inclusive of a normal return on its investment). The Australian Competition Tribunal reasoned in *Telstra Corporation Ltd (No 3)* (2007) ACompT 3 (at [159]):

“In general terms, efficient investment by an access provider in the infrastructure necessary to supply telecommunications services will be achieved when the firm is just able to recover the costs of such investment (inclusive of a normal return on its investment). If the firm is unable to recover the costs of efficient investment, it will not undertake such investment. If the firm can recover more than the costs of its investment, it will have an incentive to expand investment beyond efficient levels. 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 a declared service. An access provider will have several sources of revenue available to it to help it to recover its costs.”

The Australian Competition Tribunal also reasoned in *Re Seven Network Limited (No 4)* (2005) ATPR 42-056:

“Accordingly, a balance must be reached between allowing a reasonable, but not excessive, return to access providers. Reaching this balance will assist in encouraging both the efficient use of, and investment in, infrastructure. Such balance, in turn, is likely to promote competition in the long-term.”

VHA submits that if the access price is set at an appropriate level, then this price will fully compensate Telstra for the costs of efficient investment. Accordingly, such a price will ensure that Telstra does not have a disincentive to invest.

As part of the Compass Lexecon report, Compass Lexecon independently addressed the specific question whether mandated roaming would encourage efficient use of infrastructure. Compass Lexecon reached the following conclusions, confirming the view of the Australian Competition Tribunal set out above:²⁴

“The conclusions expressed above rely significantly on a commensurate access price being determined. In the absence of an appropriate wholesale access pricing mechanism, detriments may arise. However, an appropriate wholesale access price can to a significant extent mitigate and countermand any potential detriments by preserving desirable and efficient investment incentives for the access provider; other measures such as targeted access holidays for upgrades or new sites can also potentially assist.

From a policy and economic efficiency perspective, the potential detriments are that mandatory access may give rise to a negative trade-off between static and dynamic efficiency. Specifically, while mandated access to mobile roaming services may stimulate competition in the short-run at the retail level, it may inefficiently reduce the access provider’s incentives to invest in infrastructure, in particular in the period where facilities-based competition is not yet viable. However, appropriate wholesale access pricing can mitigate a large proportion of this potentially detrimental effect.

First, an appropriate access price can preserve the access provider’s incentives to invest in quality upgrades of its own infrastructure, upgrades which benefit both the access provider and the access seeker. In particular, when the access seeker is operating in a differentiated market or is more efficient, investment spillovers may have a positive effect on access provider’s investment incentives. The fact that rivals also benefit from the investment is therefore not in itself detrimental to the access provider’s investment incentives; there is no detrimental “free-rider” effect in this sense.

Second, the declaration of mobile roaming infrastructure can enhance the access provider’s incentives to engage in efficient cost reduction, in particular if access prices are set at appropriately low levels. An appropriate access price can incentivize the access provider to invest more in cost reduction in order to maintain a competitive advantage at the retail level.

Third, the declaration of mobile roaming infrastructure can maintain appropriate incentives for the access provider to invest in extending its network reach. It is important to note that access

²⁴ Dr Derek Ritzmann, Domestic Mobile Roaming Declaration Inquiry Expert Report, 25 November 2016, pages 28-30.

providers commonly have two incentives for new investment in infrastructure: a stand-alone incentive; and a pre-emption incentive. The stand-alone incentive arises from the expected increase in profits after investment – absent strategic effects, firms would choose investment timing by trading off earlier gains in profit against lower investment costs later on. The pre-emption incentive to invest is the advantage from being the first to invest. If being a leader is more profitable than being a follower, then each firm has the incentive to pre-empt the other firm's investment. It is likely that both incentives exist in relation to the supply of mobile telecommunications infrastructure in regional Australia. It is therefore my conclusion that incentives to invest in network extension can be maintained if access is mandated in the presence of an appropriate wholesale access price."

The key point from Compass Lexecon's conclusions is that an appropriate access price can substantially mitigate a very large proportion of any adverse effects on investment. The next question is then whether any such adverse effects are likely to be material? If so, are any such adverse effects on investment outweighed by the positive benefits of greater competition, essentially the question at the heart of the LTIE test for this declaration inquiry.

Declaration does not materially alter Telstra's or Optus' incentives to invest

Telstra's public statements about the impacts of a roaming declaration appear to assert that because, as a monopoly, it has made an investment it should be protected from actions that foster and enhance competition. This logic belies the entire rationale for regulatory intervention to deliver efficiency and optimal outcomes for end-users.

VHA submits that any adverse effects on investment are not likely to be material. VHA has provided various evidence in **Part B** and **Part C** of this submission to evidence this view.

A common-sense analysis quickly verifies that this is correct. The only areas that will be the subject of declaration (being the areas beyond 95.4%) are those areas that are characterised by an absence of competition. In the absence of competition, there will be no meaningful competitive threat. In the absence of any meaningful competitive threat, there is no reason to engage in competitive rollout. The pre-existing competitive incentives for investment by Telstra in the Telstra monopoly areas (beyond 98.2%), in particular, are therefore very weak indeed, if not practically non-existent. Declaration will therefore not be materially affecting the current position.

Putting the issue of access pricing to one side, VHA considers that much of the debate over the impact of roaming on investment incentives has been overstated by Telstra. VHA further analyses this issue in detail below.

Telstra has a clear incentive to point to all its investment in regional mobiles in Australia over the last decade and to innocently proclaim that such investment would not have occurred if roaming had been

declared. With respect, VHA considers that such statements by Telstra are not substantiated by any evidence. They amount to mere assertion and are contrary to both economic logic and market reality.

VHA considers that the falsehood of Telstra's claims can be clearly demonstrated by first analysing the incentives to invest in the presence of declaration, then comparing this to the incentives to invest that will exist in the absence of declaration. On such a comparison, declaration will have little, if any, adverse impact on investment incentives in the Telstra monopoly areas.

First, VHA considers the incentives to invest in the presence of declaration:

- ***Declaration does not apply to 95.6% of population:*** As identified above, VHA acknowledges that the networks have competed to roll-out new technologies. However, the declaration of roaming will only apply to those areas with less than 3 mobile networks. MNOs will have a strong incentive to compete on speed of deployment within the 3-network footprint. Declaration has no impact on network deployment within the 3-network footprint, hence declaration has no effect on investment within 95.4% by population of the mobile coverage area.
- ***Network economics will drive investment:*** Telstra's scaremongering around investment is based on a premise that investment is driven by coverage-based competition (beyond 98.2%). However, this assumes that investment is revenue-driven, namely that if a network did not invest, it would lose revenue to its competitor that did invest. In fact, investment may be cost-driven. A new technology, such as 3G or 4G, can deliver significant cost efficiencies for an MNO against an old technology, such as 2G. Consequently, the desire to achieve cost reductions can itself create all necessary economic incentives to rapidly deploy a new technology. Such cost savings, for example, have resulted in substitution from 2G to 3G, and from 3G to 4G, as well as the progressive closure of legacy networks. Declaration has no impact on cost-based incentives to invest.
- ***Government subsidies will drive investment:*** A significant part of mobile investment in the natural monopoly area has involved subsidies provided to Telstra by the Australian taxpayer. Telstra has invested because it has received a windfall gain from the taxpayer, namely a subsidised base station in an otherwise uneconomic area. The existence of such a windfall gain provides a powerful incentive to invest. Declaration of roaming will not alter Telstra's incentives to bid for government subsidies. Moreover, declaration will create competition for such subsidies (as identified in earlier in this submission) because the other MNOs will have contiguous coverage. Competition for government subsidies may, in fact, increase incentives for Telstra to invest.
- ***Wholesale revenue will drive investment:*** As identified above, Telstra has pointed to coverage-based competition as driving investment without translating this into the economics of

network build. The network build decision is based on realisation of a positive NPV. Irrespective of competition, investment will only occur where the NPV of investment is positive. Given that Telstra will be receiving wholesale revenue from the other MNOs via the access charge, Telstra will be fully compensated for the costs of efficient investment. As such, there should be no disincentive for Telstra to invest.

In relation to the last point, Telstra may point to the loss of its retail monopoly profits as creating a disincentive to invest. The argument would be that Telstra can only profitably invest in a regional area if it receives 100% of the retail margin from that area (i.e., difference between wholesale and retail) and does not share that retail margin with access seekers. However, another way of saying this is that it is only profitable for Telstra to invest if it can capture a monopoly profit sufficient to recover its investment. With respect, this is not economically efficient investment in the manner contemplated by Part XIC of the Act!

Moreover, there is a very high risk that any such monopoly profit would simply be captured by the access provider (i.e., Telstra) without resulting in any investment - after all, in the presence of a monopoly, there is no competitive incentive to actually invest.

Bearing this in mind, VHA now considers the incentives to invest in the absence of declaration:

- ***Monopoly leads to very weak investment incentives:*** Telstra already has a coverage advantage of some 60% relative to the next largest network, hence Telstra's coverage is almost double the size of the next largest network. In such circumstances, there are limited incentives for Telstra to further invest in coverage its footprint – it is already the largest network and it knows that this position is unassailable given its control of a natural monopoly. A few further base stations will add little, if any, incremental benefit to its coverage claim. It is not competing with any rival in the monopoly areas. Accordingly, coverage-based competition creates very weak incentives for Telstra to invest in expanding coverage in the natural monopoly areas.
- ***Monopoly areas receive less investment and lower quality service:*** Telstra's track record of investment in the Telstra monopoly areas is not as exemplary as Telstra would have the ACCC believe. The natural monopoly areas of Australia currently receive worse quality service from Telstra than competitive areas of Australia. Network quality in regional Australia has been criticized in the various regional telecommunications reviews in the context of network reviews. This result is entirely consistent with the predictions of the weaker incentives on a monopoly in the absence of competition.
- ***Threat of regulation:*** Telstra has faced a constant threat that if it does not invest in regional Australia, it may be forced to by way of government regulation. However, this threat has generally weakened over the years and has instead been replaced by government subsidies.

Moreover, the threat of regulation has largely been manifested as a threat of regulatory intervention by way of declaration of roaming. Telstra's response to this roaming declaration inquiry suggests that it has not historically considered this threat of regulation to be credible.

- ***Rural investment has lagged metro investment:*** Consistent with the weaker incentives to investment in the absence of competition, investment by Telstra into regional Australia has lagged investment into metropolitan Australia. The natural monopoly areas are predominantly 3G, not 4G. Only after the commencement of this declaration inquiry has Telstra announced it will deploy 4G services into some of the Telstra monopoly areas. In this manner, investment has generally occurred only when there is a threat of investment by Optus or VHA, but not otherwise.
- ***Power over regional telecoms policy:*** Telstra's monopoly power in regional Australia has conferred Telstra with a very high degree of negotiating leverage in its dealings with government and politicians. Because roaming is not declared, there is no carrier other than Telstra who can substantially extend the geographic scope of network coverage in Australia. Thus, Telstra can credibly threaten not to invest unless it receives subsidies or favourable regulatory treatment. In effect, Telstra has a stranglehold over mobile network investment in the Telstra monopoly areas of regional Australia. If roaming were declared, then other MNOs could invest and Telstra would lose its power to dictate the future of regional telecommunications policy.
- ***Mature market:*** The Australian mobiles market is mature. As such, deployment of mobile towers has generally reached its maximum economic extent for the current level of population density. The Australian market is not one in which there is massive investment in further network deployments, rather any deployments are at the fringes with the benefit of government subsidies.

When considering these issues, VHA believes that the actual incentives on Telstra, as of today, to invest in the Telstra monopoly areas are very weak indeed. Such investment is occurring not due to any competitive threat or competitive incentive, but is occurring due to the provision of government subsidies and due to the cost efficiencies in substituting to more efficient technologies. The declaration of roaming will have no impact whatsoever on these existing incentives.

In this manner, VHA submits that Telstra's arguments regarding the adverse impact of declaration on its investment incentives are being dramatically overstated. Telstra's public and emotive comments amount to scaremongering and appear calculated to obscure the reality of the current investment debate (that is, that Telstra has little incentive to invest in any event as it is not subject to coverage based competition (beyond 98.2%) in the Telstra monopoly areas).

VHA submits that Telstra's various arguments and assertions should be taken with a grain of salt. Mere assertion and speculation is not a substitute for hard evidence and the application of tried-and-tested economic logic.

(d) Conclusions

Declaration will encourage the efficient use of, and investment in, regional mobile infrastructure:

- In the declaration inquiry in 2004, the ACCC concluded that the supply of roaming would achieve efficient use of, and investment in, infrastructure. While market circumstances have changed, the ACCC's analysis remains correct. The ACCC's conclusion from 2004 remains equally applicable today.
- The declaration of roaming will promote competition. Greater competition will create the necessary conditions for achievement of allocative, productive and dynamic efficiency gains. In turn, this will provide an efficiency dividend. Criterion 'c' (promoting competition) drives criterion 'e' (achieving efficient investment and use) in section 152AB(2).
- In the natural monopoly areas, by definition it is not efficient for access seekers to invest. Declaration will achieve efficient sharing of mobile network infrastructure in those areas. Roaming is the form of network sharing that delivers the most efficient use of infrastructure while also promoting competition.
- Outside the natural monopoly areas, declaration will be a catalyst in a positively reinforcing causation cycle. Declaration promotes competition by enabling access seekers to grow market share. Sustainable investment will occur by access seekers when they achieve sufficient market share. Such investment will promote long-term facilities-based competition.
- In relation to access providers, the emotive debate over the impact of declaration on Telstra's investment incentives is a mere distraction. It is a curious position to claim that only monopoly can drive efficient investment and that competition would undermine investment incentives. The Australian Competition Tribunal has recognised that, if access prices are set at an efficient level, this will automatically achieve efficient investment by access providers.
- In this manner, access pricing is the key to unlock the efficiency dividends derived from competition. If access prices are set efficiently, the Australian Competition Tribunal has held that this will maintain incentives for access seekers and access providers to efficiently invest, thereby preserving build/buy decisions.

- Declaration will not apply in the existing areas of competitive coverage between the three MNOs, comprising 95.6% of the Australian population. After declaration, the MNOs will continue to race to deploy new mobile technologies in the competitive coverage areas. Declaration will have no impact on such coverage-based competition as a driver of investment.
- In those areas where Telstra holds a coverage monopoly, Telstra has little practical incentive to invest. Telstra's track record of investment in the monopoly areas is not as exemplary as Telstra would have the ACCC believe. We assume that the ACC will seek further detailed evidence in this regard. As Telstra is not constrained by coverage-based competition in the natural monopoly areas, it follows that competition is not a driver for Telstra to invest in those areas.
- Scrutiny of Telstra's assertions is therefore warranted. The natural monopoly areas are currently predominantly 3G, not 4G, 5 years after Telstra launched 4G in metropolitan areas. Regional investment lags investment in metropolitan Australia. Network quality in regional Australia has been criticised in various public inquiries. Telstra continually claims that it requires subsidies to further invest.
- Pursuant to government regional policies, Telstra has received some \$2 billion in direct and indirect subsidies over the last decade to deploy mobile services in regional Australia. These subsidies create a "snowball effect". With each incremental subsidy Telstra has extended its coverage monopoly making it even less likely that other MNOs can compete effectively.
- Telstra is [C-I-C], thereby free-riding on Australian taxpayers for Telstra's own commercial gain. Declaration will deliver contiguous coverage and unlock real competition for incremental subsidies. This will enable other MNOs to invest in regional Australia, finally bringing competitive drivers to incremental investment.
- Even if potentially adverse impacts on investment were identified, the service description (or any Access Determination) can be structured to eliminate any such effects. However, VHA submits that appropriate access pricing is the key to achievement of efficient investment.

7. Service description can mitigate any risks

This section of VHA's submission addresses potential ways that the service description could be drafted to as to mitigate any risks to competition or investment.

While the ACCC is not required to formally consider the terms of an Access Determination unless and until it has declared a service, the ACCC can still consider within this declaration inquiry whether there could be scope for the terms of any AD to further mitigate any remaining risks.

VHA has focussed on four key issues: (a) technical feasibility; (b) geographic scope; (c) access pricing; and (d) investment exemptions. VHA considers that supply of roaming of the nature sought is technically feasible. [C-I-C]

VHA also considers that it would be theoretically possible to provide an access holiday to encourage investment, but the price mechanism for this to occur is not self-evident and may raise wider complications. Accordingly, the use of access pricing to maintain incentives to invest is by far the preferred solution.

Accordingly, VHA considers that there are a range of practical solutions that the ACCC could adopt in the service description and subsequent Access Determination to address any concerns that are raised. The ACCC has a high degree of flexibility in this regard.

(a) Roaming is technically feasible

As far as VHA is aware, there are no material technical impediments to the supply of roaming:

- by Telstra in the regional mobile coverage area comprising those geographic areas less than 3 mobile networks, where Telstra has coverage;
- by Optus in the regional mobile coverage area comprising those geographic areas less than 3 mobile networks, where Optus has coverage; or
- by VHA itself in the regional mobile coverage area comprising those geographic areas less than 3 mobile networks, where VHA has coverage.

VHA also notes as follows:

- ***International roaming:*** All three carriers already offer full roaming over their respective networks to customers of international carriers where those customers are visiting Australia (i.e., international roaming). An arrangement for the supply of international roaming is

broadly equivalent to an arrangement for the supply of domestic roaming. In a 4G LTE network, the two types of roaming services use essentially the same network architecture, although with slightly different interfaces.

- ***Radiofrequencies and handsets:*** Roaming is not limited by radiofrequency range and it is technically feasible for all three MNOs to supply roaming on each of the frequency ranges that they use to supply mobile services to their own end-users. Moreover, the handsets of each of the MNOs can roam onto each other's networks (with a SIM swap potentially required for some handsets, depending on the circumstances).
- ***Geographic area:*** Roaming can be confined to any geographic area supplied by a MNO. The functionality exists to switch roaming off (or on) on a base station by base station basis. If the ACCC were to specify geographic restrictions in relation to the roaming footprint, VHA considers that each of the MNOs would can limit the supply of roaming to match the footprint specified by the ACCC. Roaming has historically been offered on a limited footprint basis in Australia. The precise technical details are complex and we would need to provide a separate briefing to the ACCC if this was helpful.
- ***Speeds and functionality:*** Roaming is possible on both 3G and 4G networks at the same bandwidths and with the same functionality offered by each MNO to its own end-users. Moreover, it is possible to throttle speeds and alter routing arrangements to provide better functionality to the MNO's own end-users relative to those of a rival MNO.
- ***Implementation costs:*** VHA considers that the cost of implementing a roaming solution would be generally low. The revenues for Telstra Wholesale, for example, in supplying roaming to VHA would exceed the costs of doing so. The supply of roaming would therefore be profitable for Telstra Wholesale on a stand-alone basis.
- ***Network performance:*** VHA considers that there would be no material impact of roaming on network operation or performance. In those regional areas where VHA is seeking roaming, the traffic volumes are low and hence there are no concerns with congestion. VHA assumes that the relevant cellular sites in the different locations would already be dimensioned for seasonal variances as Telstra would already experience such seasonal variances for its existing customers.
- ***Cellular hand-off:*** VHA believes that the service description for roaming should specify that cellular handoff functionality is provided for roaming calls so that calls in progress do not drop out when a customer is handed between networks. Such functionality is technically feasible and part of most roaming arrangements globally. VHA would be concerned if such

functionality were not offered as it would impede the effectiveness of roaming arrangements. VHA is aware that this was historically an issue in Canada.

If issues of technical feasibility are raised by any MNO in submissions, VHA proposes that the ACCC issue an information request directed at the issues raised. In this manner, VHA can engage with its technical experts to confirm if those issues are legitimate and whether technical work arounds are possible and practicable. VHA would be concerned if Telstra or Optus raised concerns regarding technical feasibility given that neither of these carriers have raised such concerns in historic commercial discussions.

VHA notes that roaming agreements using the same technologies exist extensively throughout the world, evidencing that roaming is technically feasible. A database is contained on the GMSA website at <http://maps.mobileworldlive.com/>.

(b) Geographic scope of service description

The ACCC has raised several issues in the Discussion Paper regarding the appropriate terms of the service description. VHA responds to the various issues below and in response to the ACCC's specific questions.

Different geographic zones

VHA confirms that it would be technically possible to limit the declaration of a roaming service to some parts of regional Australia.

VHA considers that the service description should not include metropolitan Australia. VHA will provide a definition of 'metropolitan' and 'regional' in its response to the ACCC's separate information request.

There is no demand for roaming in metropolitan Australia. There are already three competing MNOs in metropolitan Australia and hence any third party that did seek roaming in the future would have sufficient choice and competition. Declaration of roaming in metropolitan Australia would have no effect on competition as it would not address the issues identified in the first part of this submission. There is no natural monopoly in metropolitan Australia causing any market failure.

VHA further considers, on the same logic, that it is not necessary to declare any parts of regional Australia where there are three competing MNOs. Again, there is no demand, there is sufficient competition, there is no beneficial effect, and there is no natural monopoly.

In the proposed declaration of roaming in 2004, the ACCC similarly proposed to 'carve out' the metropolitan areas. The ACCC commented:

“The description for the domestic inter-carrier roaming service ‘carves out’ those areas where the operator seeking roaming would be expected to deploy its own network. Thus, with respect to GSM networks, Melbourne, Sydney, Brisbane, Adelaide and Perth metropolitan areas are excluded from the service description”.

This then begs the question whether any roaming declaration should be:

- confined to government funded sites only; or
- confined to natural monopoly areas only (including the government funded sites); or
- confined to areas with less than 2 mobile networks (including the natural monopoly areas), being essentially the Telstra monopoly area; or
- confined to areas with less than 3 mobile networks, as proposed by the ACCC.

VHA submits that of these alternatives, the ACCC’s proposed “less than 3 mobile networks” solution is the optimal solution to address the underlying concerns identified in the first part of this submission. VHA reaches this conclusion based on an analysis of each of the four coverage alternatives, as identified below in turn below:

Option 1: Roaming confined to government funded sites only

The premise for declaration of roaming on government funded sites only would be that it is not in the Australian national interest for a carrier to receive a public subsidy, then to capture all the benefits of that subsidy on an exclusive private basis. Rather, the benefits of a public subsidy should be shared with the public. While this is a compelling argument, it raises a wider public policy concern for government rather than the ACCC.

From the perspective of the declaration criteria, a declaration of government funded sites only would not resolve the natural monopoly problem. Moreover, neither VHA nor Optus would be practically able to avail themselves of the service because there would be a significant coverage gap in the zone between their respective coverage and the government funded sites.

As identified in this submission, historically, the Australian Government did indeed impose such a regulatory obligation on Telstra to provide roaming access to those sites in which it had received a government subsidy. Clause 23(4)(a) of the *Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997* required Telstra to offer mobile roaming for government funded sites in regional towns around Australia with populations of over 500 people. This obligation existed at the time of the last roaming declaration inquiry and expired in 2007.

However, the practical difficulty with this previous obligation is that it did not address the contiguous coverage issue. Accordingly, Telstra could offer roaming access to coverage on isolated government funded sites without offering roaming access to coverage on any contiguous sites. Ultimately, this meant a coverage gap would exist between the government funded sites and the other MNO's existing networks. In the absence of Telstra offering a commercial roaming service to bridge the coverage gap, the roaming obligation was therefore of little practical utility to other MNOs.

For these reasons, confining the declaration only to government funded sites would address a public policy concern, but would not be practically useful to MNOs.

Option 2: Roaming confined to natural monopoly areas only

The premise for declaration of roaming in the natural monopoly areas only would be that these areas are not able to be replicated and are the cause of the market failure in regional Australia. Declaration of these areas would target the root cause of the market failure.

However, a coverage gap would still exist between the VHA and Optus networks and the natural monopoly areas that were declared. VHA and Optus would not be able to fill that gap until their market shares had grown to a level sufficient to undertake investment. The existence of the coverage gap would act as a deterrent to customers churning to VHA and Optus, so the market share growth may be comparatively low.

Moreover, the existence of a coverage gap may give consumers the impression that VHA and Optus have poor quality networks, rather than reduced coverage networks. It is highly unlikely that Telstra would bridge that coverage gap in the absence of regulatory intervention. Ultimately, the risk of adverse publicity may result in VHA and Optus not acquiring such a roaming service. Such a service declaration may be supported by economic theory, but would not work in practice.

Option 3: Roaming confined to areas with less than 2 networks

Effectively this footprint would be the Telstra monopoly area, plus any unique/monopoly coverage held by either Optus or VHA.

The premise for declaration of roaming in the Telstra monopoly areas is that these are the areas at the heart of the natural monopoly and spill over effect concern. These are the areas where it is currently uneconomic for any other MNO to invest due to natural monopoly and insufficient market share.

Declaration of the Telstra monopoly areas only would be a complete solution from the perspective of Optus given that the Optus coverage area is contiguous, in most instances, with the Telstra monopoly areas. However, it would leave a coverage gap for VHA. The question is then whether VHA would be

confident of receiving a commercial roaming arrangement to bridge the gap with either Telstra or Optus.

[C-I-C]

Option 4: Roaming confined to areas with less than 3 networks:

Effectively this would be all areas in which the MNOs have unique coverage (including the Telstra monopoly areas), plus those areas where there is an overlap in coverage between only two MNOs (i.e., the duopoly areas). [C-I-C]

The scope of the 'less than 3' solution also means that VHA is entitled to seek roaming that is contiguous to VHA's existing network boundary, meaning there is no coverage gap that could disadvantage VHA and its consumers. As such, a 'less than 3' solution is the most equitable solution from the perspective of ensuring that Optus is not advantaged relative to VHA.

For the reasons identified earlier in this submission, roaming will create incentives for investment by enabling the carriers to build market share. Option 4 best achieves the incentives for investment by promoting competition and growth in market share.

(c) Maintenance of investment incentives

In section 4.3.4 of the ACCC's Discussion Paper, the ACCC has identified that there are options to address the effect of declaration on investment incentives.

For the reasons set out earlier in this submission, VHA submits that such options are not required for two key reasons:

- (a) First, appropriate access pricing provides all the necessary incentives for investment, hence there is no need to create further investment incentive mechanisms (particularly as such mechanisms may introduce their own difficulties and complexities).
- (b) Second, declaration will have no impact, or only a trivial impact, on investment incentives. While declaration will remove coverage-based competition for the Telstra monopoly areas, such competition has not been a material driver of investment in the Telstra monopoly areas in any event, as identified above.

In relation to the first of these points, VHA asked international telecommunications expert Richard Feasey to express his opinion on whether such investment incentives would be appropriate and, if so, how they should be framed. Richard Feasey concluded:²⁵

“Some argue for excluding certain technologies from the scope of the declaration on the grounds that Telstra needs to capture profits from exclusivity in order to be incentivised to invest in such technologies. This accepts that Telstra would not provide access to these assets absent regulation, and so supports the case for a declaration. There is then a difficult distinction to be drawn between replicating the incentives which a unregulated firm would face when investing in a competitive market, and allowing monopoly rents to fund inefficient levels of investment. There are no obvious ways to make such distinctions, or to decide what period of exclusivity might be sufficient to ensure one but not the other.

In addition, excluding a technology from the declaration will mean that any competitive benefits which might otherwise be derived from providing access to that technology are similarly excluded. If a large proportion of consumers value the new technology and will not accept substitutes for it, then they will remain ‘captive’ to Telstra in just the same way as they are today. Excluding technologies therefore runs the risk of neutering the declaration.

The ACCC would need to balance the long term consumer benefits that might be derived from any additional network investment against the competitive losses that would arise from exclusivity. Telstra should not be allowed to earn supernormal profits to make investments which it would not otherwise make under competitive conditions (even if such investments have been made by Telstra in the past). Given this, and the additional challenges involved in deriving a price for roaming using some technologies but not others, my own view is that it would be better to safeguard investment by using appropriate pricing principles than by excluding particular technologies from the scope of the declaration.

If Telstra is required to supply domestic roaming in both the monopoly and the duopoly areas, then I see no additional consumer benefit (and some cost and complexity) from requiring Optus (or Vodafone) to supply as well. Optus (and Vodafone) would remain free to offer domestic roaming over its network on a commercial basis if it wished to do so..”

What would be the nature of any investment incentives?

Putting these conclusions aside, VHA has considered what such investments incentives could look like in practice if the ACCC were minded to consider them. VHA has the following observations:

²⁵ Richard Feasey, Issues arising in relation to the ACCC’s domestic roaming declaration enquiry, November 2016, paragraphs 9-12.

- ***Equivalence of metro and regional:*** The ACCC would ideally be seeking to create incentives for network upgrades, by Telstra, in the Telstra monopoly areas. Generally, this suggests that Telstra should be under some kind of obligation to ensure equivalence of network quality and service between the Telstra monopoly areas and other areas in which mobile network competition existed. Such a requirement could be imposed as a condition on any benefit that Telstra received, such as a government subsidy or an access holiday.
- ***Access holidays:*** In the areas that would not otherwise be subject to network upgrades by Telstra, it may be appropriate to allow Telstra to apply for a temporary access holiday if it sought to upgrade its network in those areas. In this manner, Telstra would gain a temporary ‘first mover’ advantage to reward the investment. However, VHA is very concerned that such a procedure could be open for abuse. VHA also notes the criticism directed at such access holidays by Richard Feasey in his independent report. However, declaration with an access holiday mechanism would be better than no declaration at all, as currently exists in regional Australia.

In its independent report, Compass Lexecon expressed support for access holidays as a means to offset any adverse effects on investment, if the ACCC were to identify any such adverse effects. Compass Lexecon commented in the following terms:²⁶

“Beyond appropriate wholesale access, other measures may also assist in preserving efficient incentives on the access provider, in particular access holidays where these are appropriately narrowly targeted and time-limited. An “access holiday” is simply a period of time during which a new infrastructure facility would not be subject to any access regulation; during this time, the owners of the new facility would be free of mandated access and other regulation. Access holidays may be appropriate in circumstances where it is difficult to preserve the correct investment incentives on the access provider through the wholesale access price; they can potentially operate as tools to remove economically inefficient delays in infrastructure investment by the access providers that would otherwise occur as a result of the regulatory truncation of profits problem. They do this by enabling the regulatory authority to overcome an inability to commit to ex post access prices, which prevents a hold-up problem and enables the socially-desirable investment to proceed. It is important to note that the limited purpose of access holidays is to preserve the access provider’s forward-looking investment incentives, which means that their application should be limited to certain upgrades and new sites at a maximum; they are not generally appropriate for already existing infrastructure.”

In summary, VHA is not persuaded by the need for any such mechanisms and submits that appropriate access providing would deliver a more efficient outcome than the existence of any such mechanisms.

²⁶ Dr Derek Ritzmann, Domestic Mobile Roaming Declaration Inquiry Expert Report, 25 November 2016, page 30.

However, if the ACCC were minded to consider such mechanisms, an access holiday may be one of the mechanisms that is most appropriate. If so, a condition of obtaining an access holiday should be that the access provider obtains sufficient equivalence between metropolitan and regional networks.

(d) Appropriate access pricing

As identified earlier in this section, appropriate access pricing is critical to the realisation of economic efficiencies in the context of declaration, as well as maintaining investment incentives.

As the ACCC has identified in its Discussion Paper, the ACCC normally considers regulated pricing for a declared service in a public inquiry for making a final access determination (FAD) after a service is declared. As VHA understands it, the ACCC is therefore not seeking submissions on pricing at this time.

However, the ACCC has asked the question whether regulated pricing would impact competition in the retail markets. VHA has already responded to this issue earlier in this submission by highlighting that pricing issues are critical to the maintenance of economic incentives for efficient investment and use.

VHA has addressed the access pricing issues in its response to ACCC Q48 as set out in Part B of this submission.

VHA has also provided with this submission a response by Richard Feasey and Frontier Economics to questions regarding the practicality of access pricing. This material demonstrates that it is indeed possible to identify appropriate access pricing that correctly balances the relevant considerations.

For the purposes of this submission, VHA does not express any view on which pricing methodology would be most appropriate for roaming. However, VHA has provided material for the ACCC's benefit that identifies some of the issues for access pricing that would arise in the context of an FAD. This material can give the ACCC a high degree of confidence that optimal access pricing can be identified.

VHA would be happy to provide further materials on access pricing at any time if this would assist the ACCC in this current declaration inquiry. However, VHA suggests it may well be sufficient for the ACCC to identify that optimal access pricing is possible, rather than reaching any view on the appropriate pricing methodology at this point in time.

(e) Conclusions

Even if adverse impacts were identified, the non-price terms can be structured to eliminate those effects:

- VHA has focused on four key issues: (a) technical feasibility; (b) geographic scope; (c) access pricing; and (d) investment exemptions. VHA considers that supply of roaming of the nature sought is technically feasible. [C-I-C]
- VHA also considers that it would be theoretically possible to provide an access holiday to encourage investment, but the price mechanism for this to occur is not self-evident and may raise wider complications. Accordingly, the use of access pricing to maintain incentives to invest is by far the preferred solution.
- Accordingly, VHA considers that there are a range of practical solutions that the ACCC could adopt in the service description and subsequent Access Determination to address any concerns that are raised. The ACCC has a high degree of flexibility in this regard

8. Conclusion: Declaration will promote LTIE

This last section of VHA's submission draws together the various conclusions from the previous sections and identifies whether declaring a mobile roaming service would be in the LTIE.

Declaration will ensure that Telstra's premium pricing is subject to effective competition by neutralizing Telstra's bundling of contestable and non-contestable services. The magnitude of the long-term welfare gains to end-users could run into the many billions.

Declaration will deliver long-term socio-economic benefits to Australians living in regional communities by enhancing any-to-any connectivity and delivering real mobile choice.

Competition will stimulate investment and deliver efficiency dividends. Efficient sharing of infrastructure will occur. Genuine competition for regional mobile subsidies will occur. Access seekers will be able to grow market share to invest. Innovative solutions to deliver mobile services in low density areas of regional Australia may become possible.

VHA concludes that declaration would result in a long-term material increase in welfare to end-users, relative to a situation where declaration did not occur. VHA considers that the benefits to consumers would be of a very high magnitude and would be long-term in nature. Conversely, there are few (if any) detriments.

Most of the welfare gains would benefit regional consumers, but welfare gains would also benefit metropolitan consumers as well. Given this conclusion and VHA's earlier conclusions, VHA submits that declaration should occur.

In 2004, the ACCC came very close to declaring a roaming service. The ACCC considered that the criteria for declaration were satisfied. However, the ACCC decided not to declare roaming given that commercial roaming arrangements were already in place. The situation in 2016 is very different to 2004. The market has consolidated from four mobile operators down to three. Telstra is the dominant MNO and its market shares in regional Australia are now very high indeed. A substantial market asymmetry exists. [C-I-C]

The current situation will not self-correct. Telstra has captured a natural monopoly and can choreograph the future of regional competition in its favour. In the absence of regulatory intervention, regional Australians will be left significantly worse off.

(a) Declaration will promote long-term interests of end-users

As the ACCC has highlighted, guidance on the interpretation of the concept of the LTIE was provided by the Australian Competition Tribunal in *Re Seven Network Limited (No 4)* [2004] ACompT 11 (23 December 2004). Relevantly, the Tribunal reasoned in that decision that:

- A ‘future with and without’ approach provides helpful guidance.
- ‘End-users’ include potential subscribers, not just existing subscribers.
- The ‘interests of end-users’ lie in obtaining lower prices (than would otherwise be the case), increased quality of service, increased diversity and scope in product offerings, and an acceleration in innovation.
- ‘Long-term’ is the period over which the full effects of the matter under consideration are felt and the existing and potential competitors have adjusted to the outcome, made investment decisions and implemented market strategies.
- Where there are mixed effects, the overall or net effect is relevant, assessed over the long-term.

Future with and without analysis

The future state of technology in mobile services has an inherent high degree of uncertainty. However, based on current trends it seems highly likely that mobile services will continue to increase in importance over the coming years. VHA expects that data speeds will continue to increase and mobile technologies will continue to evolve, including the deployment of 5G services in Australia at some point within the next decade.

VHA has the following view on the future *without* declaration of roaming:

- [C-I-C]

VHA has already set out an analysis of the effect on competition in the retail mobiles market that would arise if roaming were declared in Section 4 of this submission. To reduce the length of this submission, VHA does not repeat the analysis here. However, VHA does note that there are short-medium- and long-term competitive effects.

Bearing that previous analysis in mind, VHA has the following view of the future *with* declaration of roaming:

- [C-I-C]

(b) Consumer welfare gains are substantial

Based on the analysis undertaken for the purposes of this submission by VHA and a number of independent experts, VHA submits that the potential welfare gains to mobile end-users are likely to be very substantial indeed.

The precise welfare gains cannot be modelled or calculated without knowing the ACCC's favoured pricing methodology and proposed price points. In the time available, VHA has not been in a position to undertake that analysis with precision.

However, as identified earlier in this submission, VHA commissioned an independent report by The CIE. This report concluded that the effect of Telstra's higher pricing was to generate a total amount of \$1.4 billion extra paid for Telstra mobile phone services per annum. VHA considers that this is the upper bound of the potential welfare gains to consumers. Therefore, declaration has the potential to deliver up to \$1.4 billion per annum in welfare gains to Australian consumers.

As a practical matter, some of that \$1.4 billion will constitute legitimate price differentiation by Telstra by means other than leveraging of its monopoly coverage. The challenge is therefore to un-entangle the monopoly rent from a legitimate competitive premium.

Faced with this challenge, VHA asked telecommunications expert Richard Feasey to consider the following critical question:

“How could the ACCC assess the competitive (and hence consumer) benefits from declaring a domestic roaming service?”

Richard Feasey's detailed analysis of these issues is set out in his independent report. Richard Feasey relevantly comments:²⁷

“The consumer benefits that arise from such a declaration are difficult to quantify with precision. It is clear that a relatively small proportion of the total population – perhaps 2-3% - who currently have no choice of network provider would benefit from having such a choice. But they, and everybody else, benefit far more if competition in the metropolitan areas drives Telstra's nationally averaged prices down to more efficient levels. That will happen if Vodafone and Optus (and the MVNOS which they support) are able to offer a service that is broadly equivalent to that offered by Telstra to all of those consumers who value network coverage but must rely on Telstra today. That amounts to about a third of the country's population. In addition, consumers who cannot afford greater network coverage at the prices which Telstra

²⁷ Richard Feasey, Issues arising in relation to the ACCC's domestic roaming declaration enquiry, November 2016, paragraph 7.

charges today (and who therefore subscribe to Vodafone or Optus instead) may be able to afford greater coverage under more competitive conditions.”

Richard Feasey also relevantly comments, following analysis of the different classes of consumers and the value they respectively allocate to coverage:²⁸

“If this is right, Telstra would appear to have a ‘captive’ group of customers for whom it is currently the only credible provider who might represent about a third of the entire population and likely more of the revenues and profits. Importantly, the overwhelming majority of these consumers do not reside in areas where Telstra holds a monopoly network position, but in areas where there appears to be network ‘competition’. Despite this, it appears that they are currently paying prices that are substantially above the competitive level. Thus, we might reasonably expect that at least a third of the Australian population would benefit from a domestic roaming declaration, even if the rest of the population are willing and able to trade off coverage for lower prices, or attach no value to Telstra’s coverage.”

Assuming that this third of the population are already captive to Telstra, and given Telstra’s market shares in regional Australia, VHA speculates that roughly half of Telstra’s mobile customer base would become contestable in the presence of declaration.

While VHA is not able to speculate as to how much of the \$1.4 billion could be competed away because of roaming, it is clear from Richard Feasey’s analysis that it could be a very high proportion indeed.

This conclusion is confirmed by VHA’s analysis of Telstra’s profitability as a mobile operator in relation to those competitive markets in which VHA operates. Telstra is one of the most profitable mobile operators in the world. Telstra’s profits above other mobile operators are consistent with the \$1.4 billion per annum figure. VHA’s expectation is that if Telstra were subjected to effective competition, much of this excess profit would disappear, suggesting that a very large proportion of it does constitute monopoly rent.

²⁸ Richard Feasey, Issues arising in relation to the ACCC’s domestic roaming declaration enquiry, November 2016, paragraph 77.

(c) Conclusions

Please refer to the Executive Summary for the overall conclusions from this submission.

Please let us know if you wish to discuss any aspect of this submission.

Yours faithfully

Vodafone Hutchison Australia Pty Limited

5 December 2016