



Australian
Competition &
Consumer
Commission

**Inquiry into varying the exemption
provisions in the final access
determinations for the WLR, LCS and
PSTN OA services**

Final Report

Public Version

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List of abbreviations and acronyms

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
AER	Australian Energy Regulator
ATA	analogue telephone adapter
BBM	building block model
CACS Act	Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2010
CAN	customer access network
CBD	central business district
CCA	Competition and Consumer Act 2010
CSP	carriage service provider
c-i-c	commercial-in-confidence
DSLAM	digital subscriber line access multiplexer
EFTPOS	electronic funds transfer at point of sale
ESAs	exchange service areas
FAD	final access determination
FTM	fixed to mobile
HFC	hybrid-fibre coaxial
IAD	interim access determination
IPTV	internet protocol television
LCS	local carriage service
LSS	line sharing service
LTIE	long-term interests of end-users
MSAN	multi-service access node

MDF	main distribution frame
MNO	mobile network operator
MVNO	mobile virtual network operator
NBN	National Broadband Network
NGA	next generation access
POTS	plain old telephone service
PSTN OA	public switched telephone network originating access service
PSTN TA	public switched telephone network terminating access service
RAF	regulatory accounting framework
RKR	record keeping rule
RSP	retail service provider
SAOs	standard access obligations
SIOs	services in operation
SLAs	service level agreements
SMEs	small and medium enterprises
SSNIP	small but significant and non-transitory increase in price
SSU	Structural Separation Undertaking
TEBA	Telstra exchange building access
TPA	Trade Practices Act 1974
Tribunal	Australian Competition Tribunal
ULLS	unconditioned local loop service
VoIP	voice over internet protocol
WLR	wholesale line rental service

Executive summary

In September 2011, the Australian Competition and Consumer Commission (ACCC) commenced an inquiry into the exemption provisions included in the final access determinations (FADs) for three declared fixed line telecommunications services. These services are the Wholesale Line Rental (WLR), Local Carriage Service (LCS) and Public Switched Telephone Network Originating Access (PSTN OA) services.

The ACCC has decided to remove the exemption provisions.

The ACCC has decided to vary the FADs for the WLR, LCS and PSTN OA services to revoke the exemption provisions.

Having taken into account the matters in section 152BCA of the CCA, the ACCC considers that the exemption provisions should be removed. The ACCC has reached the conclusion that removing the exemptions will promote competition, the efficient use of and investment in infrastructure, and the long term interests of end-users. This final report sets out the ACCC's detailed reasons for its decision, including its assessment of the 'future with and without' the exemptions in the context its of assessment as to whether removing the exemption provisions will promote the long-term interests of end-users.

Further, the ACCC considers that finalising the inquiry now will promote industry certainty and stability and the interests of end-users.

The ACCC has already consulted twice in 2011 on the issue of exemptions, first in its public inquiry into making the FADs and again in its current inquiry. Interested parties have made extensive submissions and provided a substantial amount of information to the ACCC during the course of its inquiries.

After analysing the submissions and information provided to it, the ACCC has found clear evidence that the exemptions have not promoted competition in the exempt areas and are unlikely to do so in the future. In addition, the ACCC has concluded that the exemptions have the potential to undermine efficiency in the use of, and investment in, infrastructure.

Telstra remains the main provider of wholesale voice-only services and is exercising its market power to charge WLR prices that are significantly above supply costs.

The ACCC has received evidence that Telstra is charging a significantly higher price for supplying the WLR service in exempt exchange service areas (ESAs) than the FAD price of \$22.84. The FAD price is based on the estimated actual costs to Telstra of supplying the service. The ACCC has also been advised that rebates have been reduced or withdrawn since the exemptions took effect. In the ACCC's view, Telstra's ability to charge substantially more than the cost-based price for WLR supports a conclusion that Telstra has substantial market power in the exempt ESAs.

This conclusion is further supported by evidence that Telstra is the dominant provider of wholesale voice-only services.

A small number of access seekers offer wholesale voice services using their own infrastructure but these services are typically bundled with data services or have conditions that effectively increase the price of those services compared to Telstra's WLR prices. Some access seekers on-sell Telstra's resale voice services (WLR and

LCS) but they do not require their own infrastructure to do so and remain dependent on purchasing Telstra's resale services.

Access seekers submitted evidence that infrastructure investments to supply voice-only services are not commercially viable. This evidence showed that capital costs have only been recouped within a reasonable payback period when they are used to provide broadband or bundled broadband/voice services, as these services produce higher revenues than voice-only services.

Many access seekers have installed infrastructure that cannot provide a traditional fixed voice service (although it can provide a VoIP service¹). Access seekers have invested in infrastructure largely to meet growing retail demand for data (broadband) services. Investing in their own infrastructure (such as DSLAMs² and switching equipment) has allowed access seekers to differentiate their broadband and bundled broadband/voice services in retail markets for these products.

Some access seekers would need to augment their existing infrastructure investments to allow them to provide traditional voice-only services, either for self-supply or for wholesale supply in competition with Telstra's WLR and LCS services. Access seekers submitted that they would be unlikely to recover their costs (including a commercial rate of return) of such investments. Detailed modelling submitted by Macquarie Telecom and by Telstra's consultant (the Sundakov Report) confirmed that, on a range of cost and demand assumptions, there is no business case for access seeker investments in voice-capable DSLAMs at current WLR prices in the exempt areas.

Telstra has a cost advantage in providing voice-only services as the copper network assets required to provide voice services are largely sunk and substantially depreciated. In addition, Telstra benefits from economies of scale on its existing network.

On the basis of this analysis, the ACCC has concluded that there is little prospect of a wholesale market developing in voice-only resale services in the exempt areas.

Supply-side constraints and Telstra's dominance in retail services significantly limit the effectiveness of retail competition in restraining Telstra's exercise of its wholesale market power.

Telstra submitted that in supplying wholesale resale services, it faces a strong indirect constraint on its market power from intense retail competition. It submitted that retail competition has increased as a result of the increasing substitutability of alternatives to traditional fixed voice services.

Recent industry trends indicate that retail demand for voice-only products continues to decline in significance relative to demand for data services. An increasing proportion of consumers are shifting away from traditional voice-only products towards bundled voice/broadband, VoIP and mobile services. Further, the price

¹ Voice over Internet Protocol—This technology allows voice services to be provided over the internet. Additional investments by service providers or by their retail customers may be required to allow these customers to use VoIP services. 'Special services', such as EFTPOS, alarms, metering, and traffic lights, cannot currently be provided using VoIP.

² Digital Subscriber Line Access Multiplexer—DSLAMs are equipment, located in a telephone exchange, that are used to provide broadband and VoIP services in conjunction with the ULLS (see footnote 3) and switching equipment.

differential between these products (especially mobile services) and traditional voice-only services has decreased significantly.

The ACCC agrees that these trends indicate that these alternative services are increasingly viewed as substitutes for traditional voice-only services at the retail level. However, the evidence indicates that the different characteristics of these alternative services means that they are not seen as perfect substitutes to traditional voice-only products. Further, substitution of alternative services for traditional voice-only products is apparent only for some customer segments.

A substantial proportion of fixed line services—at least 40 per cent and up to 58 per cent—continue to be voice-only:

- Broadband services cannot be provided on some lines due to technical limitations such as large pair gain systems and other line ‘blockers’.
- Many corporate customers prefer traditional voice-only services for additional voice lines to their metropolitan offices. Corporate and government customers with legacy equipment or using ‘special services’ (like point of sale (EFTPOS) equipment, security systems, and metering equipment) cannot be served using IP-based services, without significant customer and/or access seeker investments.
- Certain residential customers require a traditional fixed line voice service and do not use broadband services.

Further, access seekers cannot provide resale services that are fully substitutable for Telstra’s resale services in terms of service quality. Importantly, the Service Level Agreements offered by Telstra for the ULLS³ are inferior to those provided for the WLR service, particularly in terms of fault restoration times, even when an access seeker purchases an improved service option from Telstra (at additional cost). Corporate and government customers often require a higher quality of service than can currently be provided using the ULLS.

These supply-side constraints on the substitutability of the ULLS for the WLR service mean that, for supplying a significant share of the retail voice-only market, there is no effective alternative to purchasing WLR, LCS and PSTN OA services from Telstra. The ACCC was provided with evidence that access seekers with their own infrastructure and spare capacity still purchase a large number of WLR services for this reason.

The exemption provisions have the potential to distort decisions on using, and investing in, infrastructure.

Access seekers submitted that Telstra’s ability to charge WLR prices in the exempt ESAs that are significantly above the cost of supplying those services has reduced their ability to compete effectively with Telstra for retail customers.

The exemptions may hinder the efficient use of access seekers’ existing DSLAM and switching infrastructure. Higher WLR prices in exempt ESAs increase the cost of

³ Unconditioned Local Loop Service—The ULLS essentially gives an access seeker the use of the copper wire between an end-user and a telephone exchange without a dial tone or carriage service. The ULLS must be purchased in conjunction with an access seeker’s own investment in infrastructure equipment in the exchange to allow the access seeker to provide voice and data services to its retail customers (with the exception of retail service providers that have invested in their own networks).

providing broadband and bundled broadband/voice services using the LSS,⁴ in conjunction with the WLR. Higher WLR prices may also reduce access seekers' ability to provide a competitively-priced suite of telecommunications services to corporate and government end-users. Any consequent loss of broadband and bundled broadband/voice customers by access seekers would mean that existing DSLAMs may not be efficiently utilised.

The ACCC recognises that the sunk copper-based assets owned by both Telstra and access seekers will become redundant when the NBN is rolled out and the copper network is de-commissioned. The ACCC considers that economic efficiency requires that the use of these assets should not be artificially reduced by above-cost pricing of resale services during the transition to the National Broadband Network (NBN).

The ACCC recognises that the roll-out of the NBN has significantly altered investment incentives for industry participants. In addition, uncertainty about the NBN deployment schedule, and the terms and conditions on which industry participants will gain access to the NBN further, increases investment risk.

During the transition to the NBN, access seekers will continue to have incentives to invest in infrastructure to provide fixed line services to retail customers, such as investments in switching equipment and transmission infrastructure, which are required to connect to the NBN.

There are likely to be much lower incentives to invest in copper-based infrastructure, such as DSLAMs, that will become redundant when the NBN is rolled out.⁵

The ACCC considers that maintaining the previous regulatory approach would be neither efficient nor conducive to promoting sustainable investment on the NBN—and therefore not in the long term interests of end-users—for the following main reasons:

- Investments in copper-based infrastructure, which were prompted by prices in exempt areas exceeding the cost-based FAD prices, would represent inefficient investment. These investments will not be used on the NBN.
- Telstra's ability to charge more than the cost-based FAD prices in the exempt areas could have the effect of reducing the use of Telstra's existing copper-based assets below an efficient level, prior to its eventual de-commissioning, even though the higher prices increase Telstra's overall profits.

⁴ Line Sharing Service—The copper line spectrum can be split (or shared) so that one carrier or service provider provides the voice services over the line and the LSS access seeker provides high-speed broadband services, through the use of its own DSLAMs, over the higher frequency part of the copper line. The LSS is only provided when there is a voice service on the line.

⁵ The differential between the regulated prices for ULLS and WLR services (which reflects the cost of supply differential) may still create an incentive for further DSLAM investments, depending on access seekers' overall assessment of the expected risks and returns of such investments.

1 Introduction

On 1 September 2011, the Australian Competition and Consumer Commission (ACCC) commenced a public inquiry into varying the final access determinations (FADs) for the WLR, LCS and PSTN OA services in respect of the exemption provisions. Section 152BCN of the *Competition and Consumer Act 2010* (CCA) allows the ACCC to vary a FAD. Part 25 of the *Telecommunications Act 1997* (Telco Act) provides for the ACCC to conduct a public inquiry into varying a FAD.

This report sets out the ACCC's final decision on the inquiry. The ACCC will vary the FADs for the WLR, LCS and PSTN OA services to remove the exemption provisions. Details of the ACCC's reasoning, including its assessment of submissions and other relevant information, are provided in this report.

1.1 Background

The issue of exemptions dates back to 2008, when the ACCC's WLR and LCS exemption orders were set aside by the Australian Competition Tribunal after Chime sought merits review. In 2009, the Full Federal Court set aside that decision following an application for judicial review of the Tribunal's decision by Telstra and remitted the matter back to the Tribunal, which then made a new decision in 2009 to grant the exemptions subject to certain conditions and limitations.

The first round of exemptions, which exempted 129 ESAs, came into effect from 30 December 2010.

On 20 July 2011 the ACCC finalised its decision on pricing for the six declared fixed line services and made FADs for those services.⁶ The FADs expire on 30 June 2014.

The ACCC noted that while pricing issues had been subject to extensive consultation and consideration by the ACCC since December 2009, the issue of exemptions had only been subject to public consultation since April 2011. The ACCC decided that it needed further information to allow it to fully consider and assess the complex and contentious issues raised during that consultation process.

For the purpose of making the FADs, the ACCC decided to maintain the exemption provisions while it conducted an inquiry into those provisions. The ACCC considered that maintaining the exemptions in the FADs would promote regulatory certainty and stability until the ACCC concluded its further and more detailed consideration of whether the exemptions should continue in the future.

The issues identified as requiring further information and consideration included the strength of competition in the exempt areas and the implications of the absence of a significant wholesale market in resale services (that is, WLR and LCS). Following the release of the FADs, the ACCC received information that Telstra is charging a higher price (than the FAD price) for WLR services in exempt areas than in non-exempt areas.

⁶ The six declared fixed line services are: the unconditioned local loop services (ULLS), the wholesale line rental (WLR) service, the line sharing services (LSS), the local carriage service (LCS), and the PSTN originating access (PSTN OA) and terminating access (PSTN TA) services.

On 1 September 2011, the ACCC commenced its public inquiry into varying the FADs in respect of the exemption provisions and released an issues paper. The issues paper set out the matters, and discussed the issues, on which the ACCC was seeking information and industry views.

In making its decision on whether to vary the FADs in respect of the exemption provisions, the ACCC has taken into account the criteria specified in subsection 152BCA(1) of the CCA. These criteria, and the ACCC's interpretation of the criteria, are set out in Appendix A of this report.

1.2 Consultation process

Submissions to the issues paper were received from nine parties:

- AAPT
- ACN Pacific
- Competitive Carriers' Coalition
- Frontier Economics (on behalf of Macquarie Telecom, AAPT and Optus)
- Herbert Geer (on behalf of Adam Internet, iiNet and Internode)
- Macquarie Telecom
- Optus
- Primus, and
- Telstra.

A list of all submissions received by the ACCC during its consultation processes, including additional material provided with submissions or in separate correspondence, is set out in Appendix B.

In considering the exemptions issue, the ACCC has had regard to submissions and information on the issue of exemptions received during its consultation on making the FADs. Some submitters resubmitted material submitted during the ACCC's previous consultations on exemptions and the ACCC has also had regard to that material.

The ACCC has proceeded to publish a Final Report on the exemptions variation inquiry after receiving extensive submissions in relation to the current state of competition and the effect of exemptions on the market for fixed line voice services in exempt ESAs.

The ACCC has consulted twice this year on the issue of exemptions, first in the public inquiry into making the FADs and secondly during the exemptions variation inquiry. Submissions to the issues paper were originally due on 30 September 2011. Following a Telstra request for an extension, the ACCC granted a two week extension (to 14 October) for submissions by all parties. Furthermore, parties have lodged additional submissions-in-reply to submissions from other parties.

The ACCC has publicly indicated that it would make a decision regarding the exemptions by the end of 2011.⁷

⁷ ACCC, *ACCC finalises fixed line telecommunications prices and delivers pricing certainty and stability to industry*, media release, 21 July 2011.

1.3 Structure of this report

This report is structured as follows:

Chapter 2 sets out the ACCC's consideration of the relevant markets, for the purposes of this inquiry, and its assessment of the state of competition in those markets.

Chapter 3 assesses the impact of the exemptions on infrastructure investment, current and prospective incentives for the efficient use of infrastructure, and the current and prospective environment for further infrastructure investment.

Chapter 4 assesses the impact of the exemption provisions on the costs of regulation and on any-to-any connectivity. The potential for modifying the exemption provisions to reduce regulatory costs and the regulatory burden is discussed.

Chapter 5 sets out the ACCC's final decision and its assessment of its decision against the legislative criteria including an assessment of the 'future with and without' exemptions.

The **Appendices** contain detailed summaries of submissions and other information considered by the ACCC during its inquiry.

2 Promotion of competition

In deciding whether to vary the FADs, section 152BCA requires the ACCC to take into account whether the determination will promote the long-term interests of end-users of carriage services or services supplied by means of carriage service (the LTIE). In determining whether something promotes the LTIE, one of the matters that the ACCC is required to consider is the extent to which it is likely to result in the achievement of the objective of promoting competition.

In assessing whether varying the FADs to remove the exemption provisions is likely to promote competition, the ACCC considers it useful to undertake the following three-stage analysis:

- first, identify the markets that are affected by the granting of exemptions
- second, assess the state of competition within those markets, and
- third, assess whether price and service offerings to consumers in those markets have improved, or are likely to improve, as a result of the exemptions compared to the situation without the exemptions—the ‘future with and without’ assessment.

Section 2.1 of this chapter identifies the markets relevant to assessing the impact of the exemptions. The ACCC adopts a purposive approach to market definition, which means that the definition of a relevant market cannot be separated from the particular issue under consideration. The market definition adopted for the purpose of this exemptions inquiry may not, therefore, necessarily be applicable for another purpose.

The second stage of the analysis—the assessment of the state of competition within the markets defined in section 2.2—is set out in section 3. Understanding the current state of competition in these markets is a necessary first step in assessing the likely future state of competition with exemptions and without exemptions.

The ‘future with or without’ assessment, which is set out in chapter 5, is a useful tool for the ACCC to use when assessing whether maintaining or removing the exemptions will better promote the LTIE objectives. This is the third stage of the ACCC’s analysis of the impact of the exemptions on the promotion of competition.

2.1 Definition of the relevant markets

In assessing whether varying the FADs to remove the exemption provisions would or would not promote competition in the relevant markets (and thus affect the LTIE), it is important to firstly identify the markets that would be affected by the decision.

Section 2.1.1 outlines the ACCC’s approach to market definition. In section 2.1.2, the content in the preceding issues paper in relation to market definition has been summarised. Section 2.1.3 summarises submissions to the issues paper on defining the relevant markets, including views on the potential for demand- and supply-side substitutability.

Section 2.1.4 contains the ACCC’s views on the product markets relevant to the inquiry. In forming its view on the market relevant for the exemptions inquiry, the ACCC has first considered the availability of substitutes for the supply of fixed-voice resale services which directly compete with Telstra’s supply of LCS, WLR and PSTN

OA. This is followed by an analysis of the retail markets, including trends and capacity for both demand and supply-side substitutability.

Section 2.1.5 discusses the ACCC's views on the geographic extent of the relevant markets.

2.1.1 General approach to market definition

To assist in assessing the impact of the exemption provisions in the FADs, the ACCC must first identify the relevant markets and assess the likely effect of the exemptions on the promotion of competition in each market.

Section 4E of the *Competition and Consumer Act 2010* (CCA) provides that a market includes any goods or services that are substitutable for, or otherwise competitive with, the goods or services under analysis. Accordingly, substitution is key to market definition.

Consistent with its previous decisions in relation to exemptions, the ACCC has adopted the approach to market definition as set out in the ACCC's *Merger Guidelines 2008*⁸ which focuses on two dimensions of substitution—the product dimension and the geographic dimension.

Substitution involves switching from one product to another in response to a change in the relative price, service or quality of the product that is the subject of the inquiry. There are two types of substitution:

- demand-side substitution, which involves customer-switching, and
- supply-side substitution, which involves supplier-switching.

There may be associated switching costs or difficulties which, if significant, can impede the substitutability of products.

A method to determine if a product or service is a 'close' substitute for the purposes of market definition is to use the hypothetical monopolist or 'SSNIP' test. This test establishes an area of product and geographic space over which a hypothetical monopolist would likely impose a 'small but significant non-transitory increase in price' (SSNIP). A SSNIP in the context of the hypothetical monopolist test usually consists of a price rise for the foreseeable future of 5 to 10 per cent above the price level that would prevail under competitive market conditions.

It is important to note that part XIC of the CCA does not require the ACCC to precisely define the scope of relevant markets for its inquiry. The ACCC has previously stated that it is sufficient to broadly identify the scope of the relevant market(s) likely to be affected by the exemption provisions. Accordingly, a market definition analysis under Part XIC should be seen in the context of shedding light on how removing the exemptions would or would not promote competition.

2.1.2 Previous ACCC views on market definition for the resale services

Previously, when considering the relevant markets for the resale services, the ACCC has adopted a narrow market definition. In its 2008 decisions on Telstra's exemption

⁸ ACCC, *Merger guidelines*, November 2008, available at: <http://www.accc.gov.au/content/index.phtml/itemId/809866>.

applications, the ACCC took the view that there were four separate markets, those being:

- the wholesale market for the supply of fixed-line voice services to access seekers
- the wholesale market for the supply of bundled fixed-line voice and broadband services to access seekers
- retail markets for the supply of fixed-line voice services to consumers, excluding carrier-grade and application layer VoIP and mobile services, and
- retail markets for the supply of bundled fixed-line voice and broadband services over copper, HFC or possibly, as a weaker substitute, wireless technologies.⁹

Regarding the geographic dimension of the market, the ACCC previously considered that the relevant geographic unit for considering the exemptions was the exchange service area.

In the September 2011 issues paper for this inquiry, the ACCC sought submissions on whether the ACCC's previous market definition remained appropriate for assessing the impacts of the exemption provisions.

In this context, the ACCC noted recent trends in the market towards greater substitution for fixed voice-only services. End-users appear increasingly willing to replace traditional fixed voice-only services for bundled products, VoIP and mobile services. The ACCC also noted access seekers' submissions to its 2011 public inquiry into making the FADs for the declared fixed line services that some corporate and government end-users have particular requirements that mean these customers may form a separate retail market.

Regarding the geographic dimension of the market, the ACCC noted that it had previously defined the ESA as the basic geographic unit because it best reflected the actual level of wholesale and retail competition in providing services. The ACCC noted that some corporate and government end-users require integrated service provision across a broad geographic area, which could imply a broader market definition for these services. However, it noted that access seekers could potentially meet the demands of these end-users by aggregating resale and/or 'ULLS-based supply' services obtained at the level of individual ESAs.

The ACCC sought further information in submissions to assist it in reaching a conclusion on the appropriate definition of the relevant markets for the purpose of the current inquiry into varying the exemption provisions.

2.1.3 Summary of submissions

AAPT

AAPT submitted that there are four relevant market dimensions:

- retail markets for voice only services
- wholesale markets for voice only services
- retail markets for bundled broadband and voice services, and

⁹ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemptions*, August 2008, pp. 58-9.

- wholesale markets for bundled broadband and voice services.¹⁰

AAPT indicated that there is limited supply-side substitutability as service providers must obtain WLR from Telstra to provide a fixed voice-only service to end-users.¹¹ AAPT is of the view that [c-i-c] [c-i-c].¹²

AAPT submitted that there are barriers to entry in the exempt ESAs, such as pair gain systems, sub-exchanging and ‘queue[s] to access exchange building and TEBA space’.¹³ Furthermore, AAPT considered that ULLS-based services are not substitutable for WLR and LCS or equivalent services, so the exemptions are likely to be detrimental to competition in the voice-only retail and wholesale markets.¹⁴

AAPT considered that there is no substitutability between voice-only services and bundled voice and broadband services.¹⁵

AAPT submitted a witness statement, in response to Telstra’s witness statement, which stated that:

carrier grade VoIP cannot at this time be considered to be substitutable for POTS [plain old telephone service] due to the operational limitations of the ULLS in respect of service restoration, features and other technical aspects, from the customers’ perspective or otherwise ...[and] cannot be considered an economic substitute for a single line POTS service.¹⁶

AAPT was of the view that mobile and VoIP services are not substitutes for traditional PSTN voice services for corporate customers because of ‘quality differences’ between the services. In addition, AAPT considered that corporate customers require a PSTN solution for customers wanting to contact them. AAPT submitted that, for residential consumers, VoIP may be substitutable for fixed voice services, although a back-up power supply is required.¹⁷

AAPT stated that there are separate markets for residential and corporate/government end-users. This is because corporate/government consumers require a broader suite of products. [c-i-c] [c-i-c].¹⁸

AAPT submitted that the ESA is not the appropriate geographic dimension for assessing the effects of the exemptions, as access seekers cannot workably obtain wholesale inputs on an exchange-by-exchange basis. AAPT also submitted that operational and marketing costs are not on an ESA basis, and decisions to supply are not based solely on conditions within single ESAs.¹⁹

ACN Pacific

ACN submitted that wholesale markets for resale products, and in particular, WLR, are uncompetitive. ACN considered that there is no viable alternative to the WLR

¹⁰ AAPT, *Submission by AAPT Limited in response to ACCC issues paper titled ‘Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services’* (AAPT submission), October 2011, p. 28.

¹¹ AAPT submission, p. 25.

¹² AAPT submission, p. 26.

¹³ AAPT submission, p. 28.

¹⁴ AAPT submission, p. 29.

¹⁵ AAPT submission, p. 25.

¹⁶ AAPT, Statement from [c-i-c] [c-i-c], 28 November 2011, p. 2.

¹⁷ AAPT submission, p. 30.

¹⁸ AAPT submission, p. 31.

¹⁹ AAPT submission, pp. 31–32.

service supplied by Telstra in the exempt ESAs, and the possibility that one will develop in the future is highly unlikely.²⁰

CCC

The Competitive Carriers' Coalition (CCC) stated that there is a market for fixed line voice-only services.²¹

The CCC considered that there is no 'economic case for investment for self-supply' of voice services.²²

The CCC stated that the alternative wholesale service provided over the ULLS would not have the potential to fully substitute for Telstra's resale services because of the different supply conditions and availability pertaining to the underlying ULLS.²³

Frontier Economics (on behalf of Macquarie Telecom, AAPT and Optus)

Frontier Economics submitted that voice-only services are distinct from bundled services. Regulation of the ULLS has benefited customers who purchased a bundle of ADSL and fixed voice services. Consumers of voice-only services still require WLR, LCS and PSTN OA services.²⁴

Frontier Economics further submitted that the voice market is still significant and based on [c-i-c] [c-i-c]²⁵

Frontier Economics submitted that Telstra overlooked small business/SMEs (small and medium enterprises) in its submission.²⁶ Some of these businesses require a fixed voice line for other services, such as EFTPOS, fax machines and alarms, for which VoIP is not a suitable substitute.²⁷

Frontier Economics submitted that, if VoIP is a technical substitute for PSTN voice services, it may not be an economic substitute. Frontier Economics submitted that there does not seem to be any evidence of retail supply of stand-alone VoIP and it is likely to only be economic to supply both voice and data via ULLS.²⁸

Herbert Geer Lawyers (on behalf of Adam Internet, iiNet and Internode)

Herbert Geer submitted that there are wholesale markets for voice and bundled voice/broadband services, as well as retail markets for voice and bundled voice/broadband services.²⁹

Macquarie Telecom

Macquarie Telecom proposed the following definition of the relevant markets for the purpose of the exemption variation inquiry:

²⁰ ACN Pacific, *Submission in response to the ACCC's issues paper* (ACN Pacific submission), October 2011, p. 1.

²¹ CCC, *Submission in response to the ACCC's issues paper* (CCC submission), October 2011, p. 1.

²² CCC submission, p. 2.

²³ CCC submission, pp. 2–3.

²⁴ Frontier Economics, *Reply report on Telstra submissions supporting geographic exemptions from access regulation. A report prepared for Macquarie Telecom, AAPT and Optus* (Frontier Economics submission), November 2011, p. 11.

²⁵ Frontier Economics submission, p. 11.

²⁶ Frontier Economics submission, p. 11.

²⁷ Frontier Economics submission, p. 11.

²⁸ Frontier Economics submission, p. 13.

²⁹ Herbert Geer, *Submission in response to the ACCC's issues paper*, October 2011, p. 5.

- the downstream supply of fixed voice-only services
- the downstream supply of bundled voice and data services
- the upstream supply of inputs to fixed voice-only services, and
- the upstream supply of inputs to bundled voice and data services.³⁰

Macquarie Telecom considered that there is a market for voice-only services that is distinct from a market for bundled voice and broadband services. It stated that bundled offerings meet the needs of some, but not the majority of, end-users. Macquarie Telecom submitted that 60 per cent of Telstra's fixed-lines in operation are voice-only.³¹ It stated that some voice-only customers purchase lines for alarms and point of sale equipment [c-i-c] [c-i-c]. For these customers, bundled voice and broadband services are not considered effective substitutes for voice-only services. Other end-users may acquire alternative data services, or not have any interest in broadband services.³²

In relation to the substitutability of retail services, Macquarie Telecom stated that mobile services are not adequate substitutes because of service quality differences including call clarity, network reliability and the personal, mobile nature of mobile services.³³

Macquarie Telecom submitted that VoIP services are not effective substitutes for reasons including inability to trace a caller's location, vulnerability to a loss of power and call quality variation.³⁴

Macquarie Telecom considered that there are separate residential and corporate/government market segments for retail voice services. Macquarie Telecom submitted that residential consumers choose a service based on price and service performance, whereas corporate/government consumers are most interested in service performance, reliability and responsiveness. Residential consumers require discrete service offerings, which they purchase 'off-the-shelf', while corporate/government consumers require a total service solution which they purchase using tenders.³⁵

Macquarie Telecom stated that the geographic dimension of wholesale or retail markets for corporate and government services should be national. It considered that differentiated services do not exist to meet the needs of customers located in specific geographic areas. Moreover, a business/government customer is likely to require services in multiple ESAs.³⁶

Optus

Optus submitted that while alternative wholesale suppliers do exist, they do not sufficiently restrain Telstra's market power. [c-i-c] [c-i-c].³⁷

³⁰ Macquarie Telecom, *Submission in response to the ACCC's issues paper* (Macquarie Telecom submission), October 2011, p. 11.

³¹ Macquarie Telecom submission, p. 11.

³² Macquarie Telecom submission, pp. 11–12.

³³ Macquarie Telecom submission, p. 19.

³⁴ Macquarie Telecom submission, p. 19.

³⁵ Macquarie Telecom submission, p. 20.

³⁶ Macquarie Telecom submission, p. 21.

³⁷ Optus, *Submission in response to the ACCC's issues paper* (Optus submission), October 2011, Conf. p. 3/Pub. p. 3.

Optus submitted that the relevant services—LCS, WLR and PSTN OA—are differentiated (from DSLAM-based services) and that for some purchasers of the exempted services, alternative sources of supply (access seekers' products) will not be acceptable substitutes.³⁸

Optus submitted that alternative services are not a substitute for wholesale customers which require:³⁹

- voice-only services
- a multicast service or complex services
- national coverage
- ubiquitous coverage within the exempt ESAs
- a 'switchless long distance' service to supply the long distance market
- not to pay switching costs (moving from Telstra to another carrier).

Optus submitted that residential and corporate/government customers have different requirements to residential customers.⁴⁰

Optus stated that there are a range of complex services, traditionally supplied over Telstra's PSTN network, which are required by its corporate and government customers. Optus stated that it is able to offer the majority of its products using its 'Optus Evolve' IP-based VPN platform delivered via Ethernet or the ULLS. [c-i-c] [c-i-c]⁴¹

Optus submitted that the nearest equivalent service to the WLR service offered by Optus Wholesale is the residential grade, RBT (Residential Broadband and Telephony).⁴² [c-i-c] [c-i-c]⁴³ Optus submitted that it generally sells bundled voice and broadband products rather than voice-only products to its wholesale customers.⁴⁴

Primus

Primus considered that the key market is for fixed line voice services. It considered that no viable new sources of fixed line voice services are likely to emerge in light of the transition to the NBN.⁴⁵

Primus stated that limitations of ULL-based services reduce their substitutability for the resale services.⁴⁶

Telstra

Telstra made extensive submissions on the market definition and substitutability of wholesale and retail services for the resale voice services and related retail products.

³⁸ Optus submission, Conf. p. 12/Pub. p. 12.

³⁹ Optus submission, Conf. p. 13/Pub. p. 12.

⁴⁰ Optus submission, Conf. p. 15/Pub. p. 15.

⁴¹ Optus submission, Conf. p. 16/Pub. p. 15.

⁴² Optus submission, Conf. p. 17/Pub. p. 17.

⁴³ Optus submission, Conf. p. 17/Pub. p. 17.

⁴⁴ Optus submission, Conf. p. 13/Pub. p. 13.

⁴⁵ Primus, *Submission in response to the ACCC's issues paper* (Primus submission), October 2011, p. 2.

⁴⁶ Primus submission, p. 2.

Telstra submitted that there are a range of competitive substitutes available to end-users of fixed voice services, including fixed broadband, bundled fixed broadband and voice, and mobile services.⁴⁷ Telstra stated that there are a number of retail service providers of each of these types of services in the exempt ESAs.⁴⁸

Telstra cited Attachment F to its submission, the Cave Report, and stated that ‘it is also necessary to recognise the role of self-supply by ULLS operators of resale products... The availability to a purchaser of WLR of this option (switching to ULLS access) represents a viable form of substitution for WLR.’⁴⁹

Citing the Sundakov Report, Telstra submitted that it is ‘uncontroversial’ that DSLAM/ULLS services are close substitutes for WLR, LCS and PSTN OA.⁵⁰

Substitutability of VoIP services

Telstra submitted that the ACCC’s view on the substitutability of VoIP services for traditional fixed voice services was ‘outdated’, as recent market data show that there is strong uptake of VoIP products.⁵¹ Telstra submitted that carrier-grade VoIP is ‘economically and technically substitutable for traditional PSTN voice services’.⁵²

Telstra submitted that the [c-i-c] [c-i-c] Statement explains that carrier-grade VoIP services can provide an equivalent voice service to traditional PSTN services, provided the data information packets which are transmitted over the IP network are afforded priority over other data packets in the network (thereby ensuring that voice packets continue to be transmitted when the network is congested).⁵³ The Statement also stated that ‘an industry-wide agreed solution is in place today for calling emergency services on VoIP’ and that ‘the voice technology to be used in the NBN is exclusively VoIP’.⁵⁴

Substitutability of mobile services

Telstra stated that mobile voice services had also become increasingly substitutable since the ACCC’s previous exemption inquiries, with the quality, features and price of mobile services ‘improv[ing] significantly’ in recent years.⁵⁵ Telstra submitted that [c-i-c] [c-i-c].⁵⁶

⁴⁷ Telstra, *Telstra’s response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services - Issues Paper* (Telstra submission), Pub. p. 23/Conf. p. 27.

⁴⁸ Telstra submission, Pub. p. 23/Conf. p. 27.

⁴⁹ Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment F – The ladder of investment and the exemption provisions - A report for Telstra* (‘Cave Report’), October 2011, p. 9.

⁵⁰ Telstra submission, Pub. p. 24/Conf. p. 28; Castalia Strategic Advisors, *Inquiry into Varying the Exemption Provisions in the Final Access Determinations for the WLR, LCS and PSTN OA Services* (Sundakov Report), 14 October 2011, p. 7.

⁵¹ Telstra submission, Pub. p. 24/Conf. p. 28.

⁵² Telstra submission, Pub. p. 28/Conf. p. 32.

⁵³ Telstra submission, Pub. p. 25/Conf. p. 29; Telstra attachment J, para [22].

⁵⁴ Telstra attachment J, para [44].

⁵⁵ Telstra submission, Pub. p. 28/Conf. p. 33.

⁵⁶ Telstra submission, Pub. p. 28/Conf. p. 33.

Telstra submitted that, as concluded by KPMG and the Sundakov Report, ‘the evidence is compelling’ that mobile voice services are a close substitute for fixed line voice services in Australia⁵⁷

Substitutability of bundled voice and broadband services

Telstra submitted that bundled voice and broadband services are a close substitute for voice-only services, and should fall within the same market.⁵⁸ The popularity of fixed voice and data bundles has increased significantly, while [c-i-c] [c-i-c].⁵⁹

Corporate and government market

Telstra submitted that the market for corporate and government customers is ‘strongly competitive’, and that the need for an access seeker to purchase resale WLR did not jeopardise an access seeker’s ability to win contracts to supply these customers.⁶⁰

Geographic dimension

Telstra submitted that the ESA is the appropriate geographic dimension,⁶¹ and that it would be ‘inappropriate and unnecessary for the Commission to identify a broader (or narrower) geographic dimension for the relevant markets for corporate and government customers’.⁶²

2.1.4 ACCC views on definition of the relevant product markets

For the purposes of considering the exemptions, the functional activities of interest are the supply of wholesale inputs into voice-only services and the retail supply of these services. The relevant scope of the product market at the wholesale and retail level is discussed in this section.

Wholesale supply of inputs into voice-only resale services

The ACCC notes that access seekers purchasing the resale services may typically purchase a bundle of WLR, LCS and PSTN OA services. All three of these resale services are required inputs for an access seeker to provide a suite of retail PSTN voice services (including access, local calls, STD and international calls, fixed to mobile calls) over Telstra’s network.

The ACCC is of the view that, at its narrowest, the relevant market definition would include alternative wholesale voice-only products that act as substitutes for the WLR, LCS and PSTN OA services. Suppliers of equivalent products would provide a direct constraint on Telstra’s supply of the resale services.

It appears that there is a limited supply of such substitute wholesale products. Service providers have submitted that it is not ‘commercially viable’⁶³ to supply equivalents to the resale services. Generally, access seekers have invested in infrastructure for the purposes of self-supply, rather than wholesale supply.

⁵⁷ Telstra submission, Pub. p. 29/Conf. p. 34.

⁵⁸ Telstra submission, Pub. p. 29/Conf. p. 35.

⁵⁹ Telstra submission, Pub. p. 29/Conf. p. 36.

⁶⁰ Telstra submission, Pub. p. 30/Conf. p. 37.

⁶¹ Telstra submission, Pub. p. 42/Conf. p. 53.

⁶² Telstra submission, Pub. p. 43/Conf. p. 54.

⁶³ Optus submission, Conf. p. 13/Pub. p. 13.

Optus submitted that Optus Wholesale's Residential Broadband and Telephony product (RBT) is the nearest equivalent service to the WLR service,⁶⁴ however [c-i-c] [c-i-c].⁶⁵ Optus submitted that it generally sells bundled voice and broadband products rather than voice-only products to its wholesale customers,⁶⁶ [c-i-c] [c-i-c].⁶⁷

Where supply of wholesale equivalent services is available, it is usually subject to a variety of restrictive conditions imposed by the reseller.

The details of these conditions are discussed in Appendix I. Such conditions can include [c-i-c] [c-i-c].⁶⁸

These conditions significantly increase the cost to service providers of alternative voice-only resale services relative to Telstra's resale services, and accordingly limit the degree of substitutability. In addition, the ACCC understands that alternative voice-only resale services may be only offered as part of a bundle with data services, to encourage service providers to purchase both services from the reseller.

The ACCC notes that service providers may purchase end-to-end call services as an alternative to purchasing PSTN OA and sourcing their own switching and transmission inputs. For example, a service provider could purchase WLR and LCS directly from Telstra but purchase end-to-end call services from a wholesaler such as AAPT or Optus. The ACCC notes, however, that this should not be considered a substitute service to the PSTN OA, because the alternative wholesaler will still need to acquire PSTN OA from Telstra as an input for its wholesale end-to-end voice call service.

The substitutability of alternative wholesale voice products are described in the section below.

Retail markets

Despite limited wholesale competition for the supply of voice-only resale services, competition in retail markets (customer switching to vertically integrated retailers of voice-only services or to other products substitutable for fixed line voice services) has the potential to provide an indirect constraint on Telstra's supply of WLR, LCS and PSTN OA.

Broadly speaking, there are trends in retail markets towards greater demand-side substitution for fixed voice-only services. End-users appear increasingly willing to switch to bundled voice and broadband, VoIP and mobile services. Importantly, however these trends are still developing. In addition, while many end-users may perceive the alternative retail services as effective substitutes, there appear to be particular segments of the markets for which there is little substitutability for a fixed voice-only service.

In terms of wholesale market constraints, there appears to be enduring limitations to substitution to alternative means of supply. In particular, there are limitations to supplying fixed voice services via alternative wholesale services.

⁶⁴ Optus submission, Conf. p. 17/Pub. p. 17.

⁶⁵ Optus, Optus response to ACCC request for market information, pp. 3–4. See Appendix F for more details on the ACCC's request for market information.

⁶⁶ Optus submission, Conf. p. 13/Pub. p. 13

⁶⁷ Optus, Optus response to ACCC request for market information, pp. 3–4.

⁶⁸ See Appendix I.

The following sections analyse both the degree of demand-side substitutability in retail markets for fixed voice-only services and the degree of substitutability offered by alternative sources of supply for voice resale services.

Demand-side substitutability

The resale services are used to provide retail voice services. Therefore, it is necessary to consider alternative products that end-users can purchase to acquire voice services, as they provide an indirect constraint on the supply and pricing of the resale services. The wholesale demand for resale services is derived from the demand for retail voice services provided over the fixed line network.

Retail customers can obtain voice services in a number of ways. For example, they can purchase:

- a suite of traditional voice-only services provided over a fixed line network
- voice services as part of a bundle of voice and broadband services provided on a fixed line network
- a Voice over Internet Protocol (VoIP) service, typically offered as a bundle with a broadband service, such as a Naked DSL product, and
- voice services provided over a wireless network, such as a mobile voice or bundled mobile voice and data service.

There are trends in the market towards greater substitution for fixed voice-only services. End-users appear increasingly willing to replace traditional fixed voice-only services for bundled products, VoIP and mobile services.

While the general trend in the retail market is towards greater substitution for fixed voice-only services, there is still demand for voice-only services. The ACCC considers that the degree of substitutability differs for particular market segments or customers. For instance, some businesses may require voice-only lines for complex services, alarms and point of sale equipment such as EFTPOS.⁶⁹ Access seekers have submitted that other services, such as bundled voice and broadband services, are not effective substitutes for voice-only services.⁷⁰ Some alternative retail services may be considered a strong substitute by particular market segments, such as younger consumers, whereas for other segments they may be less substitutable.

The degree of substitutability of a suite of traditional voice-only services with alternative means of purchasing voice services is discussed below.

Bundled voice and broadband products

In previous decisions, the ACCC defined the bundled voice and broadband market as separate from the market for traditional voice-only services. This approach largely reflected the significant proportion of customers who either purchased only voice services or purchased broadband services separately from their voice service (often from a different supplier).

However, recent trends indicate both increasing demand for data services by retail customers and an increasing adoption of bundled voice and broadband services, especially by residential customers.

⁶⁹ Macquarie Telecom submission, pp. 11–12.

⁷⁰ Macquarie Telecom submission, pp. 11–12.

Table 2.1 shows that the number of fixed voice-only services in operation (SIOs) in Australia has been declining steadily since September 2007, when the reporting requirements commenced under the Telstra Customer Access Network Record Keeping Rule (CAN RKR).⁷¹ Meanwhile, the number of broadband subscribers in Australia has been increasing, as shown by table 2.2 below.

Table 2.1: Fixed voice-only services in operation

	Sep-07	Jun-08	Jun-09	Jun-10
Fixed voice-only SIOs (millions)	6.8	6.5	6.2	6.1

Source: Telstra CAN RKR reports 2007-2010.

Table 2.2: Fixed line broadband subscribers in Australia, for ISPs with more than 1,000 subscribers

	Dec-08	Jun-09	Dec-09	Jun-10	Dec-10	Jun-11
Total fixed line broadband subscribers⁷² ('000)	5,090	5,102	5,092	5,129	5,379	5,405

Source: Australian Bureau of Statistics (ABS), Internet Activity, Australia, June 2011 (The ABS notes that its data for some broadband subscriber numbers for Dec 2008 and June 2009 are unreliable)

The increasing demand for data services is further illustrated by ABS figures which show that the total volume of data downloaded per quarter has increased from 55,434 terabytes in June 2008 to 277,202 terabytes in June 2011.⁷³

Access seekers submitted that 60 per cent of Telstra's fixed lines in operation remain voice-only, citing the ACCC's *Snapshot of Telstra's Customer Access Network* as at 31 December 2010.⁷⁴ The most recent CAN RKR data shows that 5.6 million services in operation were voice-only, out of a total of 9.66 million services in operation, or 58 per cent.⁷⁵ Access seekers, such as Macquarie Telecom, have submitted that this data proves that 'there is a market for voice-only services which is distinct from a market for bundles of voice and broadband services'.⁷⁶

Telstra submitted that the number of voice-only lines shown in the *Snapshot* overstates the number of voice-only customers. It proposed [c-i-c] [c-i-c]⁷⁷

The ACCC considers that Telstra customers who purchase a voice product provided via the copper network and a broadband product provided via Telstra's HFC network are not voice-only customers. Removing Telstra's HFC customer numbers from the

⁷¹ ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, September 2011, p. 57; ACCC, *Telecommunications competitive safeguards for 2009 – 2010*, p. 19.

⁷² This includes all broadband subscriber numbers quoted by the ABS (including DSL, cable, fibre) minus satellite, fixed wireless, mobile wireless, and other broadband. Due to unreliable satellite data, an assumption has been made for the number of satellite subscribers in Dec 2010.

⁷³ Australian Bureau of Statistics, 8153.0 – Internet Activity, Australia, June 2011 and June 2008.

⁷⁴ Macquarie Telecom submission, p. 5.

⁷⁵ ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 September 2011.

⁷⁶ Macquarie Telecom submission, p. 1.

⁷⁷ Sundakov Report, Attachment G to Telstra's Submission, pp. 17-18; Telstra submission, conf. p. 36.

CAN RKR figures reduces the percentage of voice-only lines to [c-i-c] [c-i-c] per cent of total SIOs as at June 2011. This indicates that a substantial share of lines remain voice-only.

The ACCC has considered whether the share of lines that are voice-only should be reduced further to reflect the purchase by some customers of multiple lines to a single premises. This approach calculates the proportion of customers that are voice-only rather than the proportion of lines that are voice-only. The ACCC recognises that a small number of these lines may be currently used for dial-up internet access.⁷⁸ However, the ACCC considers that many of these lines represent multiple voice lines to business premises, which are used either for voice services or for services like fax machines, point of sale (EFTPOS) equipment and alarms (which cannot readily be provided using IP-based services).

In the ACCC's view, it is not relevant, for the purpose of assessing substitutability, whether these lines are purchased individually by separate customers or purchased as multiple lines to a single premises. The ACCC has concluded that these secondary lines form part of the relevant market for the purposes of this inquiry.

Nevertheless, there is evidence that end-users, particularly residential customers, are increasingly acquiring bundled voice and broadband services. The Australian Communications and Media Authority (ACMA) recently reported that 52 per cent of Australian residential consumers acquire bundled communication services. Of these, 95 per cent include fixed voice as part of the bundle and 84 per cent include internet services.⁷⁹

The ACCC notes that consumers are likely to be attracted to a bundled service by its price. The price of acquiring fixed voice and broadband services in a bundle is usually less than the total price of acquiring the two services separately. Consumers may also prefer to deal with a single service provider and receive only one bill for voice and broadband services, which is a standard feature of a bundled service.⁸⁰

Furthermore, retail service providers often offer 'whole of business' discounts to corporate and government end-users, if the customer purchases all of its communications needs from the same supplier. Indeed, corporate and government customers often prefer the convenience of dealing with a single supplier. Optus has submitted that it is an important factor for retailers to be able to offer 'whole of business' deals for large business and government customers.⁸¹

The potential for substitutability of bundled services for traditional voice is also illustrated by the relative prices for bundled services compared to voice-only services.

Telstra has submitted modelling which indicates that the current pricing of bundled voice and data services, for a range of different voice usage levels (average, upper-

⁷⁸ As at June 2011, approximately 5 per cent of all internet connections were dial-up. Source: Australian Bureau of Statistics, 8153.0 – Internet Activity, Australia, June 2011.

⁷⁹ ACMA, *Communications Report 2009–10 series, Report 2 – Take-up and use of voice services by Australian consumers*, November 2010, p. 26.

⁸⁰ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications: Final decision and class exemption*, August 2008, p. 42.

⁸¹ Optus submission, Conf. p. 16/Pub. p. 16.

middle and high), is likely provide an effective substitute for some voice-only users in the event of a SSNIP of 5–10 per cent.⁸²

Similarly, analysis undertaken by the ACCC (see table G.3 in appendix G), indicates that there is a range of bundled products available that may be substitutable for voice-only customers (for varying levels of usage) based on price. In particular, the price level of these services mean that a voice customer may be able to substitute a voice-only product for a bundled product with little or no change in their monthly bill.⁸³

However, whether a particular customer will switch would depend on their awareness/acceptance of the bundled product as well as their willingness to commit to a contract and to bear any upfront costs associated with acquiring the bundle (see appendix G).

The ACCC does not consider that it is necessary to reach a concluded view on whether bundled voice and broadband products are likely to be in the same market as voice-only products for the purposes of the exemptions variation inquiry.

VoIP

Broadly speaking, there are three different kinds of VoIP services available to consumers:

- POTS⁸⁴ emulation via soft-switching and the ULLS—The access seeker uses the normal voice band of the copper line to connect a standard (POTS) telephone to a Multi-Service Access Node (MSAN) or a DSLAM with a voice card that can terminate both DSL and voice-band traffic. This approach has been adopted by carriers such as Optus.
- Carrier-grade VoIP via an Internet Access Device and the ULLS/LSS—The end-user connects a standard telephone to an Internet Access Device that converts the voice call to VoIP at the end-user premises. The call is transferred to the exchange and the access seeker's equipment over the broadband connection, and involves class-of-service prioritisation to ensure call quality. This approach has been adopted by carriers such as iiNet, Internode and TPG.
- Application layer VoIP via the ULLS/LSS—The access seeker provides a voice service through a full IP solution over the broadband connection, using either a VoIP handset or software on a computer to emulate a telephone, for example, Skype or non-Class of Service specified VoIP services from a carrier.

Consistent with previous decisions,⁸⁵ the ACCC considers that VoIP services provided via POTS emulation are technical substitutes for a traditional voice service because the experience from the consumer's perspective is identical.

⁸² Sundakov Report (Attachment G to Telstra's Submission), pp. 12–25.

⁸³ Note that this substitution is expected to be largely one-sided. A voice-only customer could substitute to a bundled voice and broadband product, in response to a SSNIP for voice-only services, and simply not use the data service. However, a bundled customer would be less likely to move to a voice-only product in the event of a SSNIP for bundled products because these customers are likely to still want a data service.

⁸⁴ A Plain Old Telephone Service (POTS) is a traditional voice service provided on the fixed line network.

⁸⁵ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemptions*, August 2008, p. 43..

Furthermore, the costs to end-users of a POTS emulation voice service are unlikely to vary significantly from the costs of fixed line voice services. For the purposes of this inquiry, the ACCC will refer to these services as POTS emulation to distinguish them from other VoIP services

The ACCC previously considered that carrier-grade and application-layer VoIP was unlikely to be substitutable for fixed line voice services due to quality and service provision limitations.⁸⁶ However, it is likely that the substitutability of carrier-grade VoIP for traditional voice services has improved and is increasingly improving in both quality and relative cost.

Major carriers, such as iiNet, TPG and Internode, offer carrier-grade VoIP solutions using a range of analogue telephone adapter (ATA) solutions and/or VoIP-enabled phones, usually sold as part of a bundle with broadband services.⁸⁷

Analysis undertaken by the ACCC (shown at table G.4 in appendix G), illustrates that many of these bundled services are priced within a range that many end-users, particularly those with medium and high usage of voice services, could switch from a voice-only service to a VoIP service for little or no change in cost, in the event of a SSNIP of the resale services.

The ACCC acknowledges Frontier Economics' submission, however, that there does not seem to be any evidence of retail supply of stand-alone VoIP.⁸⁸

The ACCC acknowledges that, in order to use a carrier-grade service, consumers must acquire either a VoIP-enabled phone or modem with ATA technology. This equipment may involve upfront costs to end-users, which may limit the substitutability of these services. The ACCC understands that, for residential customers, most service providers will supply this equipment at no cost to the customer if the customer signs up to a service contract for a period, typically 12 or 24 months.

In the past, the ACCC has acknowledged that VoIP service quality variation may limit its substitutability for fixed voice-only services. However, recent research by the ACMA indicates that VoIP services are increasingly seen as substitutes for traditional voice services in terms of quality. The ACMA has identified that 18 per cent of VoIP users have chosen a VoIP service that directly substituted for their fixed line voice service.⁸⁹ The ACMA has also found that 84 per cent of residential customers and 68 per cent of small and medium enterprises (SMEs) using a VoIP service indicated they were either satisfied or very satisfied with their VoIP service in a 2010 survey.⁹⁰ The ACMA has noted that increasing take-up of bundled VoIP and broadband services was a factor in reducing PSTN revenue and connections.⁹¹

⁸⁶ *ibid.*, p. 44..

⁸⁷ See carrier websites on VoIP products and related equipment.

⁸⁸ Frontier Economics submission, p. 13.

⁸⁹ ACMA, *Take-up and use of voice services by Australian consumers*, 2009–10 Communications report series: Report 2, 18 November 2010, p. 30.

⁹⁰ ACMA, *Australian consumer satisfaction with communications services*, 2009–10 Communications report series: Report 3, 2 December 2010, p. 27.

⁹¹ ACMA, *Changing business models in the Australian communications and media sectors: Challenges and response strategies*, 2009–10 Communications report series: Report 4, 13 January 2011, p. 6.

The ACMA expects the number of VoIP users to increase due to improved familiarity with the technology as well as increased supply-side and demand-side interest.⁹² Consumer familiarity is likely to increase over time, particularly because the primary type of voice service to be provided over NBN Co's fibre network will be a form of carrier-grade VoIP.

The adoption of carrier-grade VoIP by end-users as a substitute to fixed line telephony, however, is still developing. The ACMA has noted a Roy Morgan survey that 16 per cent of Australians use VoIP in the home, as at June 2010.⁹³ The ACMA report, however, did not distinguish between application-layer VoIP services (including Skype) and carrier-grade VoIP.⁹⁴ Telstra's expert Sundakov stated with regard to VoIP that [c-i-c] [c-i-c]⁹⁵ The ACCC notes that this early stage of development is reflected in the customer figures of leading providers of carrier-grade VoIP services—iiNet reports having 163,100 VoIP customers (as at June 2010) and TPG reports having 107,000 VoIP customers (as at July 2011).⁹⁶ These figures currently represent a small fraction of overall fixed line SIOs.

Regarding VoIP functionality, the ACCC has previously noted the issues regarding facilitating connection to emergency services numbers and availability during power outages.⁹⁷ These issues have been raised by some access seekers⁹⁸ and Telstra's submissions have also sought to address these issues. Sundakov has noted that [c-i-c] [c-i-c]⁹⁹ The ACCC also notes Telstra's witness statement submission, Attachment J to Telstra's submission, regarding the Communications Alliance arrangements to address the issues of emergency services calls via VoIP.¹⁰⁰ The ACCC considers that these may be factors that affect substitutability for some segments of the market, but may be less of a concern for others.

On the whole, the ACCC considers that bundled VoIP and broadband services are increasingly substitutable for fixed line voice services, although the degree of this substitutability is likely to vary for different segments of end-users.

Due to its lower service quality, the ACCC maintains the view that application-layer VoIP represents a weak substitute for fixed line voice services. Unlike carrier-grade VoIP, application-layer VoIP is subject to inherent quality issues associated with the 'best efforts' nature of such services, which causes quality to drop when there is internet congestion.

Mobile services

Another potential source of demand-side substitution is mobile services. The ACCC must consider the likelihood of consumers switching to mobile services in the event of a SSNIP in fixed voice services.

⁹² ACMA, *Take-up and use of voice services by Australian consumers*, 2009–10 Communications report series: Report 2, 18 November 2010, p. 19.

⁹³ ACMA, *Take-up and use of voice services by Australian consumers*, 2009–10 Communications report series: Report 2, 18 November 2010, p. 13.

⁹⁴ *ibid.*

⁹⁵ Sundakov Report (Attachment G to Telstra's Submission), p. ii.

⁹⁶ iiNet 2010 annual report; TPG 2011 annual report.

⁹⁷ ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, September 2011, p. 57.

⁹⁸ For example, AAPT submission, pp. 23–24.

⁹⁹ Sundakov Report (Attachment G to Telstra's Submission), p. 15.

¹⁰⁰ Telstra attachment J, para [27].

Previously, the ACCC has stated that, from a demand perspective, mobile use may be viewed by the majority of consumers as a complement to their traditional fixed line services rather than as a substitute.¹⁰¹ In reaching this view, the ACCC noted, among other factors, that the increase in mobile phone subscriptions has not been fully ‘offset’ by an equivalent decrease in fixed services.¹⁰² This view was supported by Dr. Rob Albon’s finding that:

... the relationship between fixed-line and mobile networks does involve some true ‘substitution’ ... [but] ... the more dominant characteristic between fixed-line and mobile networks appears to be one of complementarity, relating to calls between fixed-line and mobile networks – fixed-to-mobile (FTM) and mobile-to-fixed (MTF).¹⁰³

Recent evidence suggests that the degree of fixed-to-mobile substitution in the Australian market is changing. As shown by table 2.3, fixed line SIOs have fallen in recent years while the number of mobile SIOs has grown rapidly.¹⁰⁴ In addition, figure 2.1 shows that mobile-originating voice traffic has continued to grow as a proportion of total voice traffic, while total voice traffic has been falling. Mobile traffic increased from 16.4 per cent of total voice traffic minutes in 2005–06 to 38.2 per cent in 2009–10.¹⁰⁵ It should be noted, however, that this trend has been affected by the decrease in fixed voice minutes used for dial-up internet, which has fallen significantly as mode of internet access.

Table 2.3: Fixed and mobile SIOs in Australia (in millions)

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Fixed	11.4	11.6	11.7	11.5	11.3	10.9	11.0	10.7	10.6
Mobile	12.7	14.3	16.5	18.4	19.8	21.3	22.1	24.2	26.0

Source: ACMA communications report 2009-10.

The ACCC also notes recent research which indicates that an increasing number of Australian households choose to not acquire a fixed line service and instead use mobile-services as their primary mode of voice communication. Based on survey data, the ACMA reports that the proportion of Australian consumers going mobile-only for voice communications has reached 14 per cent,¹⁰⁶ compared to around 6 per cent when Dr. Albon undertook his analysis in 2006.¹⁰⁷

¹⁰¹ ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR—Final decision*, July 2009, p. 22.

¹⁰² ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR—Final decision*, July 2009, p. 22.

¹⁰³ R. Albon, ‘Fixed to Mobile Substitution, Complementarity and Convergence’, *Agenda*, vol.13, no. 4, 2006, pp. 319–320.

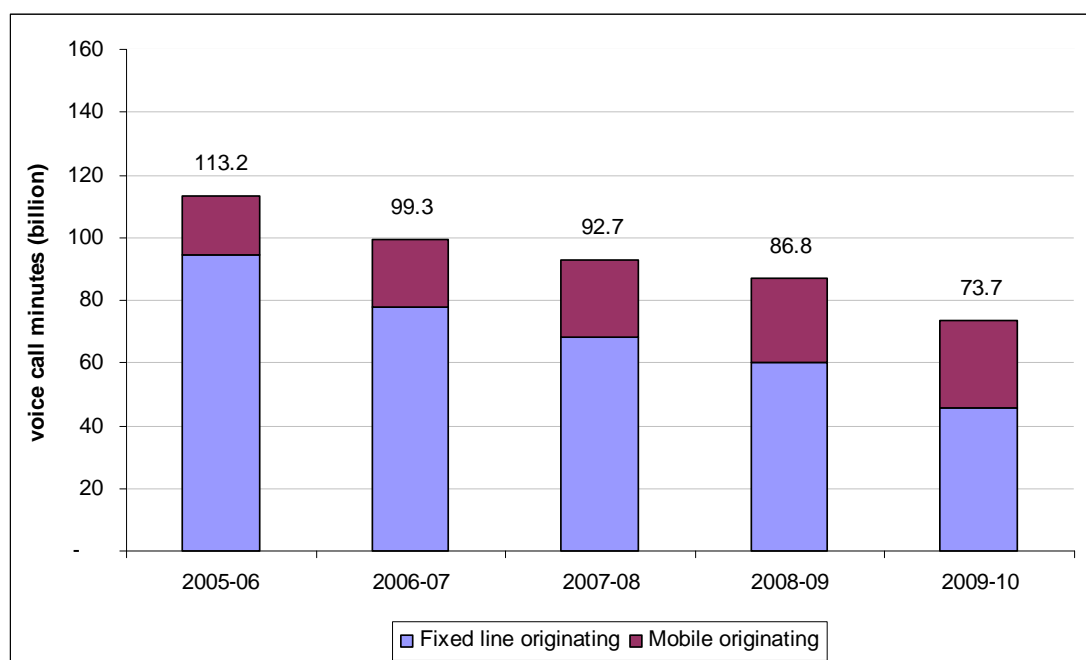
¹⁰⁴ ACCC, *Telecommunications competitive safeguards for 2009 – 2010*, Table 2.2.

¹⁰⁵ ACCC, *Telecommunications competitive safeguards for 2009 – 2010*, Figure 2.1.

¹⁰⁶ ACMA, *Communications Report 2009-10 series, Report 2 – Take-up and use of voice services by Australian consumers*, November 2010, p. 21.

¹⁰⁷ R. Albon, ‘Fixed to Mobile Substitution, Complementarity and Convergence’, *Agenda*, vol.13, no. 4, 2006, p. 313.

Figure 2.1: Fixed and mobile call minutes 2005–06 to 2009–10¹⁰⁸



Source: ACCC RAF RKR reports 2005–06 to 2009–10 and Telstra annual reports.

It is important to note that the trend towards increasing fixed-to-mobile substitution is not uniform across all market segments. According to ACMA research, the preference for fixed voice services over only mobile services increases as the age of respondents increases. Younger residential customers are most likely to ‘cut the cord’; around one third of mobile phone users aged 18 to 24 reported having no fixed line connection in their household.¹⁰⁹

It appears that consumers with low incomes are much more likely to go ‘mobile-only’ than are high income consumers. Recent research by the ACMA found that consumers with low incomes are increasingly using mobiles as their sole communication device. The ACMA’s research indicates that consumers with a household income of less than \$25,000 and only one phone type are more likely to have a mobile phone (22 per cent) than a fixed line phone (21 per cent).¹¹⁰ The ACCC understands that this may be due to the ongoing fixed costs, such as line rental, associated with a fixed line service. Conversely, a prepaid mobile service can be acquired with relatively few ongoing fixed costs.

The ACMA has also found household structure plays a part in whether consumers choose to go ‘mobile-only’. Mobile users living in shared households or under boarding arrangements are less likely to have access to a fixed line service at home, compared to those living with others with whom they share a personal relationship.¹¹¹

¹⁰⁸ ACCC, *Telecommunications competitive safeguards for 2009–2010*, Figure 2.1.

¹⁰⁹ ACMA, *Communications Report 2009–10 series, Report 2 – Take-up and use of voice services by Australian consumers*, November 2010, pp. 21–23.

¹¹⁰ ACMA, *Community research into consumer behaviours and attitudes towards telecommunications numbering and associated issues*, May 2011, p. 19.

¹¹¹ ACMA, *Communications Report 2009–10 series, Report 2 – Take-up and use of voice services by Australian consumers*, November 2010, p. 23.

The ACCC understands that business customers may be less likely than residential customers to make a complete substitution from fixed to mobile. AAPT submitted that businesses prefer to offer customers a fixed line voice contact number over a mobile number.¹¹² This likely reflects the lower cost of untimed local calls on the fixed line network compared to the cost of timed calls to mobile numbers.

From a price perspective, the ACCC's telecommunications services index shows that since 1997–98, the price of mobile services has declined at a greater rate than fixed line services as shown in table 2.4.¹¹³

Table 2.4: Telecommunications services index, 1997–98 to 2009–10

	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10
PSTN services	100.0	95.0	88.4	83.2	81.0	81.9	82.1	81.1	75.8	71.6	67.7	65.9	62.0
Mobile services	100.0	94.9	82.4	76.8	75.2	75.9	73.5	64.0	59.7	58.3	55.1	50.8	51.8

Source: Data from Telstra, SingTel Optus, AAPT, Primus, Vodafone, Hutchison, Vodafone Hutchison Australia (VHA), and Virgin Mobile; pricing plans and other published information.

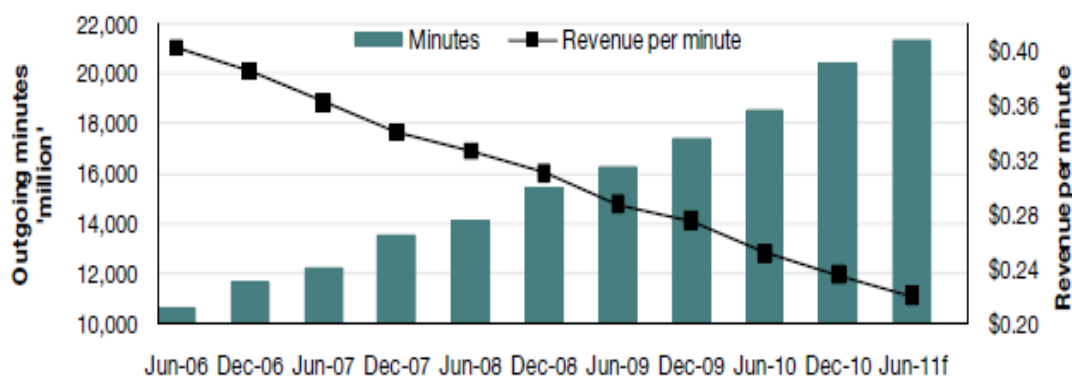
The introduction of 'bucket plans'¹¹⁴ for mobile services has made local calls and calls to other mobiles more attractive to residential consumers. This appears to be reflected in both a decline in the cost to end-users of mobile calls and an increase in mobile usage, as shown in figure 2.2 below.

¹¹² AAPT submission, p. 30.

¹¹³ ACCC, *Telecommunications competitive safeguards for 2009–2010*, Table 7.1.

¹¹⁴ Bucket plans offer a fixed monetary value that can be spent on particular call services. The price paid for the plan is, in general, substantially less than what the provider states the value of included calls to be.

Figure 2.2: Revenue per minute and minutes of use by mobile subscribers, 2006 to 2011 (forecast)



Source: CBA, Telstra, SingTel Optus, HTA

In general, the mobile price premium is less apparent now than it was a decade ago.¹¹⁵ Increasingly competitive plans, which include a large volume of call minutes and SMS, are being offered by mobile service providers. Analysis undertaken by the ACCC (shown at table G.5 in appendix G) illustrates that many mobile price plans (for different levels of usage) are now within a range that could see further demand-side substitution in the event of a SSNIP.

Some pricing features of a fixed line service are not typically replicated by mobile service providers and as such will likely limit the extent of fixed-to-mobile substitution in particular market segments. In particular, fixed line networks provide for untimed local calls, which will most likely continue to be an attractive feature to end-users who make lengthy local calls. In 2009–10, the average call duration on a fixed line SIO was four times that on a mobile SIO,¹¹⁶ which potentially highlights the tendency of end-users to utilise fixed line rather than mobile services for long local calls.

Conversely, in other market segments, mobile services are perceived to offer additional value because of the convenience provided by mobility. Mobile services are commonly substituted for fixed line services in certain situations, such as when a consumer is away from their home or place of business. Mobile devices also offer a wider range of functionality, such as the ability to send and receive SMS messages¹¹⁷ and, for some newer devices (e.g. smartphones), email, instant messaging and data.

On the basis of the evidence above, the ACCC considers that for some groups of consumers, mobile services represent a substitute rather than complement for fixed

¹¹⁵ Australian Communications and Media Authority (ACMA), *Communications Report 2009–10 series, Report 2 – Take-up and use of voice services by Australian consumers*, 18 November 2010 (ACMA report). p.21; Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment F – Mobile voice services as a substitute for fixed-line voice services* (‘KPMG Report’), October 2011, p. 22.

¹¹⁶ Based on data from ACCC, *Telecommunications competitive safeguards for 2009–2010*, Figure 2.1 and Table 2.2. As previously noted, fixed line volume data may also include dial-up internet minutes.

¹¹⁷ Some fixed line service providers may also give customers the ability to receive SMS on a home phone.

line voice services. The ACCC notes, however, that for others—for example, many older consumers and business customers—these services may not be economic substitutes. The ACCC does not consider it necessary to reach a concluded view on whether mobile services are in the same market for the purposes of this inquiry.

Conclusion

The ACCC notes there are trends in retail communications market towards greater demand-side substitution from fixed line voice-only services to other services capable of providing voice functionality.

However, the ACCC also considers that demand side substitution is still developing. Voice-only lines still represent up to 58 per cent of total fixed line SIOs, indicating that a large number of end-users have not actively substituted to other products to-date. As noted above, there are also a number of market segments for which substitution would be less likely than others.

The ACCC does not consider it necessary to reach a concluded view on product market definition in this matter. For the purposes of its analysis, the ACCC has considered Telstra's market power (and therefore the effect of the exemptions) on the basis of the broadest possible retail product market definition including traditional voice-only services, bundled voice and broadband services, carrier-grade VoIP services provided with broadband services, and, to some extent, mobile services.

The ACCC notes that if Telstra is found to have market power based on this broad product market definition it will also have market power based on a narrower definition.

The ACCC again notes that, under Part XIC, the ACCC is not required to precisely define the market but rather market definition is one tool in a broader framework that can assist the ACCC's analysis of whether the exemption provisions will or will not promote the LTIE.

Wholesale alternatives for the supply of voice-only resale services

In addition to the potential constraints imposed on Telstra for the supply of voice-only resale services through customer switching to other retail products, it is relevant to establish whether there are other constraints that exist from alternative sources of wholesale supply (including through retailers self-supplying wholesale services).

Broadly speaking, there are five alternative means for access seekers to supply voice (and, in some cases, broadband) services to retail customers, apart from purchasing resale services from Telstra. These involve a service provider:

- purchasing ULLS and investing in their own infrastructure (DSLAMs and switching equipment)—to provide voice and/or broadband services
- purchasing resale voice-only services from other access seekers that have their own infrastructure and use the ULLS to self-supply and to sell wholesale services—to provide voice-only services
- purchasing wholesale DSL from Telstra or other access seekers that have their own infrastructure and use the ULLS to self-supply and to sell wholesale services—to provide broadband services (including VoIP)

- providing mobile voice/data services using their own mobile network or by purchasing access to a mobile network operator's network—to provide voice and/or data services, or
- investing in an alternative fixed network—to provide voice and/or broadband services.

This section analyses the substitutability of these alternative means of supply as alternatives to acquiring Telstra's resale services.

ULLS

The ACCC considers that voice services provided using access seekers' DSLAM/MSAN infrastructure and the ULLS can provide an effective substitute for WLR and LCS.¹¹⁸ Access seekers can use these inputs to provide a quality voice service to end-users, or, alternatively, to supply wholesale voice services to other access seekers.

Depending on the access seeker's infrastructure, several types of voice services can be provided using the ULLS. These include:

- Plain Old Telephone Service (POTS)
- POTS emulation (using a voice card or MSAN), and
- Carrier-grade Voice over Internet Protocol (VoIP).

If a ULLS-based access seeker has a DSLAM and analogue PSTN switching equipment, it may choose to provide a POTS, which provides a traditional voice service. Most access seekers have not made investments in legacy PSTN switching equipment which has been used historically by Telstra for its copper network, and (given this has been surpassed by IP switching technology) are unlikely to make such investments in the future.

Access seekers that have a softswitch and PSTN gateway (and some additional equipment—including a voice card for POTS emulation or an ATA at the end user premises for VoIP) can use the ULLS to provide either POTS emulation or carrier-grade VoIP. Both of these means of supply enable access seekers to provide a voice service comparable in quality to a traditional PSTN voice service. This is the common approach to providing voice services, in conjunction with broadband services, adopted by access seekers.

However, access seekers have submitted that the ULLS is not fully substitutable for Telstra's resale services for a variety of reasons discussed below.

First, several access seekers submitted that Telstra offers inferior Service Level Agreements (SLAs) for the ULLS compared to the SLAs offered for the WLR service.¹¹⁹ Optus submitted that end-users being serviced using ULLS must wait up to four times as long as a WLR-based customer for fault restoration (even when the access seeker has purchased an improved service option from Telstra).¹²⁰ This may limit the substitutability of ULLS-based wholesale supply for particular segments of the market such as corporate/government end-users.

¹¹⁸ In this case PSTN OA will be purchased, along with the transmission services used by an access seeker to connect its DSLAMs back to its core network.

¹¹⁹ Optus submission, Conf. p. 17/Pub. p. 17.

¹²⁰ *ibid.*

Second, access seekers have pointed out that ULLS is not available on all lines as some lines have ‘blockers’, such as large pair gain systems, that prevent the supply of broadband services on the line. In these cases, voice-only services are the only fixed line services that can be provided to the retail customer and Telstra’s resale services are the only means of supplying these services. Optus submitted that, despite being an established service provider with its own DSLAM infrastructure, Optus still uses a significant number of Telstra resale services which allow Optus to provide a number of business services and services to areas where ULLS is not available.¹²¹ The ACCC has previously estimated that approximately seven per cent of SIOs within the ACCC’s exemption footprint cannot be supplied by ULLS-based competitors due to deployment of pair gain systems.¹²²

Third, access seekers submitted that using ULLS and their own infrastructure to supply voice-only services is not ‘commercially viable’. Macquarie Telecom has [c-i-c] [c-i-c]¹²³

Consideration of the costs of infrastructure investments required to supply voice services over DSLAMs is included at Appendix J.

The ACCC considers that access seekers’ submissions about the low commercial viability of providing voice-only services in part reflects the higher profit margins on the supply of broadband and bundled voice and broadband services, compared to voice-only services. Access seekers prefer to use their own infrastructure to provide more profitable bundled and broadband services. However, in the event of a SSNIP for WLR, the commercial viability of using ULLS to supply voice-only services may increase.

Fourth, Optus submitted that corporate and government customers require certain ‘enhanced features’ that cannot be supplied using access seeker infrastructure, without investments by the retail customer. Optus submitted that [c-i-c] [c-i-c]¹²⁴ These ‘enhanced features’ can, however, be supplied using the WLR without further investments by retail customers. Macquarie Telecom submitted that [c-i-c] [c-i-c].¹²⁵

It is important to note that the largest service providers with potentially the greatest capacity to viably supply equivalent resale services to the LCS and WLR services continue to purchase Telstra’s resale services rather than wholly self-supply. The access seeker respondents to the ACCC’s market inquiry (the DSLAM-based competitors such as Optus, AAPT, iiNet, Macquarie Telecom) acquired the majority of WLR services sold by Telstra as at March 2011, accounting for approximately [c-i-c] [c-i-c] per cent of all WLR SIOs and [c-i-c] [c-i-c] per cent of WLR SIOs in the Exempt ESAs.¹²⁶ As a specific example, Optus acquires WLR for [c-i-c] [c-i-c] per cent of its CAN wholesale access services (WLR + ULLS SIOs) in the Exempt ESAs.¹²⁷ This implies that even an access seeker with the alternative supply options available to Optus (ULLS, DSLAMs with POTS emulation voice capability, a HFC

¹²¹ *ibid.*, pp. 24–25.

¹²² ACCC, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, September 2011, p. 57.

¹²³ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

¹²⁴ Optus submission, Conf. p. 17/Pub. p. 15.

¹²⁵ Macquarie Telecom submission, pp. 5, 12.

¹²⁶ See Appendix F.

¹²⁷ Optus, Optus response to ACCC request for market information,.

network, fibre network assets) still may require the WLR to service a considerable portion of its customer base.

Optus has submitted that some service providers may retain customers supplied via resale services, despite having deployed DSLAMs in the relevant area, because such customers do not consider a DSLAM-based service an effective substitute for Telstra's resale services.¹²⁸

The ACCC is of the view that access seekers' inability to provide equivalent services may reflect their past infrastructure investment decisions. Many access seekers have not invested in DSLAMs with voice capability or in switching equipment with the capability to provide 'enhanced features' to end-users with traditional analogue (legacy) equipment. To service customers requiring these 'enhanced features', significant investments would be required by access seekers or their retail customers to allow the substitution of ULLS for Telstra's resale services.

The ACCC considers that the supply of voice services using the ULLS (in particular via POTS emulation) is a substitute for Telstra's resale voice services for supplying fixed line voice services and should be taken to be part of the relevant market.

However, ULLS is not fully substitutable for the resale services for supplying all end-users. Certain customers, including corporate/government end-users, may require a higher quality of service (such as faster fault restoration times) than can currently be provided using the ULLS. In addition, ULLS-based supply is not capable of providing the full range of features required by certain customers, on the basis of access seekers' current infrastructure.

In regard to fault restoration times for ULLS and WLR, the ACCC notes that the Telecoms (Customer Service Guarantee) Standard 2011 sets retail Customer Service Guarantee (CSG) benchmarks for fault restoration. The fault restoration times depend on the location of the end-user.¹²⁹ The CSG benchmarks represent minimum service restoration times for retail customers.

Telstra has submitted that [c-i-c] [c-i-c] The statistics on fault restoration times for ULLS and WLR submitted by Telstra show [c-i-c] [c-i-c]¹³⁰ The ACCC notes that Telstra also offers its wholesale customers faster fault restoration times than the CSG benchmarks at additional cost. Telstra did not provide statistics on faults restored faster than required by the CSG benchmarks.

The ACCC also notes that the CSG benchmarks do not apply to 'sophisticated business-oriented' services.

Alternative fixed networks (HFC, fibre networks)

Another potential constraint on Telstra's supply of resale services arises from the supply of voice services using alternative fixed line networks. A number of alternative fixed networks are in operation (to varying degrees) in the exempted areas, including:

- Hybrid Fibre Coaxial (HFC) networks operated by Telstra, Optus and TransAct (Neighbourhood Cable), and

¹²⁸ Optus submission, pp. 8–9.

¹²⁹ <http://www.comlaw.gov.au/Details/F2011L00413>, accessed at 14 December 2011.

¹³⁰ Telstra, *Telstra's response to access seekers' submission to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, 6 December 2011, p. 25.

- Geographically-limited fibre networks, serving certain business customers and/or business parks or discrete residential areas.

The ACCC has previously considered that voice (and broadband) services provided over HFC networks are substitutable for copper-based voice services from the perspective of most end-users. However, it noted that such services were not widely available.

Optus uses its HFC network to provide residential end-users with voice and broadband services, as well as pay television services. Optus has previously submitted to the ACCC that it does not use the HFC network to provide services to business customers as the network is not configured to provide the standard of services required by these customers.¹³¹ The ACCC understands that additional infrastructure investments would be required to provide the SLAs and features required by these customers (although it is not clear to what extent these issues may have been addressed during Optus' 2010 upgrade to DOCSIS 3.0 technology on its HFC).¹³²

Consistent with previous decisions, the ACCC considers that the existence of alternative networks does not provide a good substitute for Telstra's resale services in many cases. These networks are often geographically limited and, particularly in the case of the HFC networks, are not configured to provide wholesale access services. While these networks may be a competitive alternative for the owners of the networks, they are limited in the extent to which they provide a suitable supply substitute for other access seekers.

The ACCC has treated the supply of voice services on these alternative networks, where available, as within the relevant markets for the purposes of the exemptions inquiry. However, the ACCC recognises that in many geographic regions these networks do not offer an alternative to Telstra's resale services.

Wholesale DSL

Wholesale DSL can potentially be used by an access seeker as an input to providing a 'best efforts' VoIP service or potentially a carrier-grade VoIP service as an alternative to the supply of fixed line voice services. The greater the substitutability at a retail level between carrier-grade VoIP and fixed line voice services, the greater will be the willingness of retail service providers to switch to acquiring a wholesale DSL service rather than a voice-only resale service to supply voice customers. For example, if retail customers were indifferent between voice services provided via VoIP and fixed line services at prevailing market prices, a retail service provider will choose the wholesale service (DSL or voice-only resale) that offers it the lowest cost way to service a particular customer.

To the extent that substitution between these products at a retail level is imperfect (see discussion above), this will limit the willingness of retail service providers to switch between these wholesale sources of supply.

¹³¹ Optus, *Optus submission to Australian Competition and Consumer Commission on Telstra's December 2007 exemption application for fixed line services in the Optus HFC area*, March 2008, p. 7.

¹³² Optus, media release, 'Optus upgrades cable broadband to deliver supersonic speeds in Brisbane, Melbourne and Sydney', 2 August 2010; DOCSIS 3.0 is Data Over Cable Service Interface Specification 3.0, an international telecommunications standard that provides higher-speed data transfer over an HFC network than previous specifications.

There are a number of carriers, including Telstra, Optus and AAPT, which currently offer wholesale DSL services. As at 21 November 2011, Telstra offered wholesale ADSL2+ in 2,113 ESAs across Australia,¹³³ including all 215 ESAs in the ACCC's Exemption ESA List. This indicates that this supply option is widely available to access seekers.

The ACCC understands, however, that the Telstra wholesale DSL service is not suited to providing a naked DSL retail service to an end-user, as Telstra requires the use of an underlying PSTN voice service. Optus submitted that [c-i-c] [c-i-c]¹³⁴ This would limit an access seeker's ability to provide VoIP as a substitute to a traditional voice service.

An access seeker could still use a wholesale DSL service from a non-Telstra supplier (e.g. Optus or AAPT) in order to provide a substitutable VoIP service without an underlying PSTN service. It is not clear to what extent this is occurring. For example, the ACCC understands that Optus [c-i-c] [c-i-c].¹³⁵

The ACCC understands that, from a retail perspective, a number of providers—including iiNet, TPG and iPrimus—offer end-users bundled Naked ADSL and VoIP, although many of these services may be provided using the ULLS, rather than wholesale DSL.

The extent to which a carrier-grade VoIP solution could be deployed over a wholesale DSL service, using a third party's DSLAM infrastructure, depends on how this infrastructure is configured. Particularly important will be whether the wholesale DSL service enables the prioritisation of different traffic classes across the DSL link. This prioritisation is required in order to supply carrier-grade VoIP. It is not clear how many of the current wholesale DSL services in the market offer this capability.

Alternatively, a more generic wholesale DSL service could be used to supply a 'best efforts' VoIP service.¹³⁶ However for the purposes of this inquiry, the ACCC does not consider 'best efforts' or application layer VoIP as a substitute for fixed line voice services.

Wholesale mobile services

It may be possible for a fixed line service provider to shift to using wholesale mobile services as an input for supplying retail voice (and data) services. As for VoIP, the willingness of retail service providers to substitute from a wholesale voice-only product to a wholesale mobile service will depend on the degree of substitutability at a retail level between mobile and fixed line services.

In recent years, the number of wholesale mobile service acquirers has grown. Mobile virtual network operators (MVNOs), such as Virgin Mobile, Dodo and other fixed line access seekers, are reselling mobile services purchased from the mobile network operators (Telstra, Optus and VHA) to their retail customers.

¹³³ Telstra, *ADSL Enabled Exchanges*, available at:

<http://www.telstrawholesale.com.au/products/data-broadband/adsl/adsl-reports-plans/index.htm>.

¹³⁴ Optus, *Submission in response to the ACCC's issues paper*, October 2011, Attachment 4: Answers to ACCC questions on Wholesale DSL, p.2.

¹³⁵ Optus, Optus response to ACCC request for market information.

¹³⁶ In contrast to carrier-grade VoIP, a 'best efforts' VoIP service does not ensure high Quality of Service through the prioritisation of IP packets.

A number of mainstream ISPs are offering mobile voice (and mobile data) services alongside fixed line VoIP and data services, in which case these providers would have an improved ability to respond to a SSNIP in fixed line prices by shifting to mobile services (or VoIP services).

Conclusion

For the purposes of this inquiry, the ACCC has considered third party supply of voice services using the ULLS and other networks (such as the HFC) is part of the relevant market for supply of wholesale voice services. However, to the extent that suppliers of these services have used their wholesale capability to self-supply rather than supply other access seekers, the constraint on Telstra comes indirectly through their retail activities. Further, there are particular issues associated with these forms of supply that limit their substitutability for Telstra's wholesale WLR, LCS and PSTN OA services, to serve particular customers.

There is also scope for retail service providers to substitute to acquiring other forms of wholesale supply such as wholesale DSL and mobile services. However, this will only be economically attractive to the extent that there is strong substitution between fixed line voice, VoIP and mobile services at the retail level. The ACCC understands that there is significant proportion of residential and corporate/government end-users that still require a fixed voice-only service. This will therefore limit the substitutability of these alternative sources of wholesale supply.

2.1.5 ACCC views on the geographic extent of markets

The second dimension of a market definition typically considered by the ACCC is the geographic dimension.

The opportunity for demand-side substitution at the geographic level may be significantly limited because of the cost to end-users of obtaining supply in alternative regions. Specifically, the re-location involved in acquiring fixed line services from within an alternative region would likely cost far more than any potential cost saving.

On the supply-side, there are further complications in assessing substitutability at the geographic level. For instance, the ACCC has previously noted that it may be difficult for service providers to quickly redeploy supply in alternative geographic regions because fixed line networks often involve sunk and lumpy investments and long lead times.¹³⁷

In 2008, the ACCC determined that it was appropriate to use Exchange Service Areas (ESAs) as the basic geographic unit for its assessment of competition at the wholesale and retail levels.¹³⁸

However, access seekers have submitted to the ACCC that the national level is more appropriate as corporate/government end-users require integrated service provision, where all of their communication needs are provided by the same supplier. Integrated service provision delivers advantages relating to convenience to corporate/government end-users. Telstra (and potentially other service providers)

¹³⁷ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications - Final decision and class exemption*, August 2008, p. 31.

¹³⁸ *ibid.*, pp. 57–58.

typically offers ‘whole-of-business’ discounts to supply all of a retail customer’s business.

Access seekers have further submitted that, from a supply-side perspective, the economies of scale and scope associated with operating networks and providing integrated services mean that a national level is a more appropriate geographic dimension.

The ACCC considers that competition can only be accurately assessed by examining a geographic region narrower than the national market. As they are, the exemption provisions apply to specific ESAs. Diversity in competitive characteristics across ESAs, means it may not be appropriate to adopt a broader geographic unit for competition analysis. In addition, the ACCC’s empirical data is, in general, disaggregated by ESA.¹³⁹ For these reasons, the ACCC considers that the ESA remains the appropriate geographic dimension for the purpose of the current exemptions variation inquiry.

While the ACCC intends to use ESAs as the geographic unit for its assessment of the effect of the exemption provisions, it does not imply that each ESA is considered a discrete geographic market. As access seekers have submitted to the ACCC, the economies of scale involved in the provision of fixed line services suggest that a ULLS-based competitor would not enter the retail market in one ESA alone.¹⁴⁰

In particular, the ACCC notes that implications for competition resulting from the exemption provisions may extend beyond the boundaries of individual ESAs, particularly in the case of competition for integrated service provision to corporate/government end-users. These implications have been considered by the ACCC in forming its decision.

2.2 State of competition in the relevant markets

2.2.1 Approach to assessing the state of competition in the relevant markets

Once the relevant markets are defined, the next step is to assess the state of competition in the relevant markets. In assessing the state of competition, the ACCC notes that it should not be limited to a static analysis entailing a description of current conditions and behaviour. The assessment should also account for dynamic factors such as the potential for sustainable competition to emerge and the extent to which the threat of entry (or expansion by existing suppliers) constrains pricing and output decisions.

The concept of ‘effective competition’

At the theoretical level, the concept of ‘perfect competition’ describes a market structure in which no producer or consumer has the market power to influence prices. Economic theory suggests that perfectly competitive markets have a large number of buyers and sellers, goods/services are perfect substitutes, all firms and consumers

¹³⁹ ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications: Final decision and class exemption*, August 2008, pp. 56-57.

¹⁴⁰ ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications: Final decision and class exemption*, August 2008, p. 58.

have complete knowledge about the pricing/output decisions of others and all firms can freely enter or exit the relevant market.

In reality, these conditions are rarely found in any market or industry—even those in which competition between rival firms is relatively intense. It is certainly not a realistic threshold for fixed line telecommunications markets given that:

- many services are provided by a small number of providers, in a situation where the incumbent as owner of the only ubiquitous local loop remains the predominant provider of most (if not all) essential inputs.
- the industry is characterised by economies of scale, scope and density over large ranges of outputs.
- services are often differentiated from each other.
- there are constantly evolving service types and network technologies.

The concept of ‘effective competition’ recognises the practical limitations of the theory of perfect competition. Definitions of such standard are always difficult, but some characteristics can be highlighted.¹⁴¹ Effective competition:

- is more than the mere threat of competition—it requires that competitors be active in the market, holding a reasonably sustainable market position
- requires, that, over the long run, prices are determined by underlying costs rather than the existence of market power (a party may hold a degree of market power from time to time)
- requires that barriers to entry are sufficiently low and that any degree of market power will be competed away in the long run, so that any degree of market power is only transitory
- requires that there be ‘independent rivalry in all dimensions of the price/product/service [package]’¹⁴², and
- does not preclude one party holding a degree of market power from time to time, but that power should ‘pose no significant risk to present and future competition’.¹⁴³

These five factors are indicators of the extent to which competition constrains the market participants to supply products and services of a given quality at prices that are based on efficient costs.

The OECD has referred to effective competition in telecommunications in the following way:

Effective competition is concerned not only with the ability to control prices and costs for products and/or services, but also with consumer benefits such as quality of service, a range of services available to consumers, efficient operation of firms in a market and innovative service provisions as well.¹⁴⁴

¹⁴¹ This is not intended to be an exhaustive characterisation of effective competition.

¹⁴² Re Queensland Co-operative Milling Association Ltd and Defiance Holding Ltd (1976) 25 FLR 169.

¹⁴³ In general, however, market power must not be used in a way that would constitute a ‘misuse of market power’.

¹⁴⁴ OECD, Indicators for the Assessment of Telecommunications Competition DSTI/ICCP/TISP, 2001, p. 6.

Factors which are relevant to a competition assessment

When assessing the effectiveness of competition in a particular market, the ACCC examines a range of structural and behavioural characteristics. This includes (but is not limited to) factors such as:

- structural factors, including the level of concentration in the market
- the potential for the development of competition in the market (including planned entry, the size of the addressable market and existence and height of barriers to entry, expansion or exit in the relevant markets)
- the dynamic characteristics of markets, including growth, innovation and product differentiation, as well as changes in costs and prices over time, and
- the nature and extent of vertical integration in the market.

2.2.2 Competition in the wholesale voice-only market

As noted in section 2.1, the most direct competitive constraint on Telstra's supply of the LCS, WLR and PSTN OA services will come from alternative supply of substitutable wholesale resale services. This section considers the state of competition in the market for wholesale inputs for voice-only services.

Previous ACCC views

In the ACCC's 2008 decisions regarding the LCS, WLR and PSTN OA exemptions, the ACCC considered that the wholesale market for voice-only resale products did not display the characteristics of particularly competitive markets because of the following factors:

- Telstra still controlled the infrastructure by which the majority of voice services are provided.
- There are significant barriers to entry in the provisioning of an end-to-end wholesale fixed voice bundle or a ULLS-based fixed voice bundle.
- Telstra's vertical integration and strong position in retail markets for fixed telephony services affects the potential for competitive entry in the wholesale market.¹⁴⁵

At the time, however, the ACCC noted the potential for alternative suppliers of wholesale services was emerging.¹⁴⁶

The ladder of investment theory

The 'ladder of investment' theory was a key reason given by Telstra in support of its applications for exemptions from the standard access obligations (SAOs).¹⁴⁷

According to this theory, which was developed by Professor Martin Cave:

Competitors challenge an incumbent by offering services which rely, as their market share rises, less and less on the incumbent's assets and more and more on their own. Thus, competitors progressively build out their networks closer and closer to their customers.¹⁴⁸

¹⁴⁵ ACCC, *Telstra's LCS and WLR exemptions applications: final decision and class exemption – public*, August 2008, p. 95.

¹⁴⁶ *ibid.*

¹⁴⁷ The 'ladder of investment' is sometimes referred to as the 'stepping stone' theory.

Applying this theory, the regulator initially allows entrants to access a resale service from the incumbent provider at a regulated price. Once resale-based competition is established, and access seekers have begun to invest in their own equipment (for example, digital subscriber line access multiplexers (DSLAMs)), the regulator withdraws regulated access at the resale level. The removal of regulated access may be phased in by gradually increasing the access price of the resale service over several years. Alternatively, the regulator may announce that regulated access to the retail service will no longer be available from some future date—that is, the service will be exempted from regulation (in relevant areas).

Once regulated access has been removed, all access seekers will be encouraged to ‘climb’ to the next rung of the ladder by investing in their own equipment. Otherwise, they will have to negotiate their own commercial contracts with access providers for the supply of wholesale services. The process of ‘climbing’ the ladder may continue further if access seekers begin to build their own networks in order to compete with the incumbent.

Professor Cave has recommended that regulators should seek to encourage entry to higher ‘rungs’ of the ladder, as long as entry is efficient.¹⁴⁹ Professor Cave, and other advocates of the ladder of investment approach, considers that facilities-based competition is more sustainable than resale-based competition and leads to greater benefits for end-users.¹⁵⁰

Consistent with the ladder of investment theory, the ACCC considered that providing regulated access to resale services, in the initial stages of competition, would facilitate access seekers’ investments in their own infrastructure (that is, DSLAMs).

The ACCC considered that increased competition at the wholesale level for line rental, local carriage and PSTN originating access services (equivalent to Telstra’s WLR, LCS and PSTN OA services) was likely once access seekers had established the capability to supply fixed line voice services using their own equipment and the ULLS. The ACCC believed that ULLS-based competitors would have an incentive to provide wholesale services to other access seekers either to exploit unused capacity on their networks or to take advantage of economies of scale.¹⁵¹

¹⁴⁸ M Cave, *Statement by Professor Martin Cave of Warwick Business School, University of Warwick, UK for Mallesons Stephen Jaques on infrastructure investment consideration in relation to Telstra’s request for LCS and WLR exemptions*, March 2008, p. 1. This statement is available at: <http://www.accc.gov.au/content/index.phtml/itemId/801246>.

¹⁴⁹ M Cave, *Applying the ladder of investment in Australia – Schedule A, Annexure 1 of Telstra’s submission in response to Telstra application for fixed line services exemption in Optus HFC network areas*, December 2007, p. 1. This submission is available at: <http://www.accc.gov.au/content/index.phtml/itemId/806382>.

¹⁵⁰ Body of European Regulators for Electronic Communications (BEREC) (formerly European Regulators Group), *Revised ERG common position on the approach to appropriate remedies in the ECNS regulatory framework – Final version*, May 2006, available at: erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf.

¹⁵¹ ACCC, *Telstra’s LCS and WLR exemptions applications: final decision and class exemption-public*, August 2008, p. 6.

Submissions

Telstra submitted that the wholesale market is increasingly competitive, citing the decrease in WLR SIOs since September 2007.¹⁵² Telstra submitted that the number of companies acquiring the ULLS has increased from 11 to 16 since September 2007, while the average number of ULLS-based access seekers in each exempt ESA has doubled to 4.4 over the same period.¹⁵³ Telstra noted that the number of ULLS lines has tripled since September 2007, reaching [c-i-c] [c-i-c] lines in June 2011, while WLR SIOs and PSTN OA and LCS traffic have [c-i-c] [c-i-c].¹⁵⁴

Telstra submitted that there were at least four alternative providers of resale voice services in the exempt ESAs and that self-supply of these services was also constraining Telstra's behaviour in relation to the supply of WLR, LCS and PSTN OA services.¹⁵⁵ Telstra noted that the number of alternative resale service providers is not necessarily indicative of the level of competition in the wholesale market.

Telstra submitted that, since the exemptions came into effect, it has continued to commercially supply resale voice services at the same or similar prices that have been in place from 2005.¹⁵⁶ Telstra stated that this demonstrates the very real competitive constraints it faces within the exempt ESAs and is a key reason why extensive entry of alternative resale providers to the market has not occurred.¹⁵⁷ [c-i-c] [c-i-c], which Telstra submits to be evidence of the price competitiveness of its resale services.¹⁵⁸

Telstra submitted that, [c-i-c] [c-i-c].¹⁵⁹

Optus submitted that Telstra is currently charging it [c-i-c] [c-i-c] per month for WLR.¹⁶⁰

Optus submitted that the expected restraint on Telstra's market power from alternative wholesale suppliers has failed to materialise. It noted that Telstra is currently charging above the current regulated rate for WLR. Optus submitted that Telstra will be even less restrained in the exercise of market power in the 'future with exemptions' scenario, stating that it is highly likely that Telstra will take 'more extreme action once the exemptions are confirmed.'¹⁶¹

Optus submitted that, to the extent that the alternative resale services are not acceptable substitutes, Telstra will have market power in respect of the exempt services in the 'future with exemptions' scenario.¹⁶²

Optus submitted that [c-i-c] [c-i-c]¹⁶³¹⁶⁴ Optus submitted that it was not able to compete effectively with Telstra because of [c-i-c] [c-i-c]¹⁶⁵

¹⁵² Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, Pub. p. 30/Conf. p. 37.

¹⁵³ Telstra submission, Pub. p. 5/Conf. p. 5.

¹⁵⁴ Telstra submission, Pub. p. 30/Conf. pp. 38–39.

¹⁵⁵ Telstra submission, Pub. p. 31/Conf. p. 40.

¹⁵⁶ Telstra submission, Pub. 7/Conf. p. 7.

¹⁵⁷ Telstra submission, Pub. 7/Conf. p. 7.

¹⁵⁸ Telstra submission, Pub. p. 7/Conf. p. 8.

¹⁵⁹ Telstra submission, Pub. p. 33/Conf. p. 42.

¹⁶⁰ Optus submission, Pub. p. 26/Conf. 26.

¹⁶¹ Optus, *Optus submission in response the ACCC's issues paper - Confidential submission*, October 2011, pp. 26–27.

¹⁶² Optus, Confidential submission, pp. 12–13.

Primus submitted that the exemptions provide Telstra with the ability to compromise competition. It stated that competition to provide resale services has not emerged across the relevant geographic areas.¹⁶⁶ Primus submitted that Telstra's price discrimination in relation to exempt services has dampened competition by increasing the resellers' costs and this has had the effect of harming the LTIE.¹⁶⁷

AAPT stated that Telstra is utilising its market power to raise the WLR price in Exemption areas above the price in declared areas, despite there being no cost-based justification for such differentiation.¹⁶⁸ AAPT stated that the price of WLR in exempt areas has been raised to [c-i-c] [c-i-c] compared to the efficient price of \$22.84 determined by the ACCC.¹⁶⁹

AAPT stated that there is no competitive market for voice-only services as Telstra is the only wholesaler.¹⁷⁰ AAPT submitted that the WLR price increases in the exempt ESAs [c-i-c] [c-i-c].¹⁷¹

AAPT submitted that some of the potential adverse effects of geographic deregulation on competition identified by the OECD have materialised.¹⁷² AAPT submitted that by raising the price of WLR in exempt areas, Telstra is cross-subsidising its competitive variable charges (such as call charges) with the non-competitive WLR charge.¹⁷³ Additionally, AAPT submitted that the exemptions give Telstra the ability to force access seekers into whole of business deals for WLR at a blended price higher than the regulated price.¹⁷⁴

AAPT submitted that the lack of alternative providers of wholesale resale services reflects technical limitations that limit the ability of access seekers to provide resale services that are equivalent to Telstra's.¹⁷⁵

Macquarie Telecom stated that [c-i-c] [c-i-c].¹⁷⁶

Macquarie Telecom submitted that there is effectively no wholesale competition in supplying voice-only services and only limited wholesale competition in supplying

¹⁶³ Optus, Attachment 4A, p. 5.

¹⁶⁴ Optus, Attachment 4B, p. 5; [c-i-c] [c-i-c].

¹⁶⁵ Optus, Confidential submission, p. 17.

¹⁶⁶ Primus, *Submission by Primus in response to the ACCC's issues paper*, October 2011, pp. 3–4.

¹⁶⁷ Primus submission, p. 5.

¹⁶⁸ AAPT, *Submission by AAPT in response to ACCC's issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 6.

¹⁶⁹ AAPT submission, p. 6.

¹⁷⁰ AAPT submission, p. 25.

¹⁷¹ AAPT submission, p. 27.

¹⁷² AAPT submission, p. 5. AAPT cited Organisation for Economic Co-operation and Development (OECD), 'Geographically segmented regulation for telecommunications', *OECD Digital Economy Papers*, no. 173, 2010. The adverse effects identified by the OECD include: unfair bundling of regulated and unregulated products; margin squeeze; predatory pricing and cross-subsidisation; under-investment in regulated areas; geographic price discrimination; and refusal to supply wholesale services.

¹⁷³ AAPT submission, p. 6.

¹⁷⁴ AAPT submission, p. 7.

¹⁷⁵ AAPT submission, pp. 23–24.

¹⁷⁶ Macquarie Telecom submission, p. 16; Macquarie Telecom, *Response to ACCC information request*, 2 September 2011.

broadband and bundled services.¹⁷⁷ The primary reason why access seekers invest in infrastructure like DSLAMs and MSANs is so that they can provide broadband and bundled voice and broadband retail services, not to supply wholesale voice-only services.¹⁷⁸

Macquarie Telecom considered that the development of wholesale competition has been constrained by a number of factors, including concerns about Telstra's capacity to use its market power to 'circumvent competition via predatory retail conduct' and its ability to interfere with the provision of ULLS services.¹⁷⁹

In addition, Macquarie Telecom submitted that a retail service provider has little incentive to supply its competitors with wholesale products as it would prefer to make its own retail sale than facilitate a competitor's sale.¹⁸⁰ Further Macquarie Telecom stated that potential wholesale suppliers may choose not to supply wholesale services because such activities are viewed as 'distraction[s] to their core business of selling to retail customers'.¹⁸¹

Macquarie Telecom stated that it has attempted to obtain alternative wholesale supply [c-i-c] [c-i-c]¹⁸²

Herbert Geer submitted that the availability of regulated access to both ULLS and WLR services promotes greater competition, and provides greater consumer choice, than access to only the ULLS.¹⁸³

The CCC submitted that Telstra remains the dominant supplier of resale services in all markets relevant to the inquiry.¹⁸⁴ It submitted that competition for fixed line services (or resale services) is not effective in any geographic area.¹⁸⁵

The CCC stated that there is no realistic prospect of new sources of fixed line voice services emerging that would have any material impact on Telstra's market power in the supply of resale services.¹⁸⁶

ACN Pacific stated that wholesale markets for resale products, particularly WLR, are uncompetitive. It stated that Telstra is the only viable supplier and has demonstrated that it can and will raise prices in exempt ESAs relative to prices in non-exempt ESAs.¹⁸⁷

Evidence on the state of competition in the wholesale voice-only market

In considering the state of competition in the wholesale voice-only market, the ACCC has considered the following.

¹⁷⁷ Macquarie Telecom, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, 14 October 2011, p. 1.

¹⁷⁸ Macquarie Telecom submission, p. 8.

¹⁷⁹ Macquarie Telecom submission, p. 8.

¹⁸⁰ Macquarie Telecom submission, p. 6.

¹⁸¹ Macquarie Telecom submission, p. 12.

¹⁸² Macquarie Telecom submission, p. 10.

¹⁸³ Herbert Geer submission, p. 3.

¹⁸⁴ CCC submission, p. 1.

¹⁸⁵ CCC submission, p. 1.

¹⁸⁶ CCC submission, p. 1.

¹⁸⁷ ACN Pacific submission, p. 1.

Level of concentration

The ACCC notes that Telstra is the main supplier of the wholesale voice-only market. The ACCC has not been able to calculate the specific market shares of participants in the wholesale voice-only market due to a lack of data.

The ACCC notes that a number of access seekers indicate that Telstra is the only wholesale provider of voice-only resale services.¹⁸⁸ The wholesale market for resale services was also identified as uncompetitive by a number of access seekers.¹⁸⁹

The ACCC notes that there are few wholesale supply alternatives for voice-only services. The ACCC notes that the only potential ULLS-based alternative wholesale services available appear to be Optus' RBT products and AAPT wholesale products such as Mid-Band Ethernet (MBE).

On the basis of figures available, the ACCC notes that Optus has submitted that it has [c-i-c] [c-i-c] standalone voice RBT accounts¹⁹⁰ and AAPT has submitted that it has [c-i-c] [c-i-c].¹⁹¹ Comparing these figures to the number of voice-only lines indicated by Telstra's CAN RKR data—5.608 million at September 2011¹⁹²—and Telstra's 1.21 million wholesale basic access lines (WLR SIOs) as at July 2011,¹⁹³ it is clear that alternative supply of wholesale voice lines represents a tiny proportion of the overall wholesale voice-only market. Therefore, the competitive constraint offered by MBE and RBT are likely to be very limited.

The ACCC notes that there is a market for on-selling of Telstra's resale services to retail service providers (RSPs) as 're-suppliers of resale PSTN services'.¹⁹⁴ Telstra submitted that this is evidence of competitively priced resale services. The ACCC notes that the presence of resale service resellers does not necessarily indicate competitive pricing, for example AAPT has noted that it will pass higher WLR charges onto wholesale customers.¹⁹⁵ The ACCC does not consider that wholesalers using the WLR as a direct input for their wholesale service could provide an effective competitive constraint on Telstra's supply of WLR.

Number of wholesale suppliers in the exempt ESAs

Telstra is the dominant provider of resale services in the exempt ESAs, with ubiquitous coverage and, as mentioned above, a vast majority market share.

As noted above, apart from on-sellers of Telstra resale services, Optus and AAPT are the only substantial alternative wholesale suppliers using their own infrastructure. The coverage of their service is largely concentrated in [c-i-c] [c-i-c].

¹⁸⁸ AAPT, *Submission in response to ACCC issues paper*, 14 October 2011, p. 24; Macquarie Telecom, *Inquiry into varying the exemption provisions in the FADs for the WLR, LCS and PSTN OA services*, 14 October 2011, p. 11; ACN Pacific, *Submission of ACN Pacific Pty Limited*, 13 October 2011.

¹⁸⁹ ACN Pacific, AAPT, Macquarie and Primus.

¹⁹⁰ Optus, *Appendix A: Optus responses to ACCC request for market information*, 6 September 2011.

¹⁹¹ AAPT, *Fixed line services geographic exemptions – request for market information*, 21 September 2011.

¹⁹² ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 September 2011 (this does not take into account some broadband customers, such as HFC).

¹⁹³ Telstra, *Annual report, 2011*, p. 10; note that WLR lines can be used to supply voice and broadband services when used in combination with LSS or wholesale DSL.

¹⁹⁴ Telstra submission, Pub. p. 33/Conf. p. 45.

¹⁹⁵ AAPT submission, p. 27.

The ACCC notes that at March 2011, [c-i-c] [c-i-c].¹⁹⁶

The ACCC notes that at March 2011, [c-i-c] [c-i-c].¹⁹⁷

Wholesale voice-only price and non-price terms and conditions

According to submissions, Telstra is charging significantly more in exempt ESAs—typically, [c-i-c] [c-i-c]—than the cost-based, regulated WLR price of \$22.84 contained in the ACCC’s FADs. While Telstra has stated that its WLR prices are generally unchanged from its previous ‘headline’ commercial rates,¹⁹⁸ access seekers have submitted that rebates have been reduced or withdrawn since the exemptions took effect.

[c-i-c] [c-i-c].¹⁹⁹

Telstra has submitted that it does not place conditions on the supply of voice-only resale services, for example, in relation to minimum contract length, minimum number of voice lines per address and minimum purchase requirements.²⁰⁰

AAPT and Optus have submitted examples of prices for their wholesale voice services. [c-i-c] [c-i-c]

The ACCC notes that the monthly charge for Optus’ voice-only RBT product is [c-i-c] [c-i-c] at March 2011.²⁰¹ However, Optus has stated that it will only provide voice-only RBT subject to certain conditions [c-i-c] [c-i-c].²⁰² These conditions are likely to significantly increase the effective price of Optus’ alternative voice-only service.

The ACCC notes that Optus and AAPT generally specify certain terms and conditions for their alternative wholesale voice-only services (see Appendix I for more details), including:

- [c-i-c]

- [c-i-c].

These conditions of supply are costs to access seekers seeking an alternative service to WLR and may deter these access seekers from purchasing alternative services offered by AAPT and Optus.

The ACCC notes there are differences in quality, functionality and service level agreements (SLAs) between WLR and ULLS services which constrain the ability of access seekers to offer equivalent wholesale voice-only services. These will be discussed further in section 2.2.4.

Optus has noted that the inferior fault restoration service for the ULLS is ‘not acceptable’ to business customers and business customers have a strong preference for the much faster restoration times offered by Telstra for WLR services.²⁰³

¹⁹⁶ ACCC, CAN RKR.

¹⁹⁷ ACCC, CAN RKR.

¹⁹⁸ Telstra submission, Pub. p. 32/Conf. p. 41.

¹⁹⁹ AAPT, *Fixed line services geographic exemptions – request for market information*, 21 September 2011.

²⁰⁰ Telstra submission, Pub. p. 41/Conf. p. 52.

²⁰¹ Optus, Optus responses to ACCC request for market information.

²⁰² Optus, *Submission in response to the ACCC’s issues paper*, October 2011, p. 14.

²⁰³ Optus, *Submission in response to the ACCC’s issues paper*, October 2011, Appendix E.

Macquarie Telecom also submitted that its customers (many of whom are retail businesses) typically require the service quality of a PSTN line combined with the low speed capability WLR.²⁰⁴

These supply issues with ULLS would likely limit the ability of access seekers to offer WLR-equivalent wholesale voice-only services using the ULLS.

Potential for competition to develop

The ACCC has given consideration of the potential for competition for the supply of wholesale voice-only services to develop.

Incentives to invest in the supply of voice-only services

The ACCC notes that there appear to be limited incentives to invest in alternative methods to supply voice-only services.

Submissions for access seekers generally noted the following reasons for not investing in voice-only services:

- margins are too low.²⁰⁵
- alternatives voice services are not viable substitutes.²⁰⁶
- it is not economically viable to supply voice-only services on a retail or wholesale basis.²⁰⁷

Optus has submitted that it is not commercially viable for ULLS-based access seekers to supply voice-only services in competition at a wholesale level with Telstra. [c-i-c]
[c-i-c].²⁰⁸

A key factor in determining the potential for competition to develop in the supply of voice-only services is the business case for potential alternative providers to supply such services.

The ACCC notes that many access seekers have installed DSLAMs that cannot provide a traditional POTS voice service (as distinct from a VoIP service²⁰⁹) and substantial additional investments would be required to provide a traditional voice service. As noted in Appendix F, of the total number of DSLAMs owned by access seeker respondents to the market information request, only [c-i-c] [c-i-c] per cent of these DSLAMs were able to provide POTS emulation services as at March 2011. Furthermore, the vast majority of these, [c-i-c] [c-i-c].²¹⁰

Access seekers have submitted that DSLAM investments to supply voice-only services are not 'commercially viable' and that the capital costs of DSLAM

²⁰⁴ Macquarie Telecom, *Letter to the ACCC*, 16 November 2011, p. 3.

²⁰⁵ CCC submission, pp. 2–3; Primus submission.

²⁰⁶ Primus submission; CCC submission, pp. 2–3.

²⁰⁷ AAPT submission, p. 25; Frontier Economics submission, p. 14; Macquarie Telecom, *Letter to the ACCC*, 16 November 2011.

²⁰⁸ Optus submission, Pub. p. 13/Conf, p. 13

²⁰⁹ A POTS (Plain Old Telephone Service) voice service is provided using a traditional analogue telephone and power is provided through the telephone line. A VoIP (Voice over Internet Protocol) service delivers the voice service over the internet, requires power to be provided by the customer, and may require additional equipment at the customer's premises or at the exchange (eg. certain switching equipment). 'Special services', such as EFTPOS, alarms, metering, and traffic lights, cannot currently be provided using VoIP.

²¹⁰ Appendix F.

investments can only be recouped within a reasonable payback period when they are used to provide broadband or bundled broadband/voice services, which produce higher revenues than voice-only services.²¹¹

As discussed in appendix J, Macquarie Telecom submitted detailed modelling showing that there is no business case for the required investments.²¹² Telstra also submitted modelling by its consultant (the Sundakov Report) showing that, even on more optimistic cost and demand assumptions, there is no business case for access seeker investments in DSLAMs to self-supply voice-only services or to offer wholesale services at current WLR prices in the exempt areas.

Both these models produce estimates of the threshold price that would be required to induce investment and supply of voice-only services that are above the current WLR price in exempt areas.

On certain assumptions, the Sundakov Report estimated that the WLR price threshold would be between [c-i-c] [c-i-c] for an existing supplier of voice and data services to [c-i-c] [c-i-c] for a wholesale-only new entrant.²¹³ Macquarie Telecom stated that the required investments would become commercially viable only if [c-i-c] [c-i-c].²¹⁴

The ACCC has had regard to the results produced by both models. Given the assumptions and parameters used in the models, the ACCC considers that Sundakov's model may provide a lower bound estimate of the threshold WLR price that would make investment in DSLAM infrastructure for the provision of voice services viable, while Macquarie Telecom's model may provide an upper bound estimate.²¹⁵

The ACCC considers that the financial modelling suggests that the business case for investment in the supply of equivalent voice-only services does not create strong incentives for new wholesalers to enter the market.

Costs to retailers of sourcing alternative supply

Furthermore, retailers would face additional costs and scale issues in seeking supply from wholesale service providers in addition to Telstra—for example, a retailer will face substantial set-up costs to invest in additional Business-to-Business (B2B) systems in order to purchase services from a wholesaler (or indeed multiple wholesalers in the exemption footprint) other than Telstra.

Optus has submitted that [c-i-c] [c-i-c].²¹⁶

Such costs may restrict a potential wholesaler's ability to attract retail customers to switch to their wholesale products from Telstra resale services.

²¹¹ For example, AAPT submission, p. 25; Primus submission; CCC submission, pp. 2–3.

²¹² Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

²¹³ Telstra submission, Pub. p. 33/Conf. p. 44.

²¹⁴ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

²¹⁵ The ACCC has also identified what appear to be errors and/or inconsistencies in Sundakov's model. For example, the maintenance costs for each type of provider outlined in Sundakov's explanatory document do not seem to be consistent with the maintenance costs in the model. The explanatory document and model also appear to be inconsistent with regard to site lease costs. However, the effect of these inconsistencies on the model's overall conclusions may not be material.

²¹⁶ Optus, Pub. p. 17/Conf. p. 18.

Impact of vertical integrating on incentives to provide wholesale voice-only services

The willingness of service providers to supply wholesale services to other access seekers depends on access seekers having incentives to make use of spare capacity or obtain economies of scale.

However, in the case of vertically integrated service providers, the benefits from making use of spare capacity or obtaining economies of scale will be weighed against the potential costs from providing wholesale services to other access seekers that compete with them at the retail level.

The ACCC considers that vertically integrated service providers will likely have incentives to favour their own retail businesses, particularly when the profitability of retail supply exceeds that of wholesale supply. This implies that vertically integrated service providers may choose not to supply resale services, even when they have spare capacity. Alternatively, they may impose terms and conditions on supplying resale services to ensure that any expected loss of retail profits as a result of supplying a retail competitor will be at least offset by the profits earned from supplying resale services.

Vertically integrated service providers may have incentives to discriminate where providing equivalent access to infrastructure services might risk profit contribution, that is:

- when a materially higher return is available on retail supply than from providing resale services, and
- effective competition in retail markets would result in the erosion of excess profits.

Vertically integrated service providers may have the incentive and ability to engage in both price and non-price discrimination in favour of their own retail business units. Vertically integrated providers may judge that ceasing, or declining, to supply competitively-priced resale services to a resale-based competitor (or potential competitor) would allow them to obtain at least some of the retail customers currently (or potentially) served by that competitor.

Aside from Telstra, Optus and AAPT are also vertically integrated service providers that offer wholesale voice services.

In response to the ACCC's issues paper, Optus submitted that the arguments regarding the incentives of vertically integrated providers are 'more likely to be the perspective of an incumbent, rather than a challenger wholesaler' and that 'challengers..., which have lower market share and lower margins, are more likely to want to voluntarily take on wholesale customers.'²¹⁷ Optus has submitted that it is a committed provider of services to its wholesale customers and currently offers both retail and resale ULL services via using its DSLAMs.²¹⁸ Optus submitted that [c-i-c]²¹⁹

²¹⁷ Optus submission, Pub. p. 11/Conf. p. 11.

²¹⁸ Optus submission, Pub. p. 11/Conf. p. 11.

²¹⁹ Optus submission, Pub. p. 11/Conf. p. 11.

Supply of resale services by wholesale-only access seekers

The ACCC notes that there is a potential alternative to resale service supply by vertically integrated access seekers. An access seeker with substantial infrastructure investments could decide to become a wholesale-only supplier in competition to the incumbent access provider, Telstra. A wholesale-only resale service supplier would not have the same incentives as vertically integrated access seekers/providers to discriminate as they would not be competing with the resellers in retail markets.

Submissions from access seekers, however, indicate that a wholesale-only business strategy on the copper network is not viable.

Impact of NBN roll-out on incentives to commence wholesale supply of voice services

Access seekers have generally noted that the NBN roll-out:²²⁰

- creates uncertainties for wholesale providers, retail service providers and investments.
- increases the risk of investing in voice services.

The ACCC considers that the NBN roll-out impacts on service providers' incentives to supply resale services in a range of ways, two of which are as follows.

First, in the transition to the NBN, vertically integrated service providers may have greater incentives to build and strengthen their reputations and customer bases. This would ensure that they are in a stronger position to take advantage of economies of scale and new opportunities to provide services to retail customers. These incentives may, in turn, reduce their incentives to offer resale services to resellers that are currently competing to build their own reputations and retail customer bases on the existing copper network.

Access seekers have submitted that Telstra is charging higher WLR prices in the exempt ESAs. The ACCC notes that this may reflect Telstra's reduced incentive to supply WLR at the cost-based FAD price, in order to constrain the ability of WLR resellers to compete at the retail level and allow Telstra to build a larger retail customer base on the CAN in preparation for the NBN.

The ACCC also notes that fixed line telecommunications customers are unlikely to switch suppliers on a frequent basis. Establishing a market presence and customer base before the NBN deployment is therefore a key imperative for prospective retail service providers.²²¹ Access seekers may be disadvantaged in areas where they have a limited presence because it is likely that customers will migrate to the NBN with their existing retail service providers.

Second, the roll-out of the NBN increases the risk of investments through asset stranding.

NBN Co released an information guide titled '*Migrating to the National Broadband Network*' in August 2011 detailing procedures and timeframes for the roll-out.²²² NBN Co stated that it will publish a 3 Year Rollout Plan at least annually outlining the Region Ready for Service Date (RRFSD). A disconnection date for the

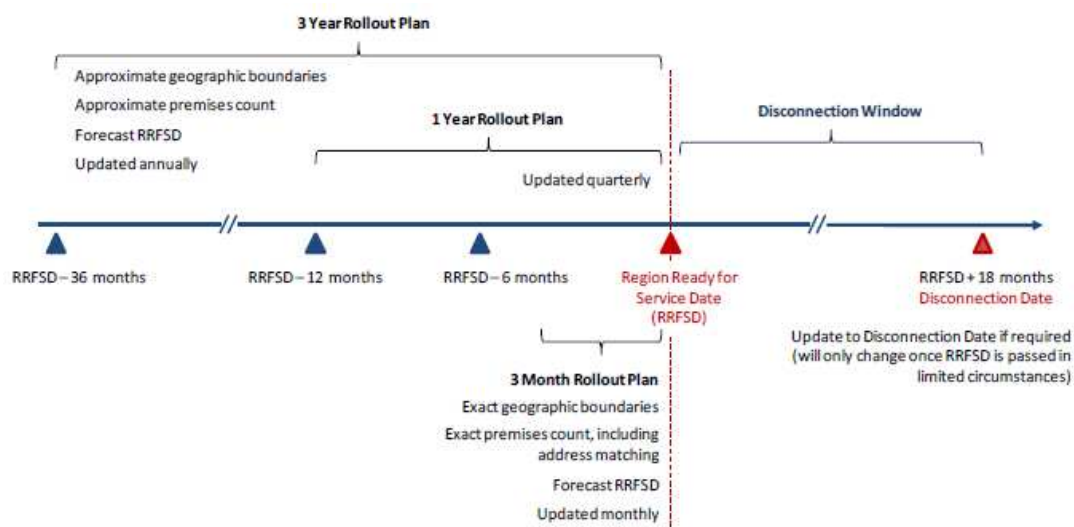
²²⁰ Macquarie Telecom submission, p. 12; Frontier Economics submission, p. 14; CCC submission, pp. 2–3.

²²¹ Optus submission, Pub. p. 29/Conf. p. 29

²²² NBN Co: www.nbnco.com.au/assets/documents/migrating-to-the-nbn.pdf.

disconnection of services and premises from the legacy copper network follows 18 months after the RRFSD. In October 2011, NBN Co indicated that it would ‘issue a three-year indicative view’ of the roll-out in early 2012.²²³

Figure 2.3: Timeline of NBN rollout²²⁴



Source: NBN Co

Access seekers investing to supply wholesale voice services or self-supply voice services face the following risks during the NBN roll-out:

- stranded assets in the form of DSLAMs/MSANs.
- uncertain and truncated payback periods.
- partial recovery of investment costs of DSLAMs/MSANs.

These uncertainties increase the risk of investments and create a barrier for investment and entry into the voice-only market. The ACCC further notes that a number of access seekers submitted that competition in the wholesale voice market will not develop given the NBN rollout.²²⁵

The ACCC notes that access seekers have submitted that DSLAM investment is affected by the NBN. Optus has submitted that, [c-i-c] [c-i-c]²²⁶ The ACCC further notes that most respondent access seekers to the information request did not invest in POTS emulation DSLAMs from March 2010 to March 2011.²²⁷ This indicates that the majority of access seekers are unlikely to commence wholesale supply of voice services given the NBN roll-out.

Conclusion on competition in wholesale voice-only services

The ACCC notes that Telstra has significant market power in the wholesale voice-only market. It is the only wholesale provider of ubiquitous voice-only services.

²²³ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

²²⁴ NBN Co, *Migrating to the National Broadband Network*, August 2011, p. 13.

²²⁵ [Macquarie](#) Telecom submission, pp. 12–13; Primus submission, p. 2.

²²⁶ Optus submission, Pub. p. 6/Conf. p. 6.

²²⁷ See Appendix F.

Telstra appears able to charge prices higher than the costs of supply (in exempt ESAs) and access seekers are unable to access equivalent services to its WLR, LCS and PSTN OA services. Further, alternative wholesale voice-only services depend on Telstra's ULLS as inputs and are offered under restrictive terms and conditions for their services.

In addition, the ACCC notes that the exemptions have resulted in an increase in the prices of resale services in exempt areas.

The ACCC notes that the ladder of investment theory suggests that access seekers will climb the infrastructure ladder and eventually engage in facilities-based competition. In the exempt ESAs, there does not appear to have been significant investment into infrastructure capable of providing services equivalent to the resale services. Based on responses to the information request, few access seekers have invested in POTS emulation infrastructure over March 2010 to March 2011.

In addition, the ACCC notes that the potential for wholesale competition is muted due to:

- uncertainties and risk from the NBN roll-out
- the apparent lack of a viable business case for investments required to supply wholesale voice-only services, and
- the potentially weak incentives for vertically integrated suppliers to enter the wholesale market.

The ACCC considers that the wholesale voice-only market does not display characteristics of a particularly competitive market. Furthermore, on the basis of current information, the ACCC considers that there is little prospect of a wholesale market developing in voice-only resale services in the exempt areas.

2.2.3 Competition in relevant retail markets

In section 2.1.4 of this decision, the ACCC acknowledged that trends in retail markets indicate growing demand-side substitution for fixed line voice services. However, it was also acknowledged that demand-side substitution between fixed line voice, bundled fixed line voice with internet, VoIP and mobile services is still developing.

The discussion below examines each of the abovementioned markets, based on information contained in appendix H of this decision.

Take up and usage

Voice only

During the period of 2006–07 to 2009–10, fixed line voice SIOs have slightly decreased from 10.9 million to 10.6 million.²²⁸ While a decrease of approximately 300,000 SIOs can be seen as nominally significant, it equates to a decrease of just under 3 per cent over a four year period.

It should also be noted that fixed line voice-only SIOs have decreased from 6.8 million to 6.1 million through the same period.²²⁹ This equates to a decrease of just over 10 per cent. This decrease of approximately 700,000 voice-only SIOs suggests

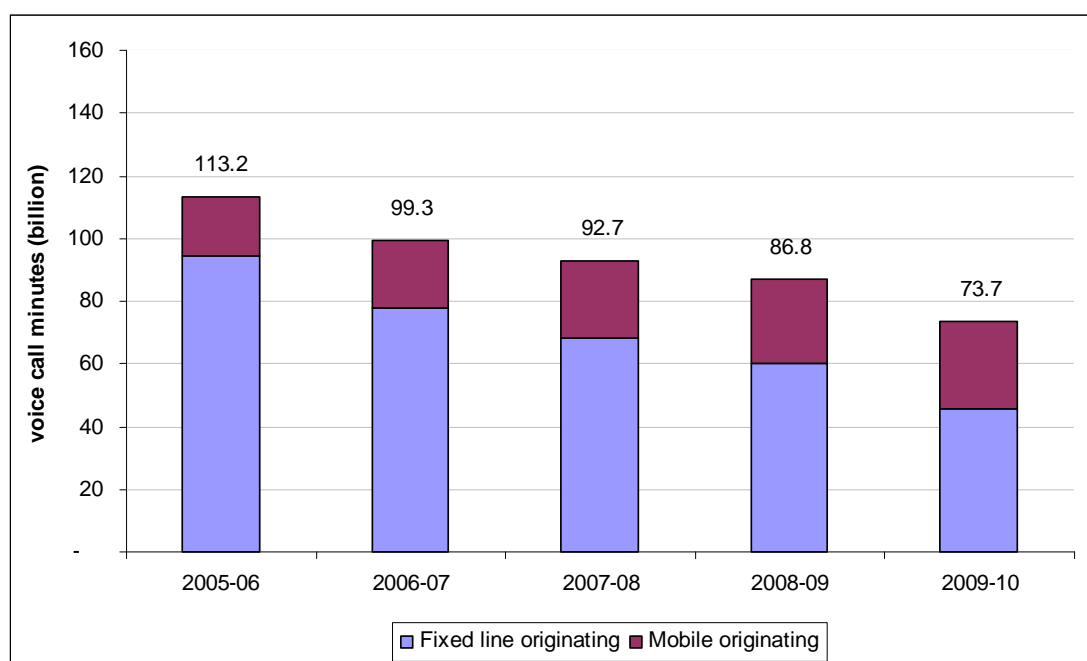
²²⁸ ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 16.

²²⁹ ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 19.

that approximately 400,000 SIOs, or less than 4 per cent of 10.9 million fixed line voice SIOs in 2006–07, might be attributable to substitution from voice-only to bundled voice and internet services.

Figure 2.4, as shown below, depicts call minutes using fixed line voice services as decreasing. The ACCC has previously expressed the view that this decrease is partially attributable to the convenience of mobility and narrowing of the price difference between fixed and mobile voice services.²³⁰ However, a further explanation for this is that dial-up internet subscriptions, a service that utilises fixed line voice calls, have decreased from approximately 2.8 million in June 2006 to 0.8 million in June 2010.²³¹

Figure 2.4: RAF reporting companies: fixed and mobile call minutes 2005–06 to 2009–10²³²



Bundled fixed line voice with internet

Information specifically referring to bundled fixed line voice with internet services is not readily available. However, some relevant inferences can be made from more generic information.

As highlighted earlier, during the period of 2006–07 to 2009–10 there may have been substitution from voice-only to bundled voice and internet services of approximately 400,000 SIOs (less than 4 per cent of fixed-line voice services in operation in 2006–07).

From December 2007 to June 2010, the number of DSL subscribers increased by approximately 425,000.²³³

²³⁰ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 17.

²³¹ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 19.

²³² ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 17.

²³³ ABS, 8153.0 - Internet Activity, Australia, June 2011.

VoIP

As at June 2010, 16 per cent of all persons over the age of 14 years have said that they use VoIP at home.²³⁴ Despite this, 86 per cent of domestic VoIP calls are made using a PC or laptop.²³⁵ The majority of VoIP users appear to be using a form other than carrier-grade VoIP.

In addition, only 40 per cent of VoIP users said that they made local calls using VoIP, with this number dropping to 20 per cent for calls to mobiles.²³⁶ This indicates that VoIP users are those with usage preferences that may at present not be representative of those that traditionally use fixed-line voice services.

Mobiles

Coverage by mobile networks is expanding. As at June 2010, 3G networks provided coverage for 99.09 per cent of the population.²³⁷

Mobile voice services are also expanding in both take up and usage. During the period of 2006–07 to 2009–10, the number of mobile SIOs increased from 21.3 million to 26.0 million.²³⁸ As highlighted earlier, the number of mobile call minutes is trending upwards.

It should be noted that there is no information readily available that provides guidance on the extent to which substitution is presently taking place between fixed line voice only and mobile services.

Concentration

Voice-only

There is no readily available information on the market shares of providers of fixed line voice-only services. For this reason fixed line voice services have been used as a proxy. As only some ISPs offer a de-bundled fixed line voice-only service, this may tend to understate the voice-only market share of providers such as Telstra and Optus.

The market for fixed line voice-only services is highly concentrated. Despite a slight decrease in 2009–10, Telstra's market share only dropped to 70 per cent. Optus has maintained its place as the second largest provider with a market share of approximately 12 per cent. Other providers account for approximately 17 per cent of the market.²³⁹

It should also be noted that during 2009–10, the number of providers in the market for fixed line voice services decreased by 85 to 306.²⁴⁰

²³⁴ ACMA, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, p. 14.

²³⁵ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 15.

²³⁶ *ibid.*

²³⁷ *ibid.*, p. 32.

²³⁸ ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 16.

²³⁹ *ibid.*, p. 20.

²⁴⁰ *ibid.*

Bundled fixed line voice with internet

Data specifically referring to market concentration of bundled fixed line voice and broadband internet is not readily available. As a result, broadband market share has been used as a representation. The sale of products such as naked DSL (a product which utilises ULLS to provide DSL broadband without any fixed line voice service) and broadband-only HFC may alter the accuracy of this proxy.

In 2009–10, Telstra’s market share of the DSL and DSL+HFC markets was approximately 40 per cent. While iiNet has become the second largest provider of DSL broadband, Optus (when its HFC network is included) is the second largest provider of fixed line broadband.²⁴¹

Despite being the largest provider of broadband internet, Telstra’s market share is approximately 30 per cent lower than in the fixed line voice market. This means that market concentration is less in the market for broadband internet services than for fixed line voice services.

VoIP

Significant information on VoIP market shares is not readily available.

According to the Australian Bureau of Statistics, 61 per cent of ISPs offered VoIP services in June 2011.²⁴² It is unclear whether VoIP in this instance refers to carrier-grade VoIP or application-layer (‘best efforts’) VoIP services. It should also be noted that Telstra does not currently offer a high-volume VoIP service to residential customers.

Mobiles

In 2009 Vodafone and Hutchinson merged to reduce the number of Mobile Network Operators (MNO) from four to three. In 2009–10 the market shares of Telstra, Optus and VHA were approximately 40 per cent, 30 per cent and 25 per cent respectively.²⁴³ It should be noted that the effects of the VHA merger and 2011 VHA network service disruptions are likely to have altered the MNOs’ market shares. No consolidated information on this is readily available at this time.

The remainder of the market was occupied by Mobile Virtual Network Operators (MVNOs) who resell wholesale mobile services that are provided by the MNOs. It should be noted that the MVNOs’ collective market share approximately doubled between 2008–09 and 2009–10.²⁴⁴ Information of whether this trend has continued is not readily available at this time.

Price trends

Voice only

Average real prices for PSTN fixed line voice services decreased by 5.8 per cent in 2009–10. Since 1997–98, the PSTN fixed line index, as reported by the ACCC, has decreased by 38.0 per cent.

²⁴¹ ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 32, 34.

²⁴² ABS, *8153.0-Internet Activity*, June 2011.

²⁴³ ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 25.

²⁴⁴ *ibid.*

Consumers have benefited from decreasing real prices for all PSTN service types, with the exception of basic access.²⁴⁵ This has resulted in an increase in basic access as a proportion of consumer expenditure on all PSTN service types. In 1997–98, basic access accounted for 19 per cent of relevant expenditure. By 2009–10, this number had risen to 50 per cent.²⁴⁶

Bundled fixed line voice with internet

While there is no specific information available on the pricing trends of bundled fixed line voice with internet services, their prices should be linked to each of the unbundled services. This is because before making a decision to purchase, rational consumers will consider the price of the bundled service (including any discounts) relative to the cumulative price of purchasing each service independently.

As identified earlier, prices for PSTN services have been trending downwards. Similarly DSL and HFC broadband prices have also been decreasing.

Table 2.5: Year-on-year percentage changes in price indexes for internet services²⁴⁷

	2007–08	2008–09	2009–10
DSL	-5.2	-0.4	-2.0
Cable	-5.9	0.5	-1.1

As a result, the prices of bundled fixed line voice with internet services have likely decreased in price.

VoIP

VoIP price trend data is not readily available. Prices can vary depending on a number of factors. Such factors include whether supply of the VoIP service is on a prepaid or contractual basis, a part of a bundle and whether it is carrier-grade or application-layer ('best efforts') VoIP.

Mobiles

Since 1997–98, average prices for mobile phone services decreased by 48.3 per cent. In 2009–10, overall prices increased by 1.8 per cent. This slight increase appears to be an anomaly and is due to a 10.5 per cent increase in the price of GSM services, which itself is a significant turnaround from the 10.8 per cent decrease in 2008–09. In 2009–10, the price of 3G mobile services decreased by 3.6 per cent.²⁴⁸

²⁴⁵ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009–10*, May 2011, p. 97.

²⁴⁶ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009–10*, May 2011, p. 98.

²⁴⁷ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009–10*, May 2011, p. 119.

²⁴⁸ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009–10*, May 2011, p. 112.

Other factors

There are several additional factors that the ACCC considers relevant to its examination of competition in relevant retail markets.

The ACCC understands that for some business customers to switch from a legacy PSTN based service to a ULLS based alternative (e.g. POTS emulation), both the customer and provider may need to undertake significant investment in their systems. Such customers are likely to be those that utilise EFTPOS, fax and alarms²⁴⁹ as well as other 'complex services', including VPN, ISDN, analogue NT 1 and payphones.²⁵⁰

In its submissions, Optus indicated that [c-i-c] [c-i-c]

The need for investment by businesses may create demand-side stickiness within these segments. This can be described as a barrier to entry to those providers not utilising Telstra's WLR/LCS/PSTN OA in the provision fixed line voice services. As a result, the ACCC believes that competition in some segments of the retail market for fixed line voice services is inhibited.

The ACCC also acknowledges that specific product characteristics of VoIP make it unlikely to be seen by many vulnerable and elderly consumers as a substitute for fixed line voice services.

As identified by the ACMA in its advice to consumers, VoIP services will not operate when power to the consumer's building is not present. Further, the ACMA advises that a VoIP service is unable to provide emergency services with the location from which the call is being made.²⁵¹ Both of these characteristics are not present in Telstra's PSTN-based services.

Finally, the ACCC is aware that depending on whether POTS emulation or carrier-grade VoIP is being utilised, a customer's decision to switch from a fixed line voice service or between VoIP and broadband providers may be influenced by other factors. These include:

- committing to a contract of up to 24 months in length
- purchasing new modem and/or phone equipment
- paying a set up fee, and
- having incomplete information about the range and quality of competitors' services.

Conclusion on competition in the retail market

Earlier discussion of VoIP and mobile services indicate that there is both growing take up and usage of non-fixed line voice services. In addition, trends suggest that since 1997–98 mobile services have decreased in price by a greater amount than PSTN fixed line voice services. This is potentially due to the lower concentration and therefore a greater level of competition in the mobile services market when compared to that of the fixed line voice services market.

²⁴⁹ Frontier Economics submission, p. 11.

²⁵⁰ Optus submission, Pub. p. 15/Conf. p. 15.

²⁵¹ ACMA, *Key issues to consider before getting VoIP*, available at: http://www.acma.gov.au/WEB/STANDARD/pc=PC_310761.

The abovementioned trends suggest that both mobile and VoIP services are acting as substitutes for retail fixed voice services which may offer some constraint on fixed line voice services. Despite this, fixed line voice SIOs have decreased by less than 3 per cent over four years. Over the same period, fixed line voice-only SIOs have decreased by approximately 10 per cent. The ACCC acknowledges this decline, but notes that the number of fixed line voice SIOs is still significant and that the majority of total call minutes are still being made using these services.

Earlier discussion has also highlighted some additional factors that appear to be limiting the substitution for fixed line voice services. The ACCC believes that while customer inertia is not insurmountable, it does make it more difficult for new and existing competitors to gain economies of scale in any market (e.g. fixed line voice, bundled voice and internet and VoIP services).

Further, the ACCC understands that there are some segments of the market for fixed line voice services (e.g. businesses that utilise EFTPOS/fax/‘complex services’ and elderly and vulnerable domestic customers) that are likely to be more resistant to substitution of VoIP and mobile services.

The above discussion leads the ACCC to the view that with time retail products may develop in a way that may address present resistances to substitution. Should the uptake, usage and pricing trends for VoIP and mobile services continue, further constraint on fixed line voice services may also be evidenced in the future.

However, the ACCC is of the view that fixed line voice services are still critical to servicing domestic and business customers. Different segments of the market for fixed line voice services are constrained by VoIP and mobile services to varying degrees. The ACCC believes that for some segments of the market, these alternatives are unlikely to offer a strong constraint on Telstra’s market power.

2.2.4 Competition in wholesale services used to supply relevant retail services

The ACCC has considered a broad market definition in reviewing the exemptions. In section 2.1, the ACCC noted that competition in retail services may act as an indirect constraint on the supply of the resale services. A range of wholesale services act as inputs into the relevant retail services. The supply side of these relevant retail services (broadband and voice) therefore needs to be considered. The ACCC has conducted this consideration in terms of the evidence on competition in broader wholesale services and the potential for competition to develop.

Submissions

Telstra

Telstra submitted that competitive conditions in the exempt ESAs have ‘exceeded expectations’, with strong growth in DSLAM-based investment and more intense retail competition. Telstra stated that stronger retail competition has led to lower prices, better value and greater choice for end-users.²⁵²

²⁵² Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper*, Pub. p. 5/Conf. p. 5.

Telstra stated that since September 2007, access seekers have continued to invest in DSLAMs, expand DSLAM capacity, and invest in core network capabilities.²⁵³ Telstra submitted that [c-i-c] [c-i-c].^{254 255}

Telstra submitted that infrastructure-based competition has also expanded beyond the 380 Attachment A ESAs in the Tribunal's exemption orders and that subsequent inquiries by the ACCC should consider whether additional ESAs meet the Tribunal's exemption conditions to become exempt ESAs.²⁵⁶

Telstra stated that the number of companies acquiring the ULLS has increased from 11 to 16 since September 2007, while the average number of ULLS-based access seekers in each exempt ESA has doubled to 4.4 over the same period.²⁵⁷ Additionally, the number of ULLS lines has tripled since September 2007, reaching [c-i-c] [c-i-c] lines in June 2011, while WLR SIOs and PSTN OA and LCS traffic have [c-i-c] [c-i-c].²⁵⁸ Nevertheless, [c-i-c] [c-i-c], which Telstra submitted to be evidence of the price competitiveness of its resale services.²⁵⁹

Telstra stated that increased competition in the exempt ESAs had impacted on its retail market share, noting that [c-i-c] [c-i-c].²⁶⁰ Telstra submitted that retail PSTN voice services were facing greater competition from services such as carrier-grade VoIP and mobile services, noting that [c-i-c] [c-i-c].²⁶¹ The ACCC's PSTN services price index has declined significantly since 1997–98, while Telstra's analysis—submitted to the ACCC in July 2011—showed that the price of fixed line voice services has declined since 2007.²⁶²

Telstra submitted that the market segment for fixed line voice services is 'particularly competitive': a large range of competitive alternatives are offered, including services offered by ULLS acquirers and services offered over other networks (including hybrid-fibre coaxial (HFC) and mobile).²⁶³ The market segment for enterprise and government customers is also 'strongly competitive' and the exemptions have not adversely affected access seekers' ability to compete for customers in this sector.²⁶⁴

Telstra submitted that [c-i-c] [c-i-c].²⁶⁵

Optus

Optus submitted that, to the extent that the alternative resale services are not acceptable substitutes, Telstra will have market power in respect of the exempt services in the 'future with exemptions' scenario.²⁶⁶

²⁵³ Telstra submission, Pub. p. 5/Conf. p. 5.

²⁵⁴ Telstra submission, Pub. p. 18/Conf. p. 18.

²⁵⁵ Telstra submission, Pub. p. 18/Conf. p. 20.

²⁵⁶ Telstra submission, Pub. p. 5/Conf. p. 5.

²⁵⁷ Telstra submission, Pub. p. 5/Conf. p. 5.

²⁵⁸ Telstra submission, Pub. p. 30/Conf. pp. 38–39.

²⁵⁹ Telstra submission, Pub. p. 7/Conf. p. 8.

²⁶⁰ Telstra submission, Pub. p. 6/Conf. p. 6.

²⁶¹ Telstra submission, Pub. p. 6/Conf. p. 6.

²⁶² Telstra submission, Pub. p. 22/Conf. pp. 24–25.

²⁶³ Telstra submission, Pub. p. 6/Conf. p. 6.

²⁶⁴ Telstra submission, Pub. p. 6/Conf. p. 7.

²⁶⁵ Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper Confidential Version*, 6 December 2011, p. 16.

Optus submitted that, for contestable end-users who can be served via ULLS, competition from access seekers with DSLAM infrastructure was already vigorous before the exemptions were proposed. For these contestable customers the exemptions will have no ill effects, but no benefits either. End users who cannot be served effectively via the ULLS (because of large pair gain systems or those who require ‘business grade’ SLAs) will experience less intense competition and higher retail prices due to the exemptions.²⁶⁷

Optus submitted that [c-i-c] [c-i-c]^{268 269}

Optus submitted that customers that cannot be effectively serviced via the ULLS must continue to be served by Telstra or by an access seeker taking resale services from Telstra. Telstra’s ability to exercise market power with respect to these customers will not be restrained by the existence of retail service providers or wholesale service providers that have made DSLAM investments.²⁷⁰

Primus

Primus submitted that the exemptions provide Telstra with the ability to compromise competition. It stated that competition to provide resale services has not emerged across the relevant geographic areas.²⁷¹ Primus submitted that Telstra’s price discrimination in relation to exempt services has dampened competition by increasing the resellers’ costs and this has had the effect of harming the LTIE.²⁷²

AAPT

AAPT stated that Telstra is utilising its market power to raise the WLR price in Exemption areas above the price in declared areas, despite there being no cost-based justification for such differentiation.²⁷³ AAPT stated that the price of WLR in exempt areas has been raised to [c-i-c] [c-i-c] compared to the efficient price of \$22.84 determined by the ACCC.²⁷⁴

Macquarie Telecom

Macquarie Telecom submitted that there is effectively no wholesale competition in supplying voice-only services and only limited wholesale competition in supplying broadband and bundled services.²⁷⁵ The primary reason why access seekers invest in infrastructure like DSLAMs and MSANs is so that they can provide broadband and bundled voice and broadband retail services, not to supply wholesale voice-only services.²⁷⁶

²⁶⁶ Optus submission, Pub. p. 12/Conf. pp. 12–13.

²⁶⁷ Optus submission, Pub. p. 3/Conf. p. 3.

²⁶⁸ Optus submission, Pub. p. 36/Conf. p. 42.

²⁶⁹ Optus submission, Pub. p. 36/Conf. p. 42.

²⁷⁰ Optus, submission, Pub. p. 30/Conf. p. 30.

²⁷¹ Primus, *Submission by Primus in response to the ACCC’s issues paper*, October 2011, pp. 3–4.

²⁷² Primus submission, p. 5.

²⁷³ AAPT, *Submission by AAPT in response to ACCC’s issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 6.

²⁷⁴ AAPT submission, p. 6.

²⁷⁵ Macquarie Telecom, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, 14 October 2011, p. 1.

²⁷⁶ Macquarie Telecom submission, p. 8.

Macquarie Telecom considered that the development of wholesale competition has been constrained by a number of factors, including concerns about Telstra's capacity to use its market power to 'circumvent competition via predatory retail conduct' and its ability to interfere with the provision of ULLS services.²⁷⁷

In addition, Macquarie Telecom submitted that a retail service provider has little incentive to supply its competitors with wholesale products as it would prefer to make its own retail sale than facilitate a competitor's sale.²⁷⁸ Further, Macquarie Telecom stated that potential wholesale suppliers may choose not to supply wholesale services because such activities are viewed as 'distraction[s] to their core business of selling to retail customers'.²⁷⁹

Macquarie Telecom submitted that [c-i-c] [c-i-c]²⁸⁰

Macquarie Telecom submitted further that [c-i-c] [c-i-c]²⁸¹

Herbert Geer

Herbert Geer submitted that, in the absence of a competitive wholesale market, Telstra could prevent new entry to retail market by raising the price of WLR, thereby making it impossible for new entrants using the WLR to compete with Telstra and ULLS-based access seekers.²⁸²

Herbert Geer submitted that Telstra will be unconstrained in the wholesale markets for voice and bundled voice/broadband services in the 'future with' the exemptions.²⁸³

Herbert Geer submitted that the availability of regulated access to both ULLS and WLR services promotes greater competition, and provides greater consumer choice, than access to only the ULLS.²⁸⁴

Herbert Geer provided a supplementary submission from Simon Hackett of Internode which described an example of how lower service standards for the ULLS, compared to the WLR, could inhibit competition in supplying retail services to certain segments of the market by ULLS-based access seekers.²⁸⁵

CCC

The CCC submitted that Telstra remains the dominant supplier of resale services in all markets relevant to the inquiry.²⁸⁶ It submitted that competition for fixed line services (or resale services) is not effective in any geographic area.²⁸⁷

Frontier Economics

Frontier Economics submitted that it did not agree with Professor Cave's views on the effectiveness of indirect competition from retail markets on the wholesale market for

²⁷⁷ Macquarie Telecom submission, p. 8.

²⁷⁸ Macquarie Telecom submission, p. 6.

²⁷⁹ Macquarie Telecom submission, p. 12.

²⁸⁰ Macquarie Telecom submission, p. 17.

²⁸¹ Macquarie Telecom submission, p. 5.

²⁸² Herbert Geer, *Submissions on exemption variation inquiry*, 14 October 2011, pp. 4–5.

²⁸³ Herbert Geer submission, p. 5.

²⁸⁴ Herbert Geer submission, p. 3.

²⁸⁵ Herbert Geer supplementary submission.

²⁸⁶ CCC submission, p. 1.

²⁸⁷ CCC submission, p. 1.

resale services.²⁸⁸ Frontier Economics submitted that the benefits to Telstra from raising wholesale WLR/LCS prices seem to outweigh the wholesale revenue lost as a result of resale customers switching to self-supply or supply of resale services by ULLS-based access seekers.²⁸⁹

Frontier Economics submitted that the ineffectiveness of indirect constraints is demonstrated by Telstra’s ability to charge a higher price for business WLR than residential WLR although the ACCC has set a single price for WLR in non-exempt areas.²⁹⁰

Evidence on competition in broader wholesale services

Take-up and usage

The ACCC notes that ULLS usage has been growing while WLR usage has been declining (as noted in Appendix F). Further, the growth in ULLS appears to have come at the expense of WLR. From Table 2.6, ULLS SIOs increased from one per cent of total fixed line services in 2005–06 to 9 per cent in 2009–10.²⁹¹ WLR SIOs declined from 21 per cent to 13 per cent over the same period. Note that, over this period, Telstra’s retail market share of SIOs has stayed fairly constant—between 77 and 80 per cent of SIOs.

Table 2.6: Telstra retail and wholesale PSTN and ULLS provided over the Telstra copper CAN and total number of fixed voice SIOs—2005–06 to 2009–10

Retail/wholesale percentage	2005–06	2006–07	2007–08	2008–09	2009–10
Telstra total retail SIOs	77%	78%	79%	80%	78%
Telstra domestic wholesale SIOs	21%	20%	15%	13%	13%
ULLS SIOs	1%	2%	5%	7%	9%
Total number of lines on Telstra’s CAN (million)	10.06	10.00	9.90	9.72	9.49
Total number of fixed line telephone SIOs (million)*	—	10.92	11.00	10.67	10.59

Source: ACCC, *Telecommunications competitive safeguards for 2009–10*, May 2011, p. 21 and Telstra financial reports *Information from ACMA Communications Report 2009-2010.

ULLS- and LSS-based access seekers

While Telstra’s DSL network is by far the most comprehensive in Australia, covering over 2400 exchanges,²⁹² ISPs have increasingly taken advantage of the regulated

²⁸⁸ Frontier Economics, *Reply report on Telstra submissions supporting geographic exemptions from access regulation – a report prepared for Macquarie Telecom, AAPT and Optus*, November 2011, p. 12.

²⁸⁹ Frontier Economics submission, p. 13.

²⁹⁰ Frontier Economics submission, p. 13.

²⁹¹ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 21.

²⁹² ACCC, *Telstra’s LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 89.

access to unbundled services—both the LSS and the ULLS—to provide broadband internet.

The ACCC notes approximately 22 ISPs have invested in their own DSLAM/MSAN equipment to provide broadband services as at June 2011.²⁹³ At 30 June 2011, [c-i-c] [c-i-c] ESAs were enabled to provide ADSL services (access seekers have deployed DSLAMs in 575 of these).²⁹⁴ Excluding Telstra, the most expansive DSLAM rollouts have been by [c-i-c] [c-i-c].

Table 2.7 below outlines the ISPs that have installed DSLAM infrastructure in exchanges and indicates the number of sites in which each access seeker had entered into as at March 2008 compared with December 2010.

Telstra CAN RKR results for the June 2011 quarter show that unbundled services (ULLS and LSS) represent:

- 18 per cent of all SIOs
- 17 per cent of all broadband services,²⁹⁵ and
- 36.5 per cent of DSL lines.²⁹⁶

The ACCC notes that there were 1,723,320 regulated unbundled services (LSS + ULLS) in operation by June 2011.²⁹⁷

Optus is the main driver of the strong growth in ULLS SIOs. Optus increased its ULLS SIOs by [c-i-c] [c-i-c] SIOs between March 2008 and June 2011.²⁹⁸ Optus added [c-i-c] [c-i-c] DSLAM sites between March 2008 and June 2011.²⁹⁹ TPG and iiNet between them have been responsible for the take-up of [c-i-c] [c-i-c] of LSS lines between March 2008 and June 2011.³⁰⁰

ULLS and LSS take-up is concentrated in metropolitan areas (Band 2 ESAs). In June 2011, only approximately 115,052 SIOs have been taken up outside of these areas compared to 1,608,268 SIOs in Band 2 ESAs.³⁰¹

²⁹³ ACCC, CAN RKR, June 2011.

²⁹⁴ ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 June 2011.

²⁹⁵ Based on the sum of ULLS and LSS SIOs divided by the total number of broadband connections at June 2011 in the ABS 8153.0 Internet activity survey.

²⁹⁶ ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 June 2011.

²⁹⁷ ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 June 2011; Total DSL lines is the sum of Total Voice and DSL, Total DSL only, ULLS SIOs, LSS SIOs.

²⁹⁸ CAN RKR data.

²⁹⁹ CAN RKR data.

³⁰⁰ CAN RKR data.

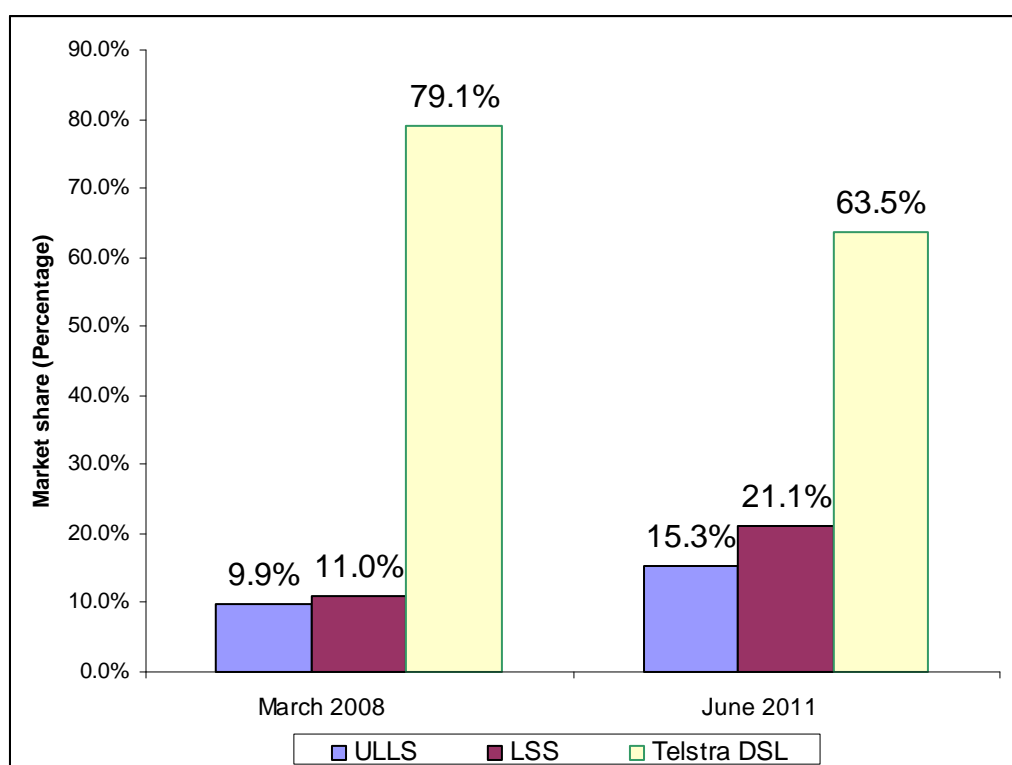
³⁰¹ ACCC, *Snapshot of Telstra's Customer Access Network* as at 30 June 2011.

The ACCC notes that, in the CBD areas, access seekers have significant fibre investments, as well as investments in DSLAMs, which they use to supply their customers. The ACCC notes that in addition to Optus and Telstra, there are a substantial number of smaller fibre network owners (based on information from the infrastructure RKR). These networks are mainly located in the CBD areas of capital cities and provide point-to-point business services and/or transmission and backhaul services between capital cities and major regional centres.

Accordingly, access seekers are less reliant on purchasing Telstra’s resale services in the CBD areas. The ACCC considers that the market share of ULLS/LSS-based competitors on Telstra CAN understates the level of competition in Band 1 ESAs as it does not take into account the services offered on alternative fibre networks. Since fibre networks are more limited in Band 2 ESAs, comparisons of ULLS/LSS-based competitors’ market shares in Bands 1 and 2 will not provide a comprehensive picture of the state of competition.

The ACCC notes that Telstra remains the dominant supplier of inputs for DSL services.³⁰² The percentage of DSL inputs (wholesale and retail) which Telstra provides has fallen between March 2008 and June 2011; Telstra’s share of the DSL market decreased from 79 per cent to 64 per cent (figure 2.5).

Figure 2.5: Market share for DSL inputs for March 2008 and June 2011



Source: CAN RKR

The ACCC notes that while DSLAM-based access seekers have increased the number of SIOs served via DSLAM infrastructure, these access seekers generally continue to also use a large number of the resale services. Access seekers with their own

³⁰² The DSL market here is based on the CAN RKR and is the sum of Telstra DSL SIOs, ULLS SIOs and LSS SIOs.

DSLAMs still acquired the majority of WLR services in March 2011 in exempt areas (appendix F).

As a specific example, Optus acquires WLR for [c-i-c] [c-i-c] per cent of its CAN wholesale access services (WLR+ULLS SIOs) in the Exempt ESAs.³⁰³ This implies that even an access seeker with the alternative supply options available to Optus (ULLS, DSLAMs with POTS emulation voice capability, a HFC network, fibre network assets) still may require the WLR to service a considerable portion of its customer base.

Wholesale DSL services

The ACCC notes that there appear to be greater ULLS-based wholesale offerings for broadband and bundled voice/broadband than for fixed voice-only services based on limited information from the industry. For example, Optus sells data and bundled voice and data services to wholesale customers.³⁰⁴ Only [c-i-c] [c-i-c] per cent of Optus' RBT customer accounts are supplied with voice-only services while Optus has [c-i-c] [c-i-c] RBT accounts that involve DSL at March 2011.³⁰⁵

That said, Telstra reported approximately 2.4 million retail fixed broadband SIOs and 869,000 wholesale fixed broadband SIOs as at 30 June 2011.³⁰⁶ This indicates that Telstra maintains a dominant position in the provision of wholesale DSL services.

Level of concentration

The ACCC notes that access seekers have two choices when supplying retail services: invest to self-supply or purchase resale services. The self-supply option typically requires investments into DSLAMs or DSLAM-equivalents and the accompanying infrastructure.

The ACCC also notes that Telstra still controls the infrastructure by which the majority of voice services are provided, with 91 per cent of all fixed voice lines supplied over the CAN. The ACCC further notes that Telstra controls access to ULLS (which is a potential supply-side substitute to the relevant retail services). Alternative wholesale voice and broadband services are dependent upon Telstra for access to the regulated ULLS.

In section 2.2.2, the ACCC noted that Telstra is the main supplier of resale voice services. The ACCC understands that Telstra is the only operator of DSL networks in approximately 80 per cent of ESAs, serving around 30 per cent of total fixed lines. In section 2.2.2, the ACCC noted that AAPT and Optus are the only alternative ULLS-based suppliers of wholesale voice and broadband services. However, the number of customers supplied using their RBT and MBE services is small compared to Telstra's resale services.

The ACCC understands that, from section 2.1.4, Telstra places restrictive terms and conditions on its wholesale DSL service. This condition would prevent an access seeker from offering a Naked DSL service using Telstra's wholesale DSL and limit

³⁰³ Optus, Optus response to ACCC request for market information.

³⁰⁴ Optus, *Submission in response to the ACCC's issues paper*, October 2011, p. 13; Optus, Optus response to ACCC request for market information

³⁰⁵ See Appendix F.

³⁰⁶ Telstra, Annual Report, June 2011.

the access seeker's ability to provide VoIP as an alternative to a traditional voice service.

As noted in section 2.2.2, Optus has submitted that [c-i-c] [c-i-c]³⁰⁷

The ACCC notes that access seekers are also investing to self-supply services. From Appendix F, the number of ESAs with ULLS/LSS-based access seekers has increased since 2007–08 and increasing number of ESAs contain multiple ULLS/LSS access seekers. These trends are also reflected in the exempt ESAs. Access seekers' DSLAM coverage has also expanded. From September 2007 to June 2011, the number of ESAs with at least one ULLS or LSS SIO increased by 81 ESAs. The largest increase was in Band 2 ESAs where DSLAM coverage increased by 58 ESAs.

Investing in DSLAMs allows access seekers to self-supply a greater number of inputs themselves—as well as potentially wholesale inputs to others. This could allow access seekers to bypass the WLR and wholesale DSL to some extent using the ULLS, and instead, provide competition that could indirectly restrain Telstra's wholesale pricing for resale services.

Facilities-based competition

The ACCC is currently unaware of any wholesale voice products being offered over alternative fixed networks (such as hybrid-fibre coaxial (HFC) and fibre networks).

The ACCC notes that Telstra submitted that the market segment for fixed line voice services is 'particularly competitive': a large range of competitive alternatives are offered, including services offered by ULLS acquirers and services offered over other networks (including HFC).³⁰⁸

The ACCC discusses facilities-based competition in more detail in section 2.1.4.

Number of access seekers in exempt ESAs

The ACCC notes that the number of access seekers has increased from September 2007 to June 2011. The number of access seekers with their own DSLAM equipment increased from 20 at September 2007 to 22 at June 2011.³⁰⁹ The number of access seekers increased in all geographical areas except for Band 4 ESAs as noted in Appendix F.

ULLS price and non-price terms and conditions

Access seekers have submitted that there are differences in the functionality and the terms on which the ULLS is supplied which limit access seekers ability to compete for certain retail customers using ULLS vis-à-vis WLR. These include that:

- Telstra offers superior SLAs for WLR compared to ULLS services, particularly in regard to service restoration and the associated costs.³¹⁰
- ULLS is not able to provide national coverage or ubiquitous coverage within the exempt ESAs.³¹¹

³⁰⁷ Optus, Attachment 4A, p. 5

³⁰⁸ Telstra submission, Pub. p. 6/Conf. p. 6.

³⁰⁹ ACCC, CAN RKR.

³¹⁰ Optus submission, Pub. p. 14/Conf. p. 14; AAPT submission, p. 8.

³¹¹ Optus submission, Pub. p. 13/Conf. p. 13; AAPT submission, p. 8.

- ULLS may not be able provide complex services³¹² and/or ULLS-based services may not be compatible with legacy technology employed by corporate and government end-users.³¹³
- ULLS also leaves the wholesale acquirer with additional costs and installation time compared to a WLR service because the ULLS access seeker needs to undertake wiring and connectivity activities previously undertaken by a Telstra technician.³¹⁴

Service Level Agreements

Several access seekers submitted that Telstra offers inferior Service Level Agreements (SLAs) for the ULLS compared to the SLAs offered for the WLR service.³¹⁵ Optus submitted that end-users being serviced using ULLS must wait up to four times as long as a WLR-based customer for fault restoration (even when the access seeker has purchased an improved service option from Telstra).³¹⁶

Optus has submitted that the restoration time is much longer for ULLS, and ULLS customers will receive no rebates if Telstra fails to restore the service within the specified timeframe.³¹⁷

Optus stated that, for its WLR services, for which Telstra offers [c-i-c] [c-i-c]³¹⁸

Macquarie Telecom has submitted that fault rectification for WLR service occurs within the following time frames:

Table 2.8: Fault rectification time frames for WLR

Geographic Area	Rectification Time Frame
Urban	[c-i-c]
Rural	[c-i-c]
Remote	[c-i-c]

Source: Macquarie Telecom

[c-i-c] [c-i-c] In contrast, Macquarie submitted that, regarding ULLS, it has the option to purchase [c-i-c] [c-i-c] which provide the following fault rectification standards:³¹⁹

³¹² Optus submission, Pub. p. 13/Conf. p. 13.

³¹³ Optus submission, Pub. p. 14/Conf. p. 14.

³¹⁴ Herbert Geer, *Witness statement from Simon Hackett*, 15 November 2011.

³¹⁵ Optus submission, Pub. p. 17/Conf. p. 17; Macquarie Telecom, *Letter to the ACCC*, 16 November 2011.

³¹⁶ Optus, submission, Pub. p. 17/Conf. p. 17.

³¹⁷ Optus submission, Pub. p. 14/Conf. p. 14.

³¹⁸ Optus, Confidential submission, Appendix E, pp. 44–45.

³¹⁹ Macquarie Telecom, *Letter to the ACCC*, 16 November 2011, p. 4.

Table 2.9: Fault rectification time frames for ULLS

Package	Cost	Time	Geographic Area	Rectification Time Frame
[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
			[c-i-c]	[c-i-c]
			[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Source: Macquarie Telecom

Optus submitted that [c-i-c] [c-i-c]³²⁰

Optus has stated that [c-i-c] [c-i-c]

Optus submitted that [c-i-c] [c-i-c]³²¹

The ACCC notes that the differential between Service Level Agreements (SLAs) offered by Telstra for WLR and ULLS services appear to be significant, particularly for geographic areas outside urban areas. The ACCC also notes submissions that [c-i-c] [c-i-c].³²² Further, the ACCC notes Optus submissions that [c-i-c] [c-i-c]³²³

The ACCC notes that, on the basis of the information submitted, the SLAs may affect the ability of access seekers to provide certain business grade services using ULLS. Therefore this may limit the ability of ULLS-based access seekers to compete against Telstra to supply certain corporate and government end-users that require superior SLAs.

Complex services

Optus has submitted that corporate and government customers require certain ‘enhanced features’ that cannot be supplied using access seekers’ infrastructure without investments by the retail customer.

Optus submitted that these enhanced features, or complex services, include such services as fax duet, huntgroups, voicemail on huntgroups and line hunt.³²⁴

Optus submitted that [c-i-c] [c-i-c]

[c-i-c] [c-i-c]³²⁵

These ‘enhanced features’ can, however, be supplied using the WLR service without further investments by retail customers. Macquarie Telecom submitted that [c-i-c] [c-i-c].³²⁶

³²⁰ Optus submission, Pub. p. 36/Conf. p. 43.

³²¹ Optus submission, Pub. p. 36/Conf. p. 42.

³²² Macquarie Telecom, *Inquiry into varying the exemption provisions in the FADs for the WLR, LCS and PSTN OA services*, 14 October 2011, p. 24

³²³ Optus submission, Pub. p. 36/Conf. p. 42.

³²⁴ Optus submission, Pub. p. 15/Conf. p. 15.

³²⁵ Optus submission, Pub. p. 35/Conf. p. 40.

The ACCC notes that, while a potentially surmountable issue, there may be significant costs involved in providing certain services using the ULLS. This may affect a ULLS-based access seeker's ability to compete for end-users which require such services.

Other issues relating to the supply of ULLS

The ACCC notes that there are potentially other supply issues which relate to ULLS that may not affect WLR or other PSTN based services.

Herbert Geer (on behalf of Internode) has submitted that ULLS also leaves the wholesale acquirer with additional costs and installation time compared to a WLR service because the ULLS access seeker needs to undertake wiring and connectivity activities previously undertaken by a Telstra technician.³²⁷

Without commenting on this particular circumstance, the ACCC notes that potential difference between the way in which ULLS is supplied vis-à-vis WLR may impact a ULLS-based access seekers ability to compete effectively against non-ULLS based service providers.

Potential for competition to develop

In considering the potential for competition to develop, the ACCC has considered the following:

- size of addressable market
- cost of infrastructure investment
- non-price barriers to provision of fixed line services
- impact of NBN roll-out on incentives to roll out further DSLAMs

Size of addressable market

The number of SIOs in an ESA is likely to be a useful (and largely fixed) means for determining the size of the 'addressable market' and appears to be a key factor guiding the 'entry decision' of an access seeker in supplying wholesale and retail services.

The number of SIOs in an ESA will influence the economies of scale that could (at least potentially) be realised by a competitor—and therefore provide an indication of the minimum efficient scale necessary to enter a particular ESA. Other things being equal, in areas with more SIOs, competitors could expect to recover these costs over a broader number of end-users in these areas—thus lowering their per-unit costs as well as the *a priori* risks of investment.

The ACCC notes that there are various factors which are likely to limit the size of the addressable SIOs within an ESA. These relate to the issue of pair gain deployment (i.e. small pair gain systems, RIMs and CMUXs) by Telstra precluding ULLS-based competition. In addition, the ACCC notes that AAPT identified another factor that reduces the size of the addressable market: sub-exchanges. AAPT noted that sub-exchanges can present a barrier to entry to ULLS-based competitors by:

³²⁶ Macquarie Telecom, *Submission to the inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, 14 October 2011, pp. 5 & 12.

³²⁷ Herbert Geer, *Witness statement from Simon Hackett*, 15 November 2011.

- limiting the number of prospective customers that can be gained in an exchange service area.³²⁸
- requiring greater costs and installation time for accessing end-users on sub-exchanges as compared to main exchanges.³²⁹
- some sub-exchanges may be too small to accommodate access seekers' equipment.³³⁰

The deployment of pair gain/RIMs by Telstra within a particular ESA will, in some cases, prevent an access seeker from supplying broadband to end-users on these lines. Large pair gain systems were put in place where copper connections from the exchange were expensive to provide, especially in new housing estates on the fringes of an ESA.

Telstra has previously stated that this problem can be resolved by:³³¹

- 'transpositioning' the line affected by the pair gain system off the pair gain system and onto an unbroken copper pair path (unaffected by a pair gain system [should such a line be available]).
- co-locating the DSLAM at the site of the large pair gain system.

The ACCC has previously noted that it is not aware of Telstra currently providing these solutions at the request of access seekers that cannot deploy DSLAMs due to Telstra deploying a pair gain system.³³² Accordingly, the ACCC considered that pair gain/RIMs deployment reduces the addressable SIOs within an ESA.

The ACCC previously determined that approximately 7 per cent of SIOs within the ACCC's Exemption Footprint (248 ESAs) were unavailable for ULLS use by access seekers due to pair gain deployment.³³³ Telstra Infrastructure RKR data indicates that approximately 11 per cent of all CAN lines are currently supplied using RIM or Large Pair Gain System (LPGS) technologies.³³⁴

Optus has submitted that, in the case of line-blockers such as large pair gain systems, voice-only services are the only fixed line services that can be provided to the retail customer and Telstra's resale services are the only means of supplying these services. Optus submitted that, despite being an established service provider with its own DSLAM infrastructure, Optus still uses a significant number of Telstra resale services which allow Optus to provide a number of business services and services to areas where ULLS is not available.³³⁵

While limiting the addressable market in effected ESAs, it is also likely that the presence of such line-blockers will impact on the extent to which an access seeker can compete for end-user customers in these areas via a ULLS-based service.

³²⁸ AAPT submission, p. 3.

³²⁹ AAPT submission, p. 13.

³³⁰ AAPT submission, p. 14.

³³¹ Telstra, *Telstra Witness Statement – Response to the ACCC 17 December 2007 request for further information*, 14 March 2008.

³³² ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 72.

³³³ ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 72.

³³⁴ Telstra Infrastructure RKR.

³³⁵ Optus submission, Pub. pp. 24–25/Conf.pp. 24–25.

Due to the increasing importance of bundling telephony services with broadband services, another technical factor that may reduce the addressable SIOs within an ESA relates to the pattern of density within an ESA. The distance an end-user is from the exchange building is one of the key factors determining the download/upload speeds an end-user can achieve over a DSL line. The speeds achievable are highly sensitive to end-user distance from the exchange. Beyond 5km from the exchange it becomes technically non-feasible to supply DSL services over Telstra's copper access network at all.

The ACCC has previously examined empirical information (supplied mostly on a confidential basis by Telstra) on the extent of pair gain deployment for the 387 ESAs nominated by Telstra for exemption.³³⁶ This information indicated that within these nominated Band 2 ESAs, only [c-i-c] [c-i-c] per cent of SIOs would be serviceable by DSL from the exchange.

Cost of infrastructure investment

The ACCC notes that investment in the self-supply of services represents a significant sunk cost to access seekers. It requires investment into DSLAMs and accompanying hardware, software, Telstra facility charges and core infrastructure.

The ACCC has received submissions on the cost of infrastructure investment and they are provided in Appendix J. The ACCC discusses the costs of infrastructure investment in section 2.2.2 and notes that they may pose a barrier to entry for access seekers.

Non-price barriers to provision of fixed line services

The ACCC has considered the following non-price barriers to entry:

- I. exchange capping
 - II. availability of transmission services
 - III. delay and queuing in equipment installation
 - IV. availability of switching capability
- I. Exchange capping

The ACCC considers that a scenario known as 'exchange capping' functions as a barrier to entry or expansion for ULLS-based competitors. At 1 July 2011, approximately 562 Telstra exchange buildings were Telstra Equipment Building Access (TEBA) enabled.³³⁷ These exchanges have an area within the exchange which has been set aside for access seekers to install their equipment.

The ACCC understands that Telstra's TEBA enabled exchange buildings may be subject to several physical limits which can impede access seekers from deploying services that utilise ULLS. In order to utilise the ULLS, an access seeker must be able to install their equipment (DSLAM or MSAN) into the exchange and access the ports (terminations) in the main distribution frame (MDF).

³³⁶ ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, pp. 72–73.

³³⁷ Telstra, *Fact sheet – Telstra Equipment Building Access (TEBA) Established sites as at 1 July 2011*. available at: telstrawholesale.com.au/download/document/fixed-facilities-access-established-sites-1.pdf.

Telstra classes exchanges as ‘rack-capped’ if it considers that there is no room available for access seekers to install their access equipment into the racks in the TEBA space. Telstra classes exchanges as ‘MDF-capped’ if it considers that there is insufficient main distribution frame (MDF) space for access seekers to utilise.

When an exchange is potentially capped, the ACCC understands that:³³⁸

room may be available after a full consultation with [Telstra] to determine the scope of works required to establish the TEBA area. Scope of works for “Potential” sites may include, but is not limited to, works such as converting non-equipment rooms into Equipment rooms, removing decommissioned equipment or upgrading major building facilities (e.g. AC switchboards, EPP, and central air conditioning plant.).

The ACCC notes that there are zero exchanges that are MDF-capped and 22 exchanges that are potentially racks-capped at the end of October 2011.³³⁹

The ACCC notes that an access seeker without existing installed equipment within a ‘capped’ exchange is unlikely to compete in that exchange utilising the ULLS.

As noted in the 2008 decision, solutions may be available to alleviate capping issues; however, these may be difficult, costly and time-consuming to implement.

In recognition of this issue, the Tribunal’s Metropolitan Orders specified that the exemptions would not have an effect in an ESA in the event that an exchange is Capped, Potentially Capped or Constructively Capped.³⁴⁰ These conditions continue to apply under the FADs. As the resale services will be available in capped exchanges either with the exemptions or without the exemptions, the effect of exchange capping on competition will not likely vary between the two cases.

II. Availability of transmission services

The ACCC notes that a key consideration for an access seeker may be whether the particular ESA is within an area where an access seeker can access backhaul transmission infrastructure from a point of interconnection near the exchange building in the ESA at cost-reflective prices, either via its own infrastructure, or supplied by a third party.

In relation to backhaul transmission services the ACCC has previously noted, in the 2008 Final Decisions, that ESAs subject to the exemption orders will be subject to competitive supply of such services.³⁴¹

³³⁸ Telstra, *Fact sheet: Telstra equipment building access (TEBA) capped sites for November 2011*, available at: <http://telstrawholesale.com/products/facilities/teba/index.htm#tab-4>.

³³⁹ ACCC, *Access to Telstra Exchange Facilities Record Keeping Rule 2011– Summary Report* October 2011 reporting period.

³⁴⁰ Capped Exchange—an Exchange Building which Telstra has determined is not available for access by an access seeker for any reason, including an Exchange Building listed by Telstra in the TEBA Capped List [the document published by Telstra that lists each Exchange Building that Telstra regards as a Capped Exchange or a Potentially Capped Exchange] as ‘MDF capped’ [Main Distribution Frame capped], ‘Racks capped’ or ‘Racks and MDF capped’. Potentially Capped—a Telstra Exchange Building which Telstra has determined may be unavailable for access by an access seeker for any reason including an Exchange Building listed in the TEBA Capped List as ‘Potential’. Constructively Capped Exchange—an exchange in respect of which the ACCC has determined that Telstra requires, as a condition of access, that the access seeker undertake works at their own expense which are out-of-the-ordinary works.

³⁴¹ ACCC, *Telstra’s LCS and WLR exemptions applications: final decision— final decision and class exemption*, August 2008, pp. 83–84.

The ACCC notes that the Domestic Transmission Capacity Service (DTCS) is currently a declared service, with certain exceptions in routes and locations where it faces substantial infrastructure competition.³⁴² In its June 2011 Discussion Paper for the DTCS, the ACCC noted transmission services that are not subject to regulation are provided in relatively mature markets served by a number of service providers.³⁴³

III. Delay and queuing in equipment installation

The capping of exchanges is not the only possible barrier to access seekers seeking to migrate customers to the ULLS. Access seekers can also face substantial delays in installing their DSLAM or MSAN equipment into exchanges.

The ACCC notes that there are 21 exchanges with queues at the end of October 2011.³⁴⁴

IV. Availability of switching equipment

A further potential barrier to entry for firms entering the fixed voice market via ULLS is accessing voice switching services.

An access seeker seeking to enter the voice market through ULLS has two options for gaining voice switching services. The access seeker could use traditional switching in conjunction with a DSLAM or soft-switching in conjunction with an MSAN.

Access seekers can purchase voice TDM (time-division multiplexing) switches themselves. The ACCC has previously noted that it can be difficult to buy such switches as they are rapidly becoming an outdated technology.³⁴⁵ An alternative option for an access seeker would be to acquire voice switching services from existing service providers. This option would require access seekers to negotiate the terms and conditions of purchasing the voice switching services from these providers on a commercial basis. However, while such an option may be technically available, the ACCC has previously recognised that carriers have not, to date, supplied such services via commercial arrangements and that, accordingly, the costs involved in obtaining such a service are unknown.³⁴⁶

A soft-switching option involves the use of the IP network to carry voice traffic, with the addition of voice cards at the DSLAM or the use of Voice over DSL. A further investment in soft-switches and PSTN gateway infrastructure is also required to route calls and connect to Telstra's and other carriers PSTN switches.³⁴⁷ Apart from the cost considerations for such infrastructure outlined in Appendix J and section 2.2.2, the

³⁴² ACCC, *Domestic transmission capacity service (DTCS) – an ACCC Discussion Paper for a public inquiry into a FAD for the DTCS*, June 2011, p. 83.

³⁴³ ACCC, *Domestic transmission capacity service (DTCS) – an ACCC Discussion Paper for a public inquiry into a FAD for the DTCS*, June 2011, p. 6.

³⁴⁴ ACCC, *Access to Telstra Exchange Facilities Record Keeping Rule 2011 – Summary Report* October 2011 reporting period.

³⁴⁵ ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 84.

³⁴⁶ ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 84.

³⁴⁷ ACCC, *Telstra's LCS and WLR exemption application – final decision and class exemption*, August 2008, p. 84.

soft-switching option also appears to require economies of scale. As the ACCC notes, only [c-i-c] [c-i-c] have been identified as users by Telstra.³⁴⁸

Accordingly, the ACCC notes that the soft-switching option entails significant sunk costs for access seekers and requires economies of scale. It may be a barrier to entry for ULLS access seekers.

Impact of NBN roll-out on incentives to roll out further DSLAMs

The ACCC considers that the NBN roll-out is likely to reduce access seekers' incentives to invest in DSLAMs and DSLAM-equivalents.

As noted in section 2.2.2, NBN Co released an information guide titled '*Migrating to the National Broadband Network*' in August 2011 detailing procedures and timeframes for the roll-out.³⁴⁹ NBN Co stated that it will publish a 3 Year Rollout Plan at least annually outlining the Region Ready for Service Date (RRFSD). A disconnection date for the disconnection of services and premises from the legacy copper network follows 18 months after the RRFSD.³⁵⁰ In October 2011, NBN Co indicated that it would 'issue a three-year indicative view' of the roll-out in early 2012.³⁵¹

Access seekers making DSLAM investments face the following risks during the NBN roll-out since they may face the prospect of NBN overbuild:

- stranded assets in the form of DSLAMs/MSANs.
- uncertain and truncated payback periods.
- partial recovery of investment costs of DSLAMs/MSANs.

These uncertainties are likely to increase the risk of investments and create a barrier for DSLAM investment. Access seekers have also generally submitted that the NBN roll-out is likely to reduce incentives for investing in DSLAMs.

Optus has submitted that, [c-i-c] [c-i-c]³⁵² Appendix F shows that, based on CAN RKR data, DSLAM investment in new exchanges has slowed, with the number of ESAs with at least one ULLS or LSS SIO only increasing by 1.8 per cent over the year from March 2010 to March 2011.

The ACCC notes that NBN Co released its 1 Year Rollout Plan on 18 October 2011 which lists 28 new locations as part of the national roll-out (passing 485,000 premises) where construction of the fibre optic network is expected to commence over the following 12 months.³⁵³ The plan includes areas of overlap with exempt ESAs. The ACCC considers that access seekers are unlikely to invest in any further DSLAM

³⁴⁸ Telstra, *Fixed line services geographic exemption-request for market information*, 2 September 2011, pp. 9–10.

³⁴⁹ NBN Co, *Migrating to the National Broadband Network*, August 2011, available at: www.nbnco.com.au/assets/documents/migrating-to-the-nbn.pdf.

³⁵⁰ NBN Co, *Migrating to the National Broadband Network*, August 2011, p. 13.

³⁵¹ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

³⁵² Optus submission, Conf. p. 6/Pub. p. 6.

³⁵³ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

infrastructure in these areas since any such investments will be overbuilt within 12 months, which would be unlikely to leave sufficient time for the cost of the investment to be recovered.

Conclusion on competition in broader wholesale services

The ACCC notes that Telstra remains the dominant supplier of wholesale services used to supply relevant retail services due to its ownership of the CAN.

The ACCC considers that ULLS-based competitors are likely to offer some indirect constraints via the retail market on Telstra for supply of the resale services. However, the ULLS does not appear to provide a viable alternative to the resale services in some circumstances due to differences in quality, functionality and service levels.

This is further complicated by the barriers to entry for supplying ULLS-based alternatives such as: exchange capping, delay and queuing in equipment installation and availability of switching equipment. These barriers reduce the viability of ULLS-based services to act as substitutes for Telstra's resale services by limiting their geographical coverage.

In addition, the ACCC notes that the likelihood of further DSLAM investment is reduced by the uncertainties and risk from the NBN roll-out. ULLS-based competitors thus face a further constraint in self-supplying wholesale voice and broadband services.

The ACCC therefore considers that there is a lack of competitive wholesale supply alternatives due to:

- Telstra's continued dominance in supplying voice and broadband services
- Telstra's control over the CAN and access to ULLS
- limited alternative suppliers of wholesale broadband and voice services, and
- ULLS-based competitors being constrained by the NBN roll-out and the limited substitutability and the barriers to entry associated with the ULLS.

These supply-side constraints, which reduce the availability of good substitutes for Telstra's resale services, and Telstra's position as the dominant provider of retail services (discussed at 2.2.3), significantly limit the effectiveness of indirect retail constraints on Telstra's market power in supplying the WLR, LCS and PSTN OA.

The ACCC's analysis of the promotion of competition, in the future 'with' or 'without' the exemption provisions, is contained in chapter 5.

3 Efficient use of, and investment in, infrastructure

In determining whether varying the exemption provisions in the FADs will promote the LTIE, the ACCC must have regard to the extent to which the variation is likely to result in the achievement of the objective of encouraging the economically efficient use of, and the economically efficient investment in:

- the infrastructure by which listed services are supplied; and
- any other infrastructure by which listed services are, or are likely to become, capable of being supplied.³⁵⁴

In determining the above, regard must be had to:

- whether it is, or is likely to become, technically feasible for the services to be supplied or charged for, having regard to:
 - the technology that is in use, available or likely to become available
 - whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and
 - the effects, or likely effects that, supplying and charging for the services, would have on the operation or performance of telecommunications networks.
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope; and
- the incentives for, including the risks involved with making the³⁵⁵ investment in:
 - the infrastructure by which the services are supplied; and
 - the other infrastructure by which the services are or are likely to become capable of being supplied.³⁵⁶

In the ACCC's view, the phrase 'economically efficient use of, and economically efficient investment in, infrastructure' requires an understanding of the concept of economic efficiency. This concept consists of three components:

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

³⁵⁴ CCA s. 152AB(2)(e)

³⁵⁵ CCA s. 152AB(7A)

³⁵⁶ CCA s. 152AB(2)(e)

The Australian Competition Tribunal has noted that:

The inclusion of the term “economically” in s. 152AH(I)(f) suggests that the concepts of allocative, productive and dynamic efficiency should be considered. Allocative efficiency will be best promoted where the price of a service reflects the underlying marginal cost of providing the service.³⁵⁷

The key question is the extent to which varying the exemption provisions in the FADs are likely to encourage productive, allocative and dynamic efficiency. Whether such efficiencies will be improved is highly relevant to, but not determinative of, this issue. The key issue is whether granting the exemptions will create an environment whereby the participants have increased incentives to undertake efficient use of, and efficient investment in, infrastructure.³⁵⁸

As the level of competition in downstream markets increases, whether it is through declaration of a service or through market forces, productive and dynamic efficiency should increase because competition should stimulate service providers to innovate and reduce the costs of providing services. This should also lead to allocative efficiency as access providers and access seekers seek to reduce the final prices paid by end-users, as a mechanism to compete in the downstream market.

3.1 Investment environment in the industry

The ACCC notes that, to date, the industry has been increasingly investing in DSLAM infrastructure to supply services. However, the National Broadband Network (NBN) roll-out presents a number of developments and uncertainties for the investment environment for the provision of carriage services.

The ACCC notes that the NBN provides a wholesale, ‘Layer Two’ Ethernet bitstream access product allowing access seekers to offer nation-wide coverage to end users.³⁵⁹ The ACCC notes that the NBN provides a service on a similar ‘layer’ as wholesale DSL and WLR.

NBN Co released a 12 month Year Rollout Plan on 18 October 2011.³⁶⁰ At that time, NBN Co indicated that it would ‘issue a three-year indicative view’ of the roll-out in early 2012.³⁶¹ The ACCC notes that the indicative nature of the three year roll-out schedule, and the potential for it to be revised annually, creates uncertainty for access seekers. This uncertainty increases the risks associated with copper-based investments, like DSLAMs, due to the potential for a truncated payback period, possible asset stranding, and consequent partial recovery of investment costs.

The recent pattern of investment has reflected these investment uncertainties. The ACCC notes that access seekers appear to have slowed the geographic expansion of

³⁵⁷ Australian Competition Tribunal, *Telstra Corporation Limited* [2006] ACompT at [94].

³⁵⁸ ACCC, *Telecommunications services – Declaration Provisions: A Guide to the Declaration Provisions of Part XIC of the Trade Practices Act*, July 1999. While this publication specifically referred to declaration provision of the TPA, the ACCC is of the view that the relevant comments made are equally applicable to this inquiry.

³⁵⁹ NBN Co, *NBN Co Wholesale Access Service Product and Pricing Overview for Access Seekers*, December 2010, p. 1.

³⁶⁰ NBN Co, <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

³⁶¹ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

their DSLAM footprints. The number of ESAs with at least one ULLS/LSS SIO increased by only 1.8 per cent from March 2010 to March 2011 (see appendix F). Optus submitted that it [c-i-c] [c-i-c]³⁶² The ACCC further notes that Optus' capital expenditure for its 'Business and Wholesale Fixed' and 'Consumer & SMB Fixed' divisions fell by more than 20 per cent between March 2010 and March 2011.³⁶³ iiNet has also noted an overall slowing of fixed line capital expenditure investment by industry.³⁶⁴

The ACCC notes that Professor Martin Cave has outlined the implications of next generation access (NGA) networks for the existing ladder of investment in the presence of a current generation network such as Telstra's copper customer access network (CAN). Professor Cave noted that access seekers cannot operate at the same network layer in an NGA network as they do on a copper network: the 'eventual removal of unbundled local loop products at the exchange' that results from an NGA network's bypass of the local exchange means that access seekers must 'move up the ladder...or down a snake to a bitstream product'.³⁶⁵

Access seekers on the NBN will be offered access at the bitstream level, compared to the copper network where lower layer (e.g. ULLS and LSS) services are also available. As a consequence of the different layer of operations, the ACCC considers that the roll-out of the NBN renders DSLAM investments at local exchanges obsolete. In the ACCC's view, this increases the risks associated with further investments to climb the copper-based 'ladder of investment' due to the risk of a truncated payback period for such investments.

3.2 Efficient use of existing infrastructure

3.2.1 Submissions

Telstra submitted that competition in the retail and wholesale markets will mean that the prices of services will better reflect their direct costs and the efficient operation of carriage services will be promoted.³⁶⁶

Macquarie Telecom submitted that it is inefficient to invest in assets that will become stranded before the end of their useful lives (even where the investment costs could be recovered) when sunk assets with the necessary capacity already exist.³⁶⁷

AAPT submitted that the exemptions are deterring the efficient use of installed infrastructure because, due to the price increases in exempt ESAs, LSS-based services

³⁶² Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 6 (public p. 6).

³⁶³ Singtel, *Management discussion and analysis of financial condition, results of operations and cashflows for the fourth quarter and year ended 31 March 2011*, 12 May 2011, p. 56.

³⁶⁴ iiNet, *iiNet in strong position for NBN rollout*, 2 February 2011, p. 18.

³⁶⁵ M Cave, 'Snakes and ladders: Unbundling in a next generation network', *Telecommunications Policy*, vol. 34, 2010, pp. 80–85.

³⁶⁶ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, Pub. p. 36/Conf. p. 47.

³⁶⁷ Macquarie Telecom, *Submission by Macquarie Telecom in response to the ACCC's issues paper*, October 2011, p. 3.

(used in conjunction with WLR and/or other services) are now less competitively priced, meaning that existing DSLAMs at exchanges would not be fully utilised.³⁶⁸

Frontier Economics also referred to inefficient/wasteful investment where sunk assets exist, stating that ‘encouraging new investment in assets that will become stranded is unlikely to be more efficient than encouraging greater use of Telstra’s existing assets. These assets can be used to supply wholesale voice services at very low marginal social cost.’³⁶⁹

3.2.2 ACCC views

The ACCC is required to assess whether varying the exemption provisions in the FADs would affect the efficient use of existing infrastructure.

The ACCC notes that the technical feasibility of supplying the resale services as well as the legitimate commercial interests of Telstra as the supplier of LCS, WLR and PSTN OA are relevant.³⁷⁰

The ACCC notes that it is clearly technically feasible to supply the resale services and/or equivalent wholesale voice services, as Telstra already supplies such services. As noted in chapter 2, there may be technical issues with providing equivalent wholesale voice services over certain types of alternative infrastructure, however these technical difficulties are not likely to be insurmountable.

The ACCC considers that, in relation to the infrastructure currently used to provide LCS, WLR and PSTN OA, efficient use will be supported by cost-based pricing, including a market return on Telstra’s investment. In this regard, the ACCC’s access determinations ensure that price and non-price terms of access are appropriate and that Telstra is compensated for its ongoing economic costs of providing these services. In this sense, Telstra’s legitimate commercial interests in supplying LCS, WLR and PSTN OA are protected.

If Telstra’s current pricing for WLR services in exempt areas reflect pricing above underlying costs, and should the exemptions remain in place, then a continuation of this above-cost pricing could artificially reduce demand for these services and result in the use of existing infrastructure at a level below the efficient level of use, as well as distorting access seeker input choices and scale.

The ACCC has noted AAPT’s submission that if the exemption provisions remain in place, an above-cost WLR price would distort demand for bundled voice/broadband services. This could potentially lead to access seekers losing some of their bundled customers if they tried to increase their retail prices to pass on the above-cost WLR price. This could, in turn, lead to the under-utilisation of access seeker DSLAMs to

³⁶⁸ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 21.

³⁶⁹ Frontier Economics, *Reply report on Telstra submissions supporting geographic exemptions from access regulation. A report prepared for Macquarie Telecom, AAPT and Optus*, November 2011, p. 19.

³⁷⁰ ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications: Final decision and class exemption*, August 2008, p. 120.

supply data services (where access seekers are currently using a WLR/LSS combination to supply end-users).³⁷¹

If the exemptions are removed, the ACCC notes that where capacity exists to supply the LCS, WLR and PSTN OA using existing sunk assets, and access to such services is priced in a way which reflects the economic cost of supplying such services, the economically efficient use of the relevant infrastructure is likely to be promoted by regulated access to these services.

The regulated provision of Telstra's resale services in areas where alternative infrastructure exists is consistent with the efficiency criteria because of the limitations of the alternative infrastructure in supplying the broad range of downstream services (discussed in chapter 2). This is true especially where Telstra's infrastructure is, and is likely to remain, the least-cost method of supply for providing many of these services for the foreseeable future and during the transition to the NBN.

3.3 Efficient investment in infrastructure

3.3.1 Costs of installing voice-capable infrastructure

Submissions to the September 2011 issues paper

The ACCC received a number of submissions on the costs of providing voice services using DSLAM/MSAN infrastructure. Submissions contained a wide range of estimated costs of installing and operating a DSLAM/MSAN. Estimates of DSLAM installation costs ranged from around \$11,700 (excluding some types of costs) to over [c-i-c] [c-i-c]. Estimates of other DSLAM costs—such as power, site leasing, maintenance and expansion costs—in submissions also varied substantially. Brief summaries of submissions on the costs of supplying voice services over voice-capable infrastructure are provided below. More detailed summaries are provided in appendices C, D, E, F and J.

Telstra

Telstra referred to a report on DSLAM costs prepared for it by its consultant, Mr Craig Lordan, on 30 May 2011. Lordan estimated that the total cost associated with the supply and installation of a 300-port DSLAM is between \$11,705 and \$13,705, consisting of a per port cost of between \$30 and \$35, and an infrastructure installation cost of \$2,705.³⁷² In relation to expansion of a DSLAM's capacity, Lordan, in a report prepared for Telstra in October 2011, estimated that it would cost an access seeker \$900 to expand a DSLAM's capacity by installing a 24-port voice card.³⁷³ Lordan estimated that the total annual ongoing cost per DSLAM port in an exchange is

³⁷¹ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 10.

³⁷² Telstra, *Public inquiry to make Final Access Determinations for the declared fixed line services – Part C of Telstra's response to the Commission's discussion paper: Schedule C.1 – Update of expert opinion on the cost of DSLAM infrastructure*, June 2011, p. 3.

³⁷³ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment H – DSLAM voice service delivery costs*, October 2011, p. 16.

between \$10.30 and \$35.75,³⁷⁴ which equates to an annual operating cost for a 300-port DSLAM of between \$3,090 and \$10,725.³⁷⁵ Telstra submitted that an access seeker already supplying DSL services would incur upfront costs of between \$32 and \$67 per service to add voice services.³⁷⁶

Telstra also submitted that [c-i-c] [c-i-c]³⁷⁷

Telstra stated that [c-i-c] [c-i-c]³⁷⁸

Optus

Optus submitted that the cost of installing a single DSLAM is around [c-i-c] [c-i-c].³⁷⁹ This figure includes costs associated with: [c-i-c] [c-i-c].³⁸⁰ Optus submitted two appendices showing examples of costs it had incurred investing in DSLAMs: the first example showed materials costs from vendors of [c-i-c] [c-i-c] and the second example showed that Optus incurred [c-i-c] [c-i-c].

Optus stated that expanding a DSLAM's capacity by adding a single voice card would cost a total of [c-i-c] [c-i-c]. Installing each subsequent card during the same site visit would cost [c-i-c] [c-i-c].³⁸¹ Optus submitted that three types of DSLAM 'operating costs' are incurred: [c-i-c] [c-i-c].³⁸²

Macquarie Telecom

Macquarie Telecom submitted that the total capital expenditure needed to supply voice services at a new exchange would be [c-i-c] [c-i-c], while total operating expenditure would be [c-i-c] [c-i-c] per exchange per annum.³⁸³

AAPT

AAPT submitted that DSLAM installation costs are unlikely to exceed [c-i-c] [c-i-c], although the cost will vary depending on the amount of cabling required at a particular DSLAM.³⁸⁴

³⁷⁴ Consisting of \$2.40 for supplier support, \$0.85 per technician, and [c-i-c] [c-i-c]. Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, confidential p. 50 (public p. 40).

³⁷⁵ Lordan (on p. 11) notes that his estimates of DSLAM operating costs exclude the costs of backhaul, which may vary considerably depending on an access seeker's choices regarding location and delivery model.

³⁷⁶ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, confidential p. 51 (public p. 40).

³⁷⁷ Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper Confidential Version*, 6 December 2011, p. 13.

³⁷⁸ Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper Confidential Version*, 6 December 2011, p. 13.

³⁷⁹ Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 35 (public p. 34).

³⁸⁰ *ibid.*

³⁸¹ *ibid.*, confidential p. 37 (public p. 34).

³⁸² *ibid.*, confidential p. 36 (public p. 34).

³⁸³ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

ACCC view on costs of installing voice-capable infrastructure

The ACCC considers that the costs of installing voice-capable infrastructure are likely to vary depending on a number of access seeker-specific factors. The ACCC notes that access seekers' estimates of the costs of voice-capable are likely to differ because of differences in the size and location of their customer base. An access seeker's customer base is likely to affect the amount of, and type of, its infrastructure investment. The ACCC considers that access seekers' estimated payback periods for infrastructure will depend on the size and location of their customer base and the assumptions that have been made regarding expected customer churn.

The ACCC considers that the costs of investment are substantial and, in some cases, may not be recovered prior to the NBN roll-out (see section 3.3.2). While some access seekers continue to invest in DSLAMs, these investments are primarily made in order to provide data services; in some cases, voice services are provided as a supplementary service to the data service. The ACCC considers that, even without the NBN roll-out, access seekers do not have a business case to invest in DSLAM/MSAN infrastructure in order to provide voice-only capability.³⁸⁵

The ACCC recognises that, as noted by Herbert Geer and Telstra (in its response to access seekers' submissions),³⁸⁶ the NBN roll-out may not have extinguished the business case for all future DSLAM investments. However, the ACCC considers that, where efficient DSLAM investment opportunities remain, access seekers will continue to invest in the absence of exemptions.

The ACCC notes that there may be a business case for access seekers to invest in DSLAMs—although the ACCC considers that there is not a business case for investment for the provision of voice-only services—because these investments may allow them to provide greater service quality and/or differentiation of their products. A business case for DSLAM investment may also exist because of the (cost-based) price differential between WLR and the ULLS. The provision of WLR requires the use of additional assets, such as switching equipment, relative to the ULLS; therefore, where access seekers own switching equipment there may potentially be an opportunity to invest in a DSLAM and profitably provide data and voice services using the ULLS rather than WLR. However, the ACCC considers that DSLAM investments that occur only because Telstra has charged a WLR price greater than the cost-based WLR price determined in the FADs—that is, where the actual WLR–ULLS price differential is greater than the cost-based WLR–ULLS price differential—could be inefficient.

3.3.2 Investment uncertainty and risk

Uncertainty from the exemptions calculation process

³⁸⁴ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 23.

³⁸⁵ The ACCC has reached this view having had regard to the business models provided by Macquarie Telecom and Telstra's consultant (Mr Alexander Sundakov). See appendix J for further details.

³⁸⁶ Herbert Geer (on behalf of Adam Internet, iiNet and Internode), *Submission by the Herbert Geer in response to the ACCC's issues paper*, October 2011, p. 3. Telstra, *Telstra's response to access seekers' submission to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, 6 December 2011, confidential pp. 27–28.

The Tribunal's exemption orders, which were incorporated into the FADs in July 2011, specify that the ACCC should undertake exemption calculations on a six-monthly basis and publish an updated list of exchanges that meet the exemption criteria after each round of exemption calculations. The ACCC considers that certain aspects of the Tribunal's exemption orders lead to instability in the geographic coverage of the exemption orders which may increase uncertainty for access seekers and, therefore, may deter efficient investment. These aspects are discussed below.

First, the addition of exempt ESAs every six months means access seekers face greater uncertainty over access to regulated WLR, LCS and PSTN OA. Following the first round of the ACCC's exemption calculations, 129 ESAs became exempt on 30 December 2010. A further 52 and 34 ESAs met the criteria to become exempt ESAs following the ACCC's second and third rounds of exemption calculations. The ACCC considers that this uncertainty makes it more difficult for access seekers to plan for, and rank, their investment opportunities.

Second, the exemption calculations were subject to a condition that when the exchange building in an exempt ESA becomes capped, the ESA is no longer exempt. If an exchange building in an exempt ESA becomes capped, access seekers will have faced a short period of deregulation—after the commencement of the exemption orders in that ESA—followed by re-regulation (after the exchange becomes capped). The ACCC considers that this uncertainty may reduce access seekers' incentives to invest in infrastructure. Further, the ACCC notes that in some instances of exchange capping, such as when an exchange is 'rack capped', it may be possible to expand the TEBA space at that exchange.³⁸⁷ The expansion of TEBA space could be achieved by building or leasing a remote structure outside the exchange building; this could have the effect of making the exchange no longer capped and thus subject to the exemption orders again.

In summary, the ACCC considers that the exemption calculations create uncertainty for access seekers, which may hinder efficient investment in infrastructure that would otherwise occur. Discouraging efficient investments would not be in the LTIE.

Uncertainty around NBN roll-out schedule

The ACCC notes that NBN Co intends to release a 'three-year indicative view' of the NBN roll-out in 2012.³⁸⁸ Uncertainty therefore remains around the timing and location of the NBN roll-out, which will not be fully resolved by the release of indicative plans. NBN Co's construction plan only provides information on roll-out locations for the next 12 months.³⁸⁹ The ACCC considers that an 'indicative view' of the subsequent construction schedule may not be sufficiently certain to support access seeker investments in copper-based equipment.

The ACCC has had regard to the financial modelling submitted by Telstra and Macquarie Telecom on the expected returns from investment in DSLAMs/MSANs to

³⁸⁷ ACCC, *Telstra's PSTN originating access exemption application – CBD and metropolitan areas – Final decision and class exemptions*, October 2008, p. 99.

³⁸⁸ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

³⁸⁹ NBN Co, *NBN Co releases 12-month national rollout plan*, media release, NBN Co, 18 October 2011, available at: <http://www.nbnco.com.au/news-and-events/news/nbn-co-releases-12-month-national-rollout-plan.html>.

provide voice services. On the basis of the model results, the ACCC considers that a business case cannot be established for infrastructure investment to provide voice-only services, given current WLR price levels (see appendix J). The NBN roll-out, which increases the risks associated with such investments, further reduces the likelihood that a business case can be made.

The ACCC notes that greater uncertainty increases the risks of making these investments in infrastructure, which will have the effect of increasing access seekers' required risk-adjusted rate of return and therefore discouraging investments.

Macquarie Telecom submitted that access seekers prefer to invest in projects that will enable them to compete on the NBN such as content, transmission, data centres and cloud computing.³⁹⁰ Since these investments can be used on the copper network as well as on the NBN, the risks associated with such investments are not increased by the impending NBN roll-out. The ACCC considers therefore that the risk-adjusted returns from such investments are likely to have improved relative to the risk-adjusted returns from copper-based investments Like DSLAMs that will become redundant when the copper network is de-commissioned.

The ACCC considers that uncertainty arising from the NBN rollout, and the lack of a business case to invest in facilities for the provision of voice-only services, make it clear that investment in DSLAMs in the presence of exemptions is unlikely to occur at any different rate to that which would occur without the exemptions. Accordingly, the ACCC considers that retaining the exemption provisions would not promote efficient investment in infrastructure and would not be in the LTIE.

³⁹⁰ Macquarie Telecom, *Submission by Macquarie Telecom in response to the ACCC's issues paper*, October 2011, p. 3.

4 Other considerations

This chapter discusses the exemptions calculation methodology, the conditions and limitations included in the exemptions provisions, and the impact of the exemption on any-to-any connectivity. It also discusses Telstra's proposal for differential pricing in 'competitive' areas (that is, the currently exempted ESAs) and the non-exempt areas, in the event that the ACCC decided to remove the exemptions.

4.1 Exemptions calculation methodology

The exemption provisions include a methodology which requires the ACCC to update the list of exempt ESAs every six months. The methodology determines which ESAs in the list of Exemption A ESAs meet the conditions and limitations for becoming exempt.

These conditions and limitations were included in the final WLR and LCS individual exemption orders handed down by the Tribunal on 24 August 2009.³⁹¹ On 9 September 2009, the Tribunal handed down its final PSTN OA individual exemption orders.³⁹² The PSTN OA order with respect to metropolitan ESAs had conditions and limitations that were substantively similar to those specified for the Tribunal's WLR and LCS orders.

The *Telecommunication Legislation Amendment (Competition and Consumer Safeguards) Act 2010* (CACS Act) repealed the ordinary individual and ordinary class exemption provisions of the *Competition and Consumer Act 2010* (CCA).³⁹³ The transitional provisions in the CACS Act state that once an access determination in relation to a declared service commences, a determination made under the ordinary exemption provisions in relation to that service ceases to have effect.³⁹⁴

However, the ACCC is able to incorporate provisions in access determinations which provide that any or all of the standard access obligations (SAOs) are not applicable to a carrier or carriage service provider (CSP). These provisions may be either unconditional or subject to such conditions or limitations as are specified in the determination.³⁹⁵ An access determination may also restrict or limit the application to a carrier or carriage service provider of any or all of the SAOs.³⁹⁶

The Exemption Determinations ceased to have effect from 1 January 2011 after the interim access determinations (IADs) took effect.

In making the interim access determinations (IADs) for the fixed line services in March 2011, the ACCC incorporated the exemptions provisions, including the conditions and limitations determined by the Tribunal. In the final access determinations (FADs) made in July 2011, the ACCC maintained the exemption provisions as they stood in the IADs, including the conditions and limitations.

³⁹¹ Australian Competition Tribunal, *Application by Chime Communications Pty Ltd (No 3)* [2009] ACompT 4.

³⁹² Australian Competition Tribunal, *Application by AAPT Limited (No 2)* [2009] ACompT 6.

³⁹³ Repealed sections 152AT (individual exemptions) and 152AS (class exemptions) of the TPA.

³⁹⁴ Items 202 (class exemptions) and 203 (individual exemptions) of the CACS Act.

³⁹⁵ Paragraphs 152BC(3)(h) and (i) of the CCA.

³⁹⁶ Paragraph 152BC(3)(i) of the CCA.

The exemption provisions applied to 380 Metropolitan ESAs listed in the orders (and known as Attachment A ESAs), in addition to 17 CBD ESAs for PSTN OA. Under the provisions, an ESA may become an 'Exemption ESA' once all of the following conditions are met:

- the ESA has three or more unconditioned local loop (ULLS)-based competitors (excluding Telstra)
- the ULLS-based competitors have an aggregate market share³⁹⁷ in the ESA equal to or greater than 30 per cent, and
- the aggregate ULLS spare capacity for that ESA is equal to or greater than 40 per cent of the aggregate number of WLR SIOs in that ESA.³⁹⁸

Once an ESA was determined to be an Exemption ESA, it was still subject to further conditions and limitations before the exemption took effect. In summary, the exemption provisions specified that the exemption would either not have effect in an ESA or not apply to specific access seekers in an ESA, if:

- (a) an access seeker is a Queued Access Seeker³⁹⁹ in that Exemption ESA as at 30 September 2009
- (b) an exchange is a Capped, Potentially Capped or Constructively Capped Exchange⁴⁰⁰
- (c) Telstra ceases to supply the ULLS in that ESA, whether to itself or to another person
- (d) the supply by Telstra of the WLR, LCS or PSTN OA service to an access seeker is under an agreement that was in force between the access seeker and Telstra as at 30 September 2009, for so long as the agreement remains in force, or
- (e) in respect of an end-user, who immediately before 30 September 2009 was supplied with a Bundled Fixed Voice and Broadband Service by the access

³⁹⁷ Aggregate market share – in respect of each Attachment A ESA the ULLS-based competitors' aggregated share of SIOs, expressed as a percentage, using the following formula:
(ULLS + ULLS Spare Capacity + WLR SIOs) / (Total SIOs).

³⁹⁸ The WLR SIOs *only* relate to the WLR SIOs of ULLS-based competitors

³⁹⁹ Queued Access Seeker—in respect of an Attachment A ESA, an access seeker, including a First Queued Access Seeker, who before the Practical Commencement Date submitted a PSR [Preliminary Study Request: a request by an access seeker to Telstra for access to an Exchange Building] in respect of an Exchange Building within the ESA that: (a) is under consideration by Telstra; or (b) has not been rejected by Telstra; or (c) has not been withdrawn by the access seeker; and (d) has not passed a JCI [Joint Completion Inspection: an inspection of an Exchange Building by representatives of Telstra and an access seeker conducted following the completion of construction works in that Exchange Building by the access seeker] in relation to the PSR.

⁴⁰⁰ Capped Exchange—an Exchange Building which Telstra has determined is not available for access by an access seeker for any reason, including an Exchange Building listed by Telstra in the TEBA Capped List [the document published by Telstra that lists each Exchange Building that Telstra regards as a Capped Exchange or a Potentially Capped Exchange] as 'MDF capped' [Main Distribution Frame capped], 'Racks capped' or 'Racks and MDF capped'. Potentially Capped—a Telstra Exchange Building which Telstra has determined may be unavailable for access by an access seeker for any reason including an Exchange Building listed in the TEBA Capped List as 'Potential'. Constructively Capped Exchange—an exchange in respect of which the ACCC has determined that Telstra requires, as a condition of access, that the access seeker undertake works at their own expense which are out-of-the-ordinary works.

seeker using the LSS, WLR and LCS supplied by Telstra, until a Prescribed LSS to ULLS Migration Process is established for that access seeker.

The exemption provisions required the ACCC to determine which of the 380 Attachment A ESAs satisfied the conditions to become Exemption ESAs. The ACCC was required to collect the relevant data and perform the calculations—using the formula set out in the exemptions provisions—to determine which of the Attachment A ESAs satisfied the conditions to become Exemption ESAs.

The ACCC was required to publish the list of Exemption ESAs on its website on a six-monthly basis. The dates the newly exempted ESAs come into effect and the number is newly exempt ESAs for each round of calculation is shown below.

Table 4.1: Dates and the number of exemption ESAs for each round of calculation

	First Round	Second Round	Third Round
Date of data	30 March 2010	30 September 2010	31 March 2011
ACCC publishes list	30 June 2010	30 December 2010	30 June 2011
No. of exempted ESAs	129	181	215
Number of newly exempt ESAs	129	52	34
Newly exempted ESAs come into effect	30 December 2010	30 June 2011	30 December 2011

Note: Details on the implementation of exemptions calculations are available at <http://www.accc.gov.au/content/index.phtml?itemId=934407>.

After an ESA became an Exemption ESA, it would remain an Exemption ESA until the exemption provisions expired or until the relevant service declarations were revoked. This was the case even if the ESA failed to meet any or all of the three conditions at a later date.⁴⁰¹

On the basis of the calculations completed to date, the ACCC found that condition 2 was the most common condition that was no longer met in subsequent rounds of calculations after an ESA had become an Exemption ESA. The decrease in market share was generally temporary and ESAs that failed to meet condition 2 after becoming exempt subsequently satisfied condition 2 in a later calculation round.

The calculated aggregate market share of ULLS competitors can temporarily decrease if an access seeker migrates from WLR to ULLS. The number of WLR SIOs and ULLS spare capacity decreases while the number of ULLS SIOs increases. This results in a net decrease in the market share calculated.

Further, there is a risk that once an ESA has become exempt, it may become capped at a later date. This increases the uncertainty faced by access seekers in making investment decisions. If an ESA were to become capped, the previous business case

⁴⁰¹ In undertaking its calculations for the Exemptions ESAs the ACCC has found instances where an Exemption ESA would have later failed the Tribunal's conditions.

for making a DSLAM investment may change as a result of the return on a DSLAM investments changing relative to purchasing WLR.

The need to undertake the exemption calculations every six months places a regulatory burden on the ACCC. There may also be an increased regulatory burden on Telstra and access seekers in providing the ACCC with ULLS spare capacity information, the number of ULLS SIOs and the number of WLR SIOs in each ESA.

If a ULLS-based competitor does not submit its ULLS spare capacity information to the ACCC in the form required by the determinations, the ACCC will 'deem' the spare capacity as provided for in the exemption provisions. The deeming calculation is not as accurate as the access seeker's own spare capacity information and results in a source of uncertainty.

4.2 Varying the exemptions conditions and limitations

In its reply submission, Telstra submitted that if the ACCC were to vary or remove the exemptions then the ACCC must consider whether or not additional conditions and limitations would be consistent with the statutory criteria.⁴⁰² Telstra submitted that [c-i-c] [c-i-c]^{403 404}

The ACCC notes that Telstra did not propose any substantive changes to the existing conditions and limitations.

AAPT submitted that if the ACCC were to retain the exemptions, it should include extra conditions. However, it stated that, if the ACCC concludes that altering the conditions or limitations in the exemptions would be complicated, impractical or onerous then the current exemptions should be removed completely.⁴⁰⁵ The ACCC notes that a further variation inquiry would be required to vary the non-price terms and conditions for the ULLS. Another variation inquiry would increase the uncertainty surrounding the exemptions.

The ACCC has considered whether it could vary the conditions and limitations in the exemptions provisions to address the supply-side constraints discussed in section 2.1. It has concluded that varying conditions and limitations would be difficult and complex.

In this regard, the ACCC notes that in May 2009, the Australian Competition Tribunal decided to impose a 'pair gain condition' on the exemption orders. The proposed condition would mean that the exemption orders would not apply where a line was affected by a pair gain system. However, Telstra submitted that the required upgrades

⁴⁰² Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemptions provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper*, December 2011, p. 6.

⁴⁰³ Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper Confidential Version*, 6 December 2011, p. 9.

⁴⁰⁴ Telstra, *Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues Paper Confidential Version*, 6 December 2011, p. 6.

⁴⁰⁵ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 11.

to billing systems would be complex and costly.⁴⁰⁶ Telstra further submitted that a ‘pair gain condition’ would likely lead to regulatory uncertainty and distortions.⁴⁰⁷

In September 2009, the Australian Competition Tribunal reviewed and subsequently set aside its decision to impose a pair gain condition on the exemption orders on the basis that it would be too complex and costly for Telstra to implement the pair gain condition.⁴⁰⁸

The ACCC considers that the effectiveness of any new conditions that address supply-side constraints cannot easily be assessed. The ACCC also considers that changing the conditions and limitations would not be able to adequately overcome the uncertainty and DSLAM investment risks due to the NBN roll-out.

Furthermore, there appears to be no business case for investment to allow voice-only ULLS self supply so varying the non-price terms and conditions would not necessarily lead to outcomes that would promote the LTIE and/or satisfy the other statutory criteria to which the ACCC must have regard.

Hence, the ACCC is of the view that it is not possible to construct conditions and limitations that would allow the exemptions to satisfy the statutory criteria and the LTIE, in the presence of NBN roll-out uncertainty.

4.3 Any-to-any connectivity

The ACCC considers that the removal of the exemptions for WLR, LCS and PSTN OA would not detract from the objective of ‘any-to-any’ connectivity.

As discussed in appendix K, a network operator that controls access to the end-users on its network is likely to have market power and may price discriminate. The network operator may charge a higher price for calls that originate or terminate on another network than for calls originating and terminating on its own network.

If this price discrimination were to occur, the ACCC considers that this would be a market failure that would hinder any-to-any connectivity and discourage end-users from switching to a non-dominant service provider.

The ACCC considers that the regulation of the PSTN OA service promotes any-to-any connectivity.

4.4 Differential pricing for ‘competitive’ services

In its 9 December 2011 submission, Telstra submitted that if the ACCC were to remove the exemptions, the FAD prices should not apply to the WLR, LCS and PSTN OA services supplied in the previously exempt areas. Telstra stated that:

While the WLR prices in exempt areas are greater than the WLR prices in non-exempt areas, there is no correlation between the prices that would be expected (and indeed observed) in

⁴⁰⁶ Telstra, *Telstra’s Submissions in reply to Optus’ Submissions on Pair Gains*, 7 September 2009, pp. 5-6. Resubmitted by Telstra on 17 October 2011 see appendix C

⁴⁰⁷ Telstra, *Telstra’s Submissions in reply to Optus’ Submissions on Pair Gains*, 7 September 2009, p. 9. Resubmitted by Telstra on 17 October 2011 see appendix C

⁴⁰⁸ Australian Competition Tribunal, *Application by AAPT Limited (No 2)* [2009] ACompT 9 (9 September 2009).

competitive markets and the prices in non-exempt areas which are set equal to the average accounting costs calculated by the ACCC's FLSM.⁴⁰⁹

Telstra stated that competitive in the currently exempted areas is 'strong' and 'sufficient to satisfy the ACCC that equivalence is already being provided'.⁴¹⁰

Telstra proposed that the ACCC should issue an IAD for the WLR, LCS and PSTN OA services supplied in the currently exempt areas at the prices proposed in the SSU and then consult on making an FAD for those services.⁴¹¹

In the ACCC's view, prices in competitive markets will reflect costs. An ability to charge above-cost prices on a sustained basis indicates that a seller has market power and is exercising that power. Chapter 2 sets out the ACCC's view on the state of the competition in the currently exempt areas.

Further, the ACCC notes that once the exemptions are removed, the FAD price and non-price terms and conditions will apply to services supplied in the previously exempt areas unless the parties negotiate alternative terms and conditions. The ACCC also notes that it cannot vary an FAD without conducting a variation inquiry (unless the variation is of a minor nature).

⁴⁰⁹ Telstra, *Exemptions for competitive WLR, LCS and PSTN OA services*, Letter, 9 December 2011, pp. 2-3.

⁴¹⁰ *ibid.*, p. 3.

⁴¹¹ *ibid.*, p. 4.

5 ACCC's final decision and assessment

The ACCC's final decision is to remove the exemptions provisions in the Final Access Determinations (FADs) for the Wholesale Line Rental (WLR), Local Carriage Service (LCS) and Public Switched Telephone Network Originating Access (PSTN OA) service.

The ACCC has decided to vary the relevant FADs in this way, having considered the mandatory legislative criteria in sub-section 152BCA(1) of the CCA.

5.1 Assessment against legislative criteria

This section sets out the ACCC's assessment of the ACCC's decision to remove the exemption provisions in the FADs against the applicable legislative criteria. The relevant legislative criteria are set out in appendix A of the final report.

5.1.1 Paragraph 152BCA(1)(a) – Whether the determination will promote the LTIE

Pursuant to section 152AB of the CCA, in determining whether a particular thing promotes the LTIE, regard must be had to the extent to which the thing is likely to result in the achievement of the following objectives:

- Promoting competition in markets for listed services;
- Achieving any-to-any connectivity in relation to carriage services that involve communications between end-users;
- Encouraging the economically efficient use of, and investment in, infrastructure.

A detailed discussion of these objectives using the tool of a 'future with and without' analysis is separately set out under section 5.2.

The ACCC considers that removing the exemption provisions from the FADs for WLR, LCS and PSTN OA services will promote the LTIE for the following reasons:

- The NBN roll-out uncertainty reduces DSLAM investment incentives through an uncertain payback period. Therefore the expected investment and market developments of DSLAM based voice-only competition are now unlikely to occur with the exemption provisions in place.
- Access seekers submitted and the ACCC accepts that there is no apparent business case for investments in voice-only capability for DSLAMs at current price levels. Should the exemptions provisions remain in effect, access seekers may be forced to pay a price for WLR that is higher than the cost-based FAD price, potentially raising efficiency concerns.
- Competition for end-users will be promoted by guaranteeing that access seekers can obtain WLR, LCS and PSTN OA services at prices that reflect supply costs.
- Access seekers will be able to provide services on lines where there are technical obstacles to using the ULLS.
- Promoting an efficient level of use of the sunk copper-based assets used by Telstra in supplying voice-only services, before they are decommissioned.

- Efficient DSLAM investments will continue to be made where they are commercially viable, based on the price differential between the ULLS and WLR service.⁴¹²

The ACCC notes that the WLR, LCS and PSTN OA services are all required for an access seeker to provide a PSTN voice service. These services are commonly bought in a bundle and failing to remove the exemption provisions for any one service, such as WLR, could result in that price rising at the wholesale level for either or both of the remaining two wholesale services (LCS and/or PSTN OA). The ACCC considers that it will be promoting the LTIE by removing the exemption provisions for all three services: WLR, LCS and PSTN OA.

5.1.2 Paragraph 152BCA(1)(b) – Legitimate business interests of a carrier or carriage service provider, and the carrier’s or provider’s investment in facilities used to supply the declared service

The ACCC notes that if the exemption provisions are removed, the carrier or provider will be able to charge either commercially negotiated prices for the declared services, or have recourse to the FAD prices for the declared WLR, LCS and PSTN OA services. The FAD prices for the WLR, LCS and PSTN OA reflect the underlying costs of providing these services and are set using a building block model (BBM).

The BBM approach allows the carrier or provider to recover their capital expenditure, operating expenditure, an allowance for regulatory depreciation and a return on capital. The ACCC has stated previously that the access provider’s legitimate business interests are met by adopting a BBM approach.⁴¹³ In addition, FAD prices set using BBM allow for recovery of the carrier’s or provider’s investment in facilities used to supply the WLR, LCS and PSTN OA.

Thus, the ACCC is of the final view that removing the exemption provisions in the FADs would not be detrimental to the legitimate business interests of the carrier or provider of WLR, LCS and PSTN OA services.

5.1.3 Paragraph 152BCA(1)(c) – Interests of all persons who have rights to use the declared service

In appendix A, the ACCC interprets this criterion as to having regard to the interests of access seekers. The removal of the exemption provisions will ensure that access seekers will have access to the WLR, LCS and PSTN OA in any of the 380 Attachment A ESAs under the same conditions as the current non-exempt ESAs. This means that access seekers will be able to pay the same price for access to the WLR, LCS and PSTN OA regardless of the type of ESA.

This will provide certainty for access seekers regarding the prices paid in all ESAs. The uncertainty and risk surrounding investment in the 380 Attachment A ESAs becoming potentially exempt ESAs in the future will not occur if the exemption provisions are removed.

⁴¹² The price differential between the ULLS and WLR service reflects the additional costs of supplying the WLR, such as switching costs.

⁴¹³ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final Report*, July 2011, p. 134.

In removing the exemption provisions in the FADs the ACCC has taken into account the legitimate business interests of access seekers by providing price certainty and reducing investment risk. This will promote confidence for access seekers to undertake future investments, where it is efficient to do so.

The ACCC is of the final view that the removal of exemption provisions in the FADs is consistent with access seekers' interests.

5.1.4 Paragraph 152BCA(1)(d) – Direct cost of providing access to the declared service

Telstra submitted that maintaining the exemptions will result in prices that better reflect their direct cost of operation of carriage services.⁴¹⁴

The ACCC is of the final view that removing the exemption provisions in the FADs for the WLR, LCS and PSTN OA services will not be inconsistent with the recovery by the access provider of its direct costs for providing the declared services.

This is because the BBM approach used for setting prices in the FADs ensures that the direct costs of providing access to the declared fixed line services are included in the revenue requirement used to calculate prices. The revenue requirement calculated using this approach comprises forecast direct and indirect operating costs, a return on and of capital, and tax liabilities.

5.1.5 Paragraph 152BCA(1)(e) – The value to a person of extensions, or enhancements of capability, whose cost is borne by someone else

The ACCC is of the final view that this criterion is not directly relevant to its decision on whether to remove the exemption provisions in the FADs for the WLR, LCS and PSTN OA services.

5.1.6 Paragraph 152BCA(1)(f) – The operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility

This criterion requires the ACCC to consider the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility.

The ACCC is of the final view that the safe and reliable operation of a carriage service, a telecommunications network, or a facility will be unaffected by the removal of the exemption provisions in the FADs for the WLR, LCS and PSTN OA services.

5.1.7 Paragraph 152BCA(1)(g) – The economically efficient operations of a carriage service, a telecommunications network or a facility

This criterion requires the ACCC to consider the economically efficient operation of a carriage service, a telecommunications network or a facility when deciding whether to

⁴¹⁴ Telstra submission, October 2011, Pub. p. 36/Conf. p. 47.

remove the exemption provisions in the FADs for the WLR, LCS and PSTN OA services.

The ACCC is of the final view that the economically efficient operation of a carriage service, a telecommunications network, or a facility, will be unaffected by the removal of exemption provisions in the FADs for the WLR, LCS and PSTN OA services.

5.1.8 Subsection 152BCA(2)

The ACCC has considered the substitutability of other eligible services supplied by Telstra, such as the ULLS and LSS, for the WLR to supply voice services.

5.1.9 Subsection 152BCA(3)

The ACCC's interpretation of subsection 152BCA(3) is discussed in section A.9 of appendix A.

Consistent with its approach to determining the price terms included in the FADs, the ACCC considers regulatory certainty and consistency to be an important consideration to its assessment of whether to remove the exemption provisions in the FADs for WLR, LCS and PSTN OA services.

5.2 Whether the variation will promote the LTIE: Assessment of 'future with and without' the exemptions

As mentioned earlier in this chapter, paragraph 152BCA(1)(a) of the CCA requires the ACCC to consider whether the proposed variation (viz the removal of the exemption provisions in the FADs for WLR, LCS and PSTN OA services) will promote the LTIE.⁴¹⁵

Under section 152AB, in determining whether a particular thing promotes the LTIE, regard must be had to the extent to which the thing is likely to result in the achievement of the following objectives:

- Promoting competition in markets for listed services;
- Achieving any-to-any connectivity in relation to carriage services that involve communications between end-users;
- Encouraging the economically efficient use of, and investment in, infrastructure.

A detailed discussion of these objectives using the tool of a 'future with and without' analysis is set out below.

5.2.1 Promotion of competition – wholesale

Future with exemptions

Since the exemptions took effect in December 2010, there has been little evidence of increased competition for the wholesale supply of resale voice-only services. While some alternative suppliers of wholesale voice services do exist, these are only supplied under terms and conditions that do not make them effective substitutes for Telstra's resale voice services. Access seekers submitted that it is not commercially

⁴¹⁵ This is only one of a number of mandatory statutory criteria set out under sub-section 152BCA(1).

viable for ULLS-based access seekers to supply-voice only services at wholesale in competition with Telstra.

The ACCC considers that the limited alternative wholesale supply of resale voice-only services are unable to effectively provide a direct constraint on Telstra's pricing of the resale services.

Additionally, the ACCC considers that entry by alternative suppliers of wholesale resale services is unlikely to occur, particularly because:

- information submitted to the ACCC indicates that there is no apparent business case for investments in DSLAMs to supply voice-only services at current price levels, and
- the NBN roll-out uncertainty reduces incentives for copper-based investments through an uncertain payback period.

The ACCC received a number of submissions from access seekers stating that wholesale services provided using DSLAM/MSAN infrastructure and the ULLS are not capable of providing equivalent services to Telstra's WLR, LCS and PSTN OA. These submissions are summarised in appendix C and are discussed in chapter 2.

The ACCC has considered the submissions received and reached the view that, for a range of wholesale customers, resale services supplied by alternative providers are not substitutable for Telstra's WLR service. For example, business customers that require business grade SLAs cannot be supplied by access seekers that use the ULLS. Access seekers are unable to supply wholesale services with the required SLAs because Telstra offers inferior service assurance for the ULLS relative to its WLR service.

While the Telstra disputed the inferiority of the SLAs for the ULLS and WLR in its 6 December 2011 submission, the ACCC notes that Telstra only provided information in relation to the minimum fault restoration times provided under the Customer Service Guarantee (CSG). It did not provide information about the fault restoration times available when access seekers pay an additional charge for a higher level of service quality than provided by the CSG.

Wholesale customers with other requirements, such as complex services or national network coverage, may be unable to switch to alternative wholesale providers because these alternative providers are unable to provide the features offered by Telstra without substantial additional investments.

The ACCC considers that, in addition to the possible detrimental effect on wholesale competition from continued exemption provisions in respect of WLR, continued exemption provisions in respect of LCS and PSTN OA may also have a negative effect on wholesale competition. The ACCC has not received submissions from access seekers claiming higher prices or denial of access to Telstra's LCS and PSTN OA services. However, the ACCC notes that these are possible outcomes in the future with exemptions, as Telstra is exempt from the SAOs in the exempt ESAs.

Further, Optus has submitted that the wholesale provision of over-ride and pre-selection services also requires access to PSTN OA.⁴¹⁶ The ACCC considers that if

⁴¹⁶ Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 20 (public p. 20).

access seekers were denied access to PSTN OA, there may be a detrimental effect on competition for the wholesale provision of over-ride and pre-selection services.

The ACCC considers that the NBN roll-out makes the development of wholesale competition in the ‘future with’ exemptions scenario less likely. An access seeker attempting to provide a service equivalent to Telstra’s WLR would be required to undertake substantial additional expenditure—for example, investing in additional DSLAMs to expand its network coverage, or upgrading its existing DSLAMs to enable the provision of additional features. However, the ACCC considers that access seekers are less likely to invest in copper-based infrastructure due to uncertainty created by the NBN roll-out. Access seekers are more likely to have a business case to invest in NBN-related projects—such as hosting, transmission and content, which enhance the access seeker’s retail service offerings both before and after the NBN is rolled out—rather than directing funds towards copper-based infrastructure which will become obsolete as the NBN is rolled out.

As a result, the ACCC considers that wholesale competition for voice-only services is unlikely to develop in the ‘future with exemptions’ scenario.

Future without exemptions

In the ‘future without exemptions’ scenario, Telstra would be required to comply with the SAOs in all ESAs, including the exempt ESAs. That is, Telstra would be required to supply WLR, LCS and PSTN OA in compliance with the price and non-price terms and conditions set out in the FADs, except if an access agreement exists between Telstra and the access seeker. Since the FAD prices are based on the estimated actual costs of supply, these prices would allow Telstra to recover its costs and would therefore be in Telstra’s legitimate business interests.

The ACCC considers that regulated access to WLR, LCS and PSTN OA in all ESAs, including the exempt ESAs, would enable access seekers operating at the wholesale level to provide a full suite of products to their customers. In the ‘future without exemptions’ scenario, access seekers are able to provide services such as data and hosting services—provided using the access seeker’s own infrastructure—to customers with special requirements, such as corporate and government customers.

The ACCC concludes that, while alternative ULLS-based supply of wholesale voice services may still *not* develop in the ‘future without exemptions’ scenario, access to Telstra’s resale services current wholesale competition will not be lessened by in any ‘future without exemptions’. Furthermore, access to WLR, LCS and PSTN OA at regulated prices will assist access seekers to compete for the provision of competitively-priced voice services to end-users.

5.2.2 Promotion of competition – retail

Future with exemptions

In the ‘future with exemptions’ scenario, the ACCC considers that it is likely that Telstra would continue to supply WLR at higher prices than the cost-based FAD prices in the exempt ESAs.

The ACCC considers that the continued supply of WLR at prices higher than the FAD prices in exempt ESAs would likely be detrimental to retail competition. Access seekers would face higher wholesale costs than Telstra, which is able to self-supply

WLR. The ACCC notes that Telstra is already the dominant provider of retail voice services (as noted in chapter 2).

While submissions by access seekers to the ACCC's exemption inquiry generally focused on the effect of the exemptions on the price of WLR in exempt areas, the ACCC considers that the continued exemption provisions in respect of LCS and PSTN OA may negatively affect retail competition for voice services.

The ACCC notes that, in the future with exemptions, a further 34 ESAs will become exempt on 30 December 2011, following the ACCC's third round of exemption calculations published on 30 June 2011. The ACCC considers that it is likely that further ESAs will become exempt in subsequent rounds of exemption calculations in the 'future with exemptions'. Because the geographic coverage of the exemption provisions would be likely to continue to increase in the future with exemptions, the resulting negative effects on retail competition would have a detrimental effect on an increasing number of end-users.

With the above analysis, the ACCC concludes that retail competition would not be promoted in the future with exemptions and that the retention of the exemption provisions in the FADs for WLR, LCS, and PSTN OA services would not promote the LTIE.

In the analysis of the state of competition (in chapter 2), the ACCC considers whether developing trends of substitution at the retail level (between voice-only services, and bundled voice/broadband, VoIP, and mobile services) could act as an indirect constraint upon Telstra's supply of the resale services. However, the ACCC considers that the current level of competition in the retail market and developing trends of substitutability would not yet be sufficient to constrain Telstra regarding the supply of the resale services.

Future without exemptions

In the 'future without exemptions', Telstra would be required to supply WLR, LCS and PSTN OA in compliance with the price and non-price terms and conditions set out in the FADs in all ESAs, including the exempt ESAs unless there is an access agreement between Telstra and the access seeker.

The ACCC considers that access to WLR, LCS and PSTN OA at regulated prices and terms and conditions would promote retail competition for the provision of voice services to end-users, including end-users with special requirements. Access to WLR would promote retail competition for fixed line voice-only customers in exempt ESAs: operators at the retail level would be able to obtain WLR from Telstra or, alternatively, services from access seekers that relied on Telstra's WLR, potentially in conjunction with their own network equipment or bundled with other services.

Operators at the retail level of the market would also be better able to compete for the provision of services to customers with special requirements—such as customers requiring complex services or business grade SLAs—as these services can be provided using Telstra's WLR service. Competition would be promoted because WLR would be subject to the price and non-price terms and conditions in the FADs in the future without exemptions.

Comparison of the future with and future without the exemptions

With the above analysis, the ACCC concludes that removing the exemption provisions in the FADs for WLR, LCS and PSTN OA would be more likely to promote retail competition.

5.2.3 Impact on efficient use of infrastructure

Future with exemptions

In the ‘future with exemptions’, Telstra would not be required to comply with the price and non-price terms and conditions specified in the FADs in exempt ESAs.

As a result, Telstra could potentially deny access to, or charge higher prices for, the WLR, LCS and PSTN OA services. The ACCC considers that, if either of these outcomes were to occur, existing infrastructure would not be efficiently used.

The ACCC notes that Telstra’s existing infrastructure is a sunk investment and that its copper-based infrastructure is set to be de-commissioned when the NBN is rolled out. However, the ACCC’s FADs determined efficient cost-based prices for declared services that use Telstra’s infrastructure. The prices set in the FADs provide Telstra with a market return that is consistent with its legitimate business interests.

If Telstra’s current pricing for WLR services in exempt areas reflect pricing above underlying costs, then a continuation of this above-cost pricing could artificially reduce demand for these services and result in use of existing infrastructure at a level below the efficient level of use, as well as distorting access seeker input choices and scale.

The ACCC concludes that in the future with exemptions, Telstra’s and access seekers’ existing infrastructure may not be used as efficiently because access to competitively-priced resale services could be unavailable. This would not promote the LTIE.

Future without exemptions

In the ‘future without exemptions’, Telstra would be required to comply with the price and non-price terms and conditions specified in the FADs in all ESAs, including exempt ESAs, unless there is an access agreement between Telstra and the access seeker.

The ACCC considers that existing infrastructure is likely to be used efficiently if Telstra is required to comply with the SAOs. The cost-based FAD prices for the WLR, LCS and PSTN OA services allow Telstra a market return and protect its legitimate business interests. Requiring Telstra to charge access seekers the FAD prices and comply with the non-price terms will ensure that its infrastructure is efficiently used.

The efficient use of access seekers’ infrastructure would also be promoted in the future without exemptions. Access seekers providing bundled voice and broadband services using WLR and LSS (and their own DSLAM) would be provided with certainty that they would have access to WLR at the FAD price in all ESAs. This would enable access seekers to use their existing DSLAMs, and the LSS, to provide the broadband component of the bundled voice and broadband service to end-users.

Efficient use of other network infrastructure, such as switching equipment and transmission, would also be promoted in the future without exemptions. Removal of the PSTN OA exemption provisions will provide access seekers with certainty that

they are able to access PSTN OA at regulated prices in all ESAs.⁴¹⁷ This certainty will enable access seekers to use their existing switching and transmission equipment to provide voice services, such as Optus' 'Switchless Long Distance' service, at the wholesale and/or retail levels of the market.

Comparison of the future with and future without the exemptions

The ACCC concludes that the efficient use of Telstra's and access seekers' existing infrastructure would be better encouraged in the 'future without exemptions'.

5.2.4 Impact on efficient investment in infrastructure

Future with exemptions

In the 'future with exemptions', access seekers may face greater uncertainty with regard to the future geographic coverage of the exemptions. The Tribunal's exemption orders require the ACCC to complete exemption calculations every six months to determine whether any new ESAs meet the Tribunal's criteria. In section 3.3 and chapter 4, access seekers face two main sources of uncertainty with the exemptions calculation process.

First, the number of exempt ESAs potentially increases every six months. The ACCC considers that this uncertainty makes it more difficult for access seekers to plan for, and rank, their investment opportunities.

Second, the Tribunal's orders specify that when the exchange building in an exempt ESA becomes capped, the ESA is no longer exempt. If an exchange building in an exempt ESA becomes capped, access seekers will have faced a short period of deregulation—after the ESA becoming exempt pursuant to the exemption calculations—followed by re-regulation (after the exchange becomes capped). The ACCC considers that this uncertainty may reduce access seekers' incentives to invest in infrastructure.

The NBN roll-out creates additional uncertainty for access seekers as DSLAMs and other copper-based infrastructure will become obsolete once the NBN is rolled out and the copper network is de-commissioned.

The ACCC considers that even where efficient investment opportunities are available—that is, where the access seeker could recover the costs of investment in an ESA, before the NBN is rolled out—this investment may not occur because of access seekers' uncertainty over the NBN roll-out date (and therefore potential truncation of the payback period for the investment). The ACCC notes that greater uncertainty increases the risks of making these investments in infrastructure, which will have the effect of increasing access seekers' required risk-adjusted rate of return and therefore discouraging investments.

As a result of the above analysis, the ACCC concludes that the 'future with exemptions' would not encourage efficient investment in infrastructure and would not promote the LTIE.

⁴¹⁷ The ACCC notes that Telstra has not increased the headline prices of resale services in exempt ESAs or denied access to PSTN OA.

Future without exemptions

In the ‘future without exemptions’, access seekers would no longer face the uncertainty caused by the exemption calculation process specified in the Tribunal’s exemption orders. The certainty of regulated access to WLR, LCS and PSTN OA in all ESAs would assist access seekers to plan for, and rank, their investment opportunities.

The ACCC considers in the ‘future without exemptions’ scenario, access seekers would no longer make inefficient investments in DSLAMs that currently occur because Telstra has charged a WLR price greater than the cost-based WLR price determined in the FADs—that is, where the actual WLR–ULLS price differential (in exempt ESAs) is greater than the cost-based WLR–ULLS price differential.

The ACCC recognises that the NBN roll-out may not have extinguished the business case for all future DSLAM investments. The ACCC considers that, where efficient DSLAM investment opportunities remain and access seekers consider there to be a business case for investment, access seekers will continue to invest even if the exemption provisions were removed. However, the ACCC considers that any future DSLAM investments are likely to be made primarily to provide end-users with data services. Access seekers may consider there to be a business case to invest because of the WLR–ULLS price differential, or because of the potential to improve end-users’ service quality by using the ULLS and their own DSLAMs. However, as discussed above, investment resulting from the WLR–ULLS price differential may only be efficient where the price differential reflected the cost-based differences (as reflected in the difference between the ACCC’s WLR and ULLS prices in the FADs).

Comparison of the future with and future without the exemptions

As a result of the above analysis, the ACCC concludes that efficient investment in infrastructure would be better encouraged in the ‘future without exemptions’.

5.2.5 Any-to-any connectivity

Future with exemptions

In the ‘future with exemptions’ scenario, there will not necessarily be a significant effect on the objective of achieving any-to-any connectivity. The ACCC notes, however, that in this scenario the terms and conditions for the supply of PSTN OA could potentially be varied from those established by the FAD.

Future without exemptions

In the ‘future without exemptions’ scenario, there will not necessarily be a significant effect on the objective of achieving any-to-any connectivity. The issue raised above regarding the terms and conditions of the PSTN OA service would not be likely to occur.

Comparison of the future with and future without the exemptions

Overall, the ACCC considers there will not necessarily be a significant effect on the objective of achieving any-to-any connectivity in the ‘future with exemptions’ or the ‘future without exemptions’.

Appendix A: Legislative criteria

The ACCC must have regard to the criteria specified in subsection 152BCA(1) of the *Competition and Consumer Act 2010* (CCA) when making a decision on whether to vary an FAD. These criteria are:

- (f) whether the determination will promote the long-term interests of end-users (LTIE) of carriage services or of services supplied by means of carriage services
- (g) the legitimate business interests of a carrier or carriage service provider (CSP) who supplies, or is capable of supplying, the declared service, and the carrier's or provider's investment in facilities used to supply the declared service
- (h) the interests of all persons who have rights to use the declared service
- (i) the direct costs of providing access to the declared service
- (j) the value to a person of extensions, or enhancement of capability, whose cost is borne by someone else
- (k) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility
- (l) the economically efficient operation of a carriage service, a telecommunications network or a facility.

Subsection 152BCA(2) sets out other matters that the ACCC may take into account in making FADs.

Subsection 152BCA(3) allows the ACCC to take into account any other matters that it thinks are relevant.

The ACCC set out in detail its views on how the legislative criteria should be interpreted in section 3.5 of its April 2011 discussion paper.⁴¹⁸ As noted in the September 2011 issues paper, the ACCC considers this interpretation remains appropriate for this inquiry. The ACCC's views on how to interpret the legislative criteria are summarised below.

A.1 Paragraph 152BCA(1)(a)

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

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

- goods and services at lower prices
- goods and services of a high quality, and/or
- a greater diversity of goods and services.⁴¹⁹

⁴¹⁸ ACCC, *Public inquiry to make final access determinations for the declared fixed line services – Discussion Paper*, April 2011.

⁴¹⁹ *ibid.*, p. 33.

With regard to the interpretation of the phrase ‘long-term’ within the LTIE test, the Australian Competition Tribunal has noted:

The long-term will be the period over which the full effects... will be felt. This means some years, being sufficient time for all players (being existing and potential competitors [...] to adjust to the outcome, make investment decisions and implement growth – as well as entry and/or exit strategies.⁴²⁰

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

- promoting competition in markets for carriage services and services supplied by means of carriage services
- achieving any-to-any connectivity, and
- encouraging the economically efficient use of, and economically efficient investment in:
 - the infrastructure by which listed carriage services are supplied, and
 - any other infrastructure by which listed services are, or are likely to become, capable of being supplied.⁴²¹

In evaluating the likely promotion of competition in markets for carriage services and services supplied by means of carriage services, subsection 152AB(4) requires the ACCC to have regard to the extent to which obstacles to end-users of listed services gaining access to listed services will be removed.

In evaluating the likely encouragement of economically efficient use and investment in infrastructure by which listed services are supplied, are capable of being supplied or are likely to become capable of being supplied, subsection 152AB(6) requires the ACCC to have regard to following matters:

- whether it is, or is likely to become, technically feasible for the services to be supplied or charged for, having regard to:
 - the technology that is in use, available or likely to become available
 - whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and
 - the effects, or likely effects that, supplying and charging for the services, would have on the operation or performance of telecommunications networks.
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope; and
- the incentives for, including the risks involved with making the⁴²², investment in:
 - the infrastructure by which the services are supplied; and

⁴²⁰ Australian Competition Tribunal, *Seven Network Limited (no 4)* [2004] ACompT at [120].

⁴²¹ Paragraph 152AB(2)(e) and subsection 152AB(6) of the CCA.

⁴²² Subsection 152AB(7A) of the CCA.

- the other infrastructure by which the services are or are likely to become capable of being supplied.⁴²³

A.2 Paragraph 152BCA(1)(b)

The second criterion requires the ACCC to consider ‘the legitimate business interests’ of the carrier or CSP.

The ACCC considers that it is in an access provider’s legitimate business interests to seek to recover its costs as well as a normal commercial return on investment having regard to the relevant risk involved. However, an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependent market as a result of the provision of access.⁴²⁴

A.3 Paragraph 152BCA(1)(c)

The third criterion requires the ACCC to consider ‘the interests of all persons who have the right to use the declared service’. The ACCC considers that this criterion requires it to have regard to the interests of access seekers.

People who have rights to currently use a declared service will generally use that service as an input to supply carriage services, or a service supplied by means of carriage service, to end-users. The access seekers’ interests would not be served by higher access prices to declared services, as it would inhibit their ability to compete with the access provider in the provision of retail services.⁴²⁵ Access seekers’ ability to compete for the custom of end-users on the basis of their relative merits could also be inhibited if terms and conditions of access favour one or more service providers over others, thereby distorting the competitive process.⁴²⁶

The ACCC does not consider that this criterion calls for consideration to be given to the interests of the users of these ‘downstream’ services as end-users’ interests are considered under other criteria.

A.4 Paragraph 152BCA(1)(d)

The fourth criterion requires that the ACCC consider ‘the direct costs of providing access to the declared service’.

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

The ACCC interprets this criterion, and the use of the term ‘direct costs’, as allowing consideration to be given to a contribution to indirect costs. This is consistent with the Tribunal’s approach in an undertaking decision.⁴²⁷ A contribution to indirect costs can also be supported by other criteria.

⁴²³ Paragraph 152AB(2)(e) and subsection 152AB(6) of the CCA.

⁴²⁴ ACCC, *Access pricing principles—telecommunications*, July 1997 (1997 Access Pricing Principles), p. 9.

⁴²⁵ *ibid.*

⁴²⁶ *ibid.*

⁴²⁷ Australian Competition Tribunal, *Application by Optus Mobile Pty Limited and Optus Networks Pty Limited* [2006] ACompT 8 at [137].

However, the criterion does not extend to compensation for loss of any ‘monopoly profit’ that occurs as a result of increased competition.⁴²⁸

A.5 Paragraph 152BCA(1)(e)

The fifth criterion requires that the ACCC consider ‘the value to a party of extensions, or enhancements of capability, whose cost is borne by someone else’.

In the 1997 Access Pricing Principles, the ACCC stated:

This criterion requires that if an access seeker enhances the facility to provide the required services, the access provider should not attempt to recover for themselves any costs related to this enhancement. Equally, if the access provider must enhance the facility to provide the service, it is legitimate for the access provider to incorporate some proportion of the cost of doing so in the access price.⁴²⁹

A.6 Paragraph 152BCA(1)(f)

The sixth criterion requires the ACCC to consider ‘the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility’.

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

A.7 Paragraph 152BCA(1)(g)

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

The ACCC considers that this criterion calls for a consideration of productive, allocative and dynamic efficiency. Further, in applying this criterion, it is relevant to consider the economically efficient operation of:

- retail services provided by access seekers using the access provider’s services or by the access provider in competition with those access seekers, and
- the telecommunications networks and infrastructure used to supply these services.⁴³⁰

A.8 Subsection 152BCA(2)

Subsection 152BCA(2) provides that, in making or varying an FAD that applies to a carrier or CSP who supplies, or is capable of supplying, the declared services, the

⁴²⁸ See Explanatory Memorandum for the *Trade Practices Amendment (Telecommunications) Bill 1996*, p. 44: [T]he ‘direct’ costs of providing access are intended to preclude arguments that the provider should be reimbursed by the third party seeking access for consequential costs which the provider may incur as a result of increased competition in an upstream or downstream market.

⁴²⁹ 1997 Access Pricing Principles, p. 11.

⁴³⁰ Australian Competition Tribunal, *Telstra Corporation Limited* [2006] ACompT at [94]–[95].

ACCC may, if the carrier or CSP supplies one or more eligible services,⁴³¹ take into account:

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

The Explanatory Memorandum states that this provision is intended to ensure that the ACCC, in making (or varying) an FAD, does not consider the declared service in isolation, but also considers other relevant services.⁴³² The ACCC proposes to consider the costs and revenues associated with other services—whether declared or not declared—that are provided by relevant carriers and CSPs in assessing the impact of the exemptions on the conditions for competition in the exempt ESAs.

A.9 Subsection 152BCA(3)

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

Consistent with its approach to determining the price terms included in the FADs, the ACCC proposes that regulatory certainty and consistency will be an important consideration in relation to its assessment of the exemption provisions.

The ACCC also considers that it may have regard to:

- submissions in response to the ACCC's *Public inquiry to make final access determinations for the declared fixed line services: Discussion paper*, April 2011 (April 2011 Discussion Paper)
- additional information requested and received from Telstra and other industry participants in relation to current market conditions and other matters relevant to the impact of the exemptions
- information that Telstra provides to the ACCC under record keeping rules (RKR), including:
 - the telecommunications regulatory accounting framework RKR (RAF RKR) and
 - the customer access network RKR (CAN RKR) (a summary of which are published at www.accc.gov.au)
- exemption determinations made under the repealed sections 152AS and 152AT of the *Trade Practices Act 1974*.

These considerations and documents do not limit the matters that the ACCC may have regard to when considering whether to vary the FADs in relation to the exemption provisions.

⁴³¹ 'Eligible service' has the same meaning as in section 152AL of the CCA.

⁴³² Explanatory Memorandum, Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010, p. 178.

Appendix B: Submissions received in response to September 2011 issues paper

Submissions received in response to September 2011 issues paper
AAPT Limited, <i>Submission by AAPT Limited in response to ACCC issues paper titled 'Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services'</i> (public and confidential versions), 14 October 2011.
AAPT, <i>Statement of [c-i-c] [c-i-c], Witness statement in response to Telstra witness statement regarding the technical equivalence of VoIP and traditional fixed line PSTN services</i> (public and confidential versions), 28 November 2008.
ACN Pacific Pty Limited, <i>ACCC inquiry into varying the exemption provisions in the Final Access Determinations for the WLR, LCS and PSTN OA services: Submission of ACN Pacific Pty Limited</i> (public), 13 October 2011.
Competitive Carriers' Coalition Inc., <i>Submission in response to the ACCC Issues Paper</i> (public), received 17 October 2011.
Frontier Economics, <i>Reply report on Telstra submissions supporting geographic exemptions from access regulation. A report prepared for Macquarie Telecom, AAPT and Optus</i> (confidential), November 2011.
Herbert Geer (on behalf of iiNet, Internode and Adam Internet), <i>Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Submission by Herbert Geer Lawyers on behalf of Adam Internet Pty Ltd, iiNet Limited, and Internode Pty Ltd.</i> (public), 14 October 2011.
Herbert Geer, <i>Extract from email 1 November from Simon Hackett to ACCC – subject: Telstra Discussion Paper and ACCC Framing Paper</i> (public), 15 November 2011.
Macquarie Telecom, <i>Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services</i> (public and confidential versions), 14 October 2011.
Macquarie Telecom, <i>Supplementary submission</i> , (confidential), 8 November 2011.
Macquarie Telecom, <i>Letter to the ACCC</i> (confidential), 16 November 2011.
Optus, <i>Optus Submission in response to the ACCC's issues paper 'Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services'</i> (public and confidential versions), October 2011.
Attachment 1: Minutes of Optus meeting with wholesale customer,

November 2010 (confidential).
Attachment 2: Vendor pricing of DSLAM and transmission equipment (confidential).
Attachment 3: DSLAM investment costs (confidential).
Attachment 4: Answers to ACCC questions on Wholesale DSL (confidential).
Attachment 5: Map of Castle Hill Exchange (confidential).
Attachment 6: Optus VoDSL service (confidential).
Optus, <i>Optus supplementary submission – Exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services</i> (public), October 2011.
Primus Telecom, <i>Primus Telecom response – Issues paper: Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services</i> (public), October 2011.
Telstra, <i>Telstra’s response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services - Issues Paper</i> (public and confidential versions), October 2011.
Attachment A: Telstra’s submissions dated 3 June 2011 (June Submissions) and the annexures thereto, previously submitted by Telstra in response to the ACCC’s Discussion Paper ‘Public inquiry to make final access determinations for the declared fixed line services’ (contains public and confidential information).
Attachment B: Telstra’s submissions dated 15 July 2011 (July Submissions) and the annexures thereto, previously submitted by Telstra in response to access seeker’s submissions to the ACCC’s Discussion Paper ‘Public inquiry to make final access determinations for the declared fixed line services’ (contains public and confidential information).
Attachment C: Telstra’s letter to the Commission dated 2 September 2011, in response to ACCC’s request for information (confidential).
Attachment D: all other previous submissions and evidence provided by Telstra (and parties acting on behalf on Telstra) in the WLR/LCS exemptions application process (contains public and confidential information).
Attachment E: all other previous submissions and evidence by Telstra (and parties acting on behalf on Telstra) in the PSTN OA exemption application process (contains public and confidential information).
Attachment F: Professor Martin Cave, <i>The ladder of investment and the exemption provisions - A report for Telstra</i> (‘Cave Report’) (public and

confidential versions), 28 September 2011.
Attachment G: Report prepared by Mr Alex Sundakov ('Sundakov Report') (confidential), 14 October 2011.
Attachment H: Mr Craig Lordan (Gravelroad consulting), DSLAM voice service delivery costs ('Lordan Report') (public and confidential versions), 13 October 2011
Attachment I: KPMG, Mobile voice services as a substitute for fixed line services ('KPMG Report') (confidential), 14 October 2011.
Attachment J: [c-i-c] [c-i-c], Statement of [c-i-c] [c-i-c]: Witness statement in respect of VoIP (public and confidential versions), 23 September 2011.
Telstra, <i>Exemption Variation Inquiry – Sundakov Report Modelling</i> (confidential), 1 December 2011.
Telstra, <i>Telstra's response to access seekers' submissions to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services - Issues Paper</i> (confidential), 6 December 2011.
Telstra, <i>Exemptions for competitive WLR, LCS and PSTN OA services – Letter to the ACCC</i> , 9 December 2011.

Appendix C: Summary of submissions to September 2011 issues paper

There were submissions in response to the ACCC issues paper from nine parties—Telstra, Optus, AAPT, Macquarie Telecom, Herbert Geer (on behalf of Adam Internet, Internode and iiNet), the Competitive Carriers' Coalition (CCC), Primus, Frontier Economics (on behalf of Macquarie Telecom, AAPT and Optus) and ACN Pacific.

This appendix includes a summary of these submissions.

C.1 Telstra submissions

C.1.1 Position on exemption provisions

Telstra submitted that the exemptions should continue to apply until at least 30 June 2014: this would align with the declaration period of the relevant services and deliver certainty and stability to the industry.⁴³³

Telstra stated that support for maintaining the exemptions is provided by evidence of strong growth in DSLAM investment by access seekers in order to self-supply, as well as more intense retail competition in the exempt ESAs.⁴³⁴ Telstra submitted that these direct and indirect constraints on its market power in wholesale voice-only resale services have meant that it has continued to supply these services at the same or similar prices that have been in place since 2005.⁴³⁵

Telstra submitted that maintaining the exemption provisions would satisfy the statutory criteria because:

- there is effective competition in both retail and wholesale markets, as evidenced by the decline in WLR services and increase in ULL services
- the exemptions are in the access provider's legitimate business interests because of the cost savings associated with deregulation
- the exemptions are in access seekers' interests because they are able to better differentiate their service offerings, and thus better able to compete with Telstra, and
- accordingly, the prices of services will better reflect their direct costs and the efficient operation of carriage services will be promoted.⁴³⁶

Telstra submitted that it is not appropriate for the ACCC to re-regulate these resale services at this time, given that the Tribunal only determined to implement the exemptions in 2009 and the first ESAs only became exempt in December 2010.⁴³⁷

⁴³³ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, p. 5 (5).

⁴³⁴ Telstra submission, Pub. p. 7/Conf. p. 8.

⁴³⁵ Telstra submission, Pub. p. 7/Conf. p. 7.

⁴³⁶ Telstra submission, Pub. p. 36/Conf. p. 47.

⁴³⁷ Telstra submission, Pub. p. 4/Conf. p. 4.

Telstra quoted Professor Martin Cave’s view in his report (prepared on behalf of Telstra) that:

...it is still very early days to expect the consequence of the changes in the marketplace to be clearly visible or to make a reliable assessment of them. This makes it very difficult for the ACCC to draw any conclusions about the long term effect of the measures on competition and investment.⁴³⁸

Telstra also cited Professor Cave’s view that the exemptions implement the ladder of investment theory, which he considers can provide benefits for end-users from greater infrastructure investments by access seekers⁴³⁹:

... in my understanding of the LoI [ladder of investment], the issues of re-instating the regulatory *status quo ante* on lower rungs is appropriate only if the expected progression to the higher rung is stalled *and* if a market review of the lower rung reveals restricted supply, high prices or inadequate competition. I see no clear evidence that either of these events is occurring. Accordingly, I consider that application in Australia of the Ladder of Investment ... is in the LTIE.⁴⁴⁰

C.1.2 Assessment framework

Telstra submitted that the ACCC’s analysis of the impact of the exemptions should be based on the concept of ‘effective competition’.⁴⁴¹ Telstra stated that access regulation should not be imposed in markets that exhibit effective competition.⁴⁴² It submitted that the Tribunal’s exemption orders accord closely with the concept of effective competition, and that a decision to continue the exemption orders—based on the evidence previously put before the Tribunal as well as more recent new evidence—would be consistent with effective competition and promote the LTIE.⁴⁴³

Telstra submitted that ‘the majority of the conditions in the Tribunal’s Orders are appropriate and should be applied’ in the ACCC’s ‘future with and without’ assessment.⁴⁴⁴ However, Telstra submitted that some conditions—such as the condition that a LSS to ULLS migration process must be established—are no longer relevant, and any proposed changes to the conditions should be subject to consultation with industry.⁴⁴⁵

Telstra stated that the ‘future with and without’ assessment should consider evidence of the competition impacts in all 215 exempt ESAs.⁴⁴⁶

⁴³⁸ Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment F – The ladder of investment and the exemption provisions - A report for Telstra* (‘Cave Report’), October 2011, p. 8.

⁴³⁹ Telstra submission, Pub. p. 4/Conf. p. 4.

⁴⁴⁰ Telstra submission, Attachment F: Cave Report, p. 12

⁴⁴¹ Telstra submission, Pub. p. 12/Conf. p. 12.

⁴⁴² Telstra submission, Pub. p. 12/Conf. p. 12. Telstra defines effective competition as the elimination of excess profits; discovery of more efficient methods of production; and discovery of what customers want.

⁴⁴³ Telstra submission, Pub. p. 12/Conf. p. 12.

⁴⁴⁴ Telstra submission, Pub. p. 35/Conf. p. 46.

⁴⁴⁵ Telstra submission, Pub. p. 35/Conf. p. 46.

⁴⁴⁶ Telstra submission, Pub. p. 35/Conf. p. 46.

C.1.3 Rationale for the exemptions

Telstra submitted that since the decisions to make exemption orders by the ACCC and the Tribunal, investment in infrastructure has grown strongly in exempt ESAs and retail competition has intensified.⁴⁴⁷

Telstra submitted that the LTIE would be promoted by efficient infrastructure-based competition, and therefore that the ladder of investment should form the theoretical basis for the ACCC's decision.⁴⁴⁸ Professor Cave (on behalf of Telstra) submitted that despite the short period during which the exemptions have had effect, the data presented in the ACCC's September 2011 issues paper are consistent with the ladder of investment theory.⁴⁴⁹ Professor Cave submitted that, if the increases in competition, the number of ULLS-based competitors and DSLAMs investments seen to date were observed over a longer period of time, the outcomes would be consistent with the ladder of investment and would be in the LTIE.⁴⁵⁰

Regarding the ladder of investment theory, Telstra quoted Professor Cave's views in his report that:⁴⁵¹

- The criticisms of the theory advanced by Bourreau, Dogan and Mananti 'misinterpret and exaggerate the role of wholesale markets for resale products in ensuring that the goals of the Ladder of Investment policy are realised'. Professor Cave states that what is relevant is a broader assessment of competition which focuses on the end user.⁴⁵²
- Xavier and Ypsilanti 'magnify the difficulties' associated with segmenting regulation on a geographic basis while offering no theoretical or conceptual analysis of its benefits against the costs.⁴⁵³
- While the exemptions have not been in place for a sufficient period of time to enable a conclusive assessment, Professor Cave's provisional view is that the data covering the relevant Australian markets 'is consistent with the view that the exemptions are achieving the LoI [ladder of investment] objectives which the ACCC looked forward to when it introduced the policy in 2008 and 2009'.⁴⁵⁴

C.1.4 Market definition

Telstra submitted that there are a range of competitive substitutes available to end-users of fixed line voice services, including fixed broadband, bundled fixed broadband and voice, and mobile services.⁴⁵⁵ Telstra stated that there are a number of retail service providers of each of these types of services in the exempt ESAs.⁴⁵⁶

⁴⁴⁷ Telstra submission, Pub. p. 4/Conf. p. 4.

⁴⁴⁸ Telstra submission, Pub. p. 13/Conf. p. 13.

⁴⁴⁹ Telstra submission, Pub. p. 15/Conf. p. 15.

⁴⁵⁰ Telstra submission, Pub. p. 16/Conf. p. 16.

⁴⁵¹ Telstra submission, Pub. p. 12/ p. 13.

⁴⁵² Telstra submission, Attachment F: Cave Report, pp. 4–6.

⁴⁵³ Telstra submission, Attachment F: Cave Report, pp. 6–7.

⁴⁵⁴ Telstra submission, Attachment F: Cave Report, pp. 9–10.

⁴⁵⁵ Telstra submission, Pub. p. 23/Conf. p. 27.

⁴⁵⁶ Telstra submission, Pub. p. 23/Conf. p. 27.

Self-supply of resale services

Telstra cited Professor Cave's view that 'it is also necessary to recognise the role of self-supply by ULLS operators of resale products... The availability to a purchaser of WLR of this option (switching to ULLS access) represents a viable form of substitution for WLR.'⁴⁵⁷

Citing the Sundakov Report (prepared by Mr Alexander Sundakov on behalf of Telstra), Telstra submitted that it is 'uncontroversial' that DSLAM/ULLS services are close substitutes for WLR, LCS and PSTN OA.⁴⁵⁸

Substitutability of VoIP services

Telstra submitted that the ACCC's view on the substitutability of VoIP services for traditional fixed voice services was 'outdated' as recent market data show that there is strong take-up of VoIP products.⁴⁵⁹ Telstra submitted that carrier-grade VoIP is 'economically and technically substitutable for traditional PSTN voice services'.⁴⁶⁰

Telstra submitted that the [c-i-c] [c-i-c] Statement (made on behalf of Telstra) explains that carrier-grade VoIP services can provide an equivalent voice service to traditional PSTN services, provided the VoIP data information packets transmitted over the IP network are afforded priority over other data packets in the network (thereby ensuring that voice packets continue to be transmitted when the network is congested).⁴⁶¹ The [c-i-c] [c-i-c] Statement also stated that 'an industry-wide agreed solution is in place today for calling emergency services on VoIP' and that 'the voice technology to be used in the NBN is exclusively VoIP'.⁴⁶²

Substitutability of mobile services

Telstra stated that mobile voice services have become increasingly substitutable since the ACCC's previous exemption inquiries, with the quality, features and price of mobile services 'improv[ing] significantly' in recent years.⁴⁶³ Telstra submitted that [c-i-c] [c-i-c].⁴⁶⁴

Telstra submitted that, as concluded by KPMG and the Sundakov Report, 'the evidence is compelling' that mobile voice services are a close substitute for fixed line voice services in Australia.⁴⁶⁵

Substitutability of bundled voice and broadband services

Telstra submitted that bundled voice and broadband services are a close substitute for voice-only services and should fall within the same market.⁴⁶⁶ Telstra stated that the

⁴⁵⁷ Telstra submission, Attachment F: Cave report, p. 9.

⁴⁵⁸ Telstra submission, Pub. p. 24/Conf. p. 28; Castalia Strategic Advisors, Inquiry into Varying the Exemption Provisions in the Final Access Determinations for the WLR, LCS and PSTN OA Services (Sundakov Report), 14 October 2011, p. 7.

⁴⁵⁹ Telstra submission, Pub. p. 24/Conf. p. 28.

⁴⁶⁰ Telstra submission, Pub. p. 28/Conf. p. 32.

⁴⁶¹ Telstra submission, Pub. p. 25/Conf. p. 29; Telstra attachment J, para [22].

⁴⁶² Telstra attachment J, para [44].

⁴⁶³ Telstra submission, Pub. p. 28/Conf. p. 33.

⁴⁶⁴ Telstra submission, Pub. p. 28/Conf. p. 33.

⁴⁶⁵ Telstra submission, Pub. p. 29/Conf. p. 34.

⁴⁶⁶ Telstra submission, Pub. p. 29/Conf. p. 35.

popularity of fixed voice and data bundles has increased significantly while [c-i-c] [c-i-c].⁴⁶⁷

Corporate and government market

Telstra submitted that the market for corporate and government customers is ‘strongly competitive’. It also submitted that the need for an access seeker to purchase WLR did not jeopardise an access seeker’s ability to win contracts to supply these customers. This is because an access seeker will only need to service a ‘small proportion of a corporate or government customer’s premises with WLR’ and that these customers ‘typically require a broad range of telecommunications services and the contracts are normally of a high value’.⁴⁶⁸

Geographic dimension

Telstra submitted that the ESA is the appropriate geographic dimension.⁴⁶⁹ It stated that it would be ‘inappropriate and unnecessary for the Commission to identify a broader (or narrower) geographic dimension for the relevant markets for corporate and government customers’ than for other customer groups.⁴⁷⁰

C.1.5 Barriers to entry

Telstra submitted that the costs of, and barriers to, providing voice services using DSLAMs are quite low.⁴⁷¹ For example, Telstra submitted that, where an operator had spare capacity, it could install a voice port line card for \$37.50 per port.⁴⁷² Telstra submitted analysis on the costs of providing voice services using DSLAMs in the Lordan Report.⁴⁷³ On certain assumptions, the Lordan Report made the following estimates:

- The operating cost of a DSLAM ranges from [c-i-c] [c-i-c] per port per annum.⁴⁷⁴
- The cost of installing a voice port line card to supply retail voice service is estimated to be \$37.50 per port. Alternatively, to supply a voice service without the use of a separate port within the DSLAM, customers can purchase a VoIP handset that costs between \$50 and \$70.⁴⁷⁵
- Other costs involved in providing retail voice services, including core network infrastructure and billing systems, ranges from \$32 and \$67 per service.⁴⁷⁶
- Assuming a service provider currently provides retail voice services via DSLAM and ULLS, additional network equipment and operating costs are not required to supply the retail services as wholesale service.⁴⁷⁷

⁴⁶⁷ Telstra submission, Pub. p. 29/Conf. p. 36.

⁴⁶⁸ Telstra submission, Pub. p. 30/Conf. p. 37.

⁴⁶⁹ Telstra submission, Pub. p. 42/Conf. p. 53.

⁴⁷⁰ Telstra submission, Pub. p. 43/Conf. p. 54.

⁴⁷¹ Telstra submission, Pub. p. 20/Conf. p. 22.

⁴⁷² Telstra submission, Pub. p. 20/Conf. p. 22.

⁴⁷³ Telstra *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment H – DSLAM voice service delivery costs* (‘Lordan Report’), October 2011.

⁴⁷⁴ Telstra submission, Attachment H, p. 14

⁴⁷⁵ Telstra submission, Attachment H, p. 16

⁴⁷⁶ Telstra submission, Attachment H, p. 22.

⁴⁷⁷ Telstra submission, Attachment H, p. 26.

- Business to business interfaces cost \$15,000 per reseller to modify an existing retail billing system to bill wholesale services.⁴⁷⁸

Further details of Telstra’s submission on the costs of, and barriers to, entry are available in appendix J.

Telstra submitted that ‘any barriers to entry are sufficiently covered by the conditions in the Tribunal’s Orders and Telstra’s continued provision of resale services in exempt areas’.⁴⁷⁹

Telstra submitted that potential wholesalers do not find it attractive to supply wholesale voice-only services at the price Telstra is currently offering but are likely to do so if Telstra attempted to increase its prices significantly.⁴⁸⁰ Telstra submitted analysis by Mr Alexander Sundakov (on behalf of Telstra) on price thresholds for viable wholesale resale supply (the Sundakov Report).⁴⁸¹ On certain assumptions, the Sundakov Report estimated that the WLR price threshold would be between [c-i-c] [c-i-c] for an existing supplier of voice and data services to [c-i-c] [c-i-c] for a wholesale-only new entrant.⁴⁸²

Telstra stated that it does not agree that vertically integrated access seekers will not offer resale services to other access seekers that are expected to ‘cannibalise’ their retail customers such that wholesale profits would not compensate for lower retail profits.⁴⁸³ Sundakov concluded that the extent of any retail cannibalisation is likely to have minimal impact on incentives for new entrants or existing operators to supply resale services.⁴⁸⁴

C.1.6 State of competition

Telstra submitted that competitive conditions in the exempt ESAs have ‘exceeded expectations’, with strong growth in DSLAM-based investment and more intense retail competition. Telstra stated that stronger retail competition has led to lower prices, better value and greater choice for end-users.⁴⁸⁵

Telstra stated that since September 2007, access seekers have continued to invest in DSLAMs, expand DSLAM capacity, and invest in core network capabilities.⁴⁸⁶

Telstra submitted that [c-i-c] [c-i-c].⁴⁸⁷

Telstra submitted that infrastructure-based competition has also expanded beyond the 380 Attachment A ESAs in the Tribunal’s exemption orders and that subsequent inquiries by the ACCC should consider whether additional ESAs meet the Tribunal’s exemption conditions to become exempt ESAs.⁴⁸⁸

⁴⁷⁸ Telstra submission, Attachment H, p. 24.

⁴⁷⁹ Telstra submission, Pub. p. 42/Conf. p. 53.

⁴⁸⁰ Telstra submission, Pub. p. 14/Conf. p. 14.

⁴⁸¹ Sundakov Report, section 5.

⁴⁸² Telstra submission, Pub. p. 33/Conf. p. 44.

⁴⁸³ Telstra submission, Pub. p. 34/Conf. p. 45.

⁴⁸⁴ Telstra submission, Pub. p. 34/Conf. p. 45; Sundakov Report, pp. 56–57.

⁴⁸⁵ Telstra submission, Pub. p. 5/Conf. p. 5.

⁴⁸⁶ Telstra submission, Pub. p. 5/Conf. p. 5.

⁴⁸⁷ Telstra submission, Pub. p. 18/Conf. p. 20.

⁴⁸⁸ Telstra submission, Pub. p. 5/Conf. p. 5.

Wholesale competition

Telstra submitted that the number of alternative resale service providers is not necessarily indicative of the level of competition in the wholesale market. Telstra stated that the wholesale market is increasingly competitive, citing the decrease in WLR SIOs since September 2007.⁴⁸⁹ Telstra stated that there were at least four alternative providers of resale voice services in the exempt ESAs and that self-supply of these services was also constraining Telstra's behaviour in relation to the supply of WLR, LCS and PSTN OA services.⁴⁹⁰

Telstra stated that the number of companies acquiring the ULLS has increased from 11 to 16 since September 2007, while the average number of ULLS-based access seekers in each exempt ESA has doubled to 4.4 over the same period.⁴⁹¹ Additionally, the number of ULLS lines has tripled since September 2007, reaching [c-i-c] [c-i-c] lines in June 2011, while WLR SIOs and PSTN OA and LCS traffic have [c-i-c] [c-i-c].⁴⁹² Nevertheless, [c-i-c] [c-i-c], which Telstra submitted to be evidence of the price competitiveness of its resale services.⁴⁹³

Telstra submitted that, since the exemptions came into effect, it has continued to commercially supply resale voice services at the same or similar prices that have been in place from 2005.⁴⁹⁴ Telstra stated that this demonstrates the very real competitive constraints it faces within the exempt ESAs and is a key reason why extensive entry of alternative resale providers to the market has not occurred.⁴⁹⁵

Telstra submitted that, [c-i-c] [c-i-c].⁴⁹⁶

Retail competition

Telstra stated that increased competition in the exempt ESAs had impacted on its retail market share, noting that [c-i-c] [c-i-c].⁴⁹⁷ Telstra submitted that retail PSTN voice services were facing greater competition from services such as carrier-grade VoIP and mobile services, noting that [c-i-c] [c-i-c].⁴⁹⁸ The ACCC's PSTN services price index has declined significantly since 1997–98, while Telstra's analysis—submitted to the ACCC in July 2011—showed that the price of fixed line voice services has declined since 2007.⁴⁹⁹

Telstra submitted that the market segment for fixed line voice services is 'particularly competitive': a large range of competitive alternatives are offered, including services offered by ULLS acquirers and services offered over other networks (including hybrid-fibre coaxial (HFC) and mobile).⁵⁰⁰ The market segment for enterprise and

⁴⁸⁹ Telstra submission, Pub. p. 30/Conf. p. 37.

⁴⁹⁰ Telstra submission, Pub. p. 31/Conf. p. 40.

⁴⁹¹ Telstra submission, Pub. p. 5/Conf. p. 5.

⁴⁹² Telstra submission, Pub. p. 30/Conf. pp. 38–39.

⁴⁹³ Telstra submission, Pub. p. 7/Conf. p. 8.

⁴⁹⁴ Telstra submission, Pub. p. 7/Conf. p. 7.

⁴⁹⁵ Telstra submission, Pub. p. 7/Conf. p. 7.

⁴⁹⁶ Telstra submission, Pub. p. 33/Conf. p. 42.

⁴⁹⁷ Telstra submission, Pub. p. 6/Conf. p. 6.

⁴⁹⁸ Telstra submission, Pub. p. 6/Conf. p. 6.

⁴⁹⁹ Telstra submission, Pub. p. 22/Conf. pp. 24–25.

⁵⁰⁰ Telstra submission, Pub. p. 6/Conf. p. 6.

government customers is also ‘strongly competitive’ and the exemptions have not adversely affected access seekers’ ability to compete for customers in this sector.⁵⁰¹

Telstra cites the [c-i-c] [c-i-c] Statement that carrier-grade VoIP services delivered via DSLAM infrastructure typically support additional features that are not available on the PSTN service today, including: a Do Not Disturb function; call screening or selective call rejection; high definition voice; IP video phones, video calls and video conferencing; and multiple lines or numbers over a single broadband access.⁵⁰²

C.1.7 Industry certainty and regulatory burden

Industry certainty

Telstra stated that reopening the exemptions inquiry was likely to result in increased uncertainty and regulatory risk and that the prospect of re-regulation may have distorted access seekers’ investment decisions.⁵⁰³

In the interests of regulatory certainty, Telstra submitted that the ACCC should not re-regulate the declared services in the exempt areas unless the reasons for doing so are compelling.⁵⁰⁴ Telstra submitted that if the ACCC did not follow this approach, it would risk undermining the stability of the environment for investment and therefore be ‘at odds with’ Part XIC of the CCA.⁵⁰⁵

Additionally, Telstra stated that it was inappropriate for the ACCC to consider re-regulation only ten months after the exemptions had taken effect.⁵⁰⁶ Telstra submitted that:

- consistent with various provisions in Part XIC of the CCA, a period of three to five years would enable the ACCC to more accurately ascertain the competitive impact of the exemptions
- a review ten months after the exemptions took effect is at odds with the three year regulatory period, and
- the Tribunal’s exemption orders specified a five year duration.⁵⁰⁷

Regulatory burden

Telstra submitted that the exemptions are in the access provider’s legitimate business interests because of the cost savings associated with deregulation. More specifically, the administrative and compliance burdens of regulation will be removed.⁵⁰⁸

C.1.8 Impact of NBN

Telstra stated that the commencement of the deployment of the NBN had not deterred access seekers from investing in DSLAMs, noting that the number of ESAs that meet the Tribunal’s exemption conditions is growing.⁵⁰⁹ Further, Telstra submitted that

⁵⁰¹ Telstra submission, Pub. p. 6/Conf. p. 7.

⁵⁰² Telstra attachment J, para [31].

⁵⁰³ Telstra submission, Pub. p. 4/Conf. p. 4.

⁵⁰⁴ Telstra submission, Pub. p. 10/Conf. p. 10.

⁵⁰⁵ Telstra submission, Pub. p. 11/Conf. p. 11.

⁵⁰⁶ Telstra submission, Pub. p. 11/Conf. p. 11.

⁵⁰⁷ Telstra submission, Pub. p. 11/Conf. p. 11.

⁵⁰⁸ Telstra submission, Pub. p. 36/Conf. p. 47.

⁵⁰⁹ Telstra submission, Pub. p. 6/Conf. p. 6.

access seekers, including Internode and iiNet, had made comments to the media regarding plans for further DSLAM deployments while recognising the pending NBN roll-out.⁵¹⁰

C.1.9 Telstra submission in response to access seekers' submissions (received 6 December 2011)

On 6 December 2011, the ACCC received a confidential submission from Telstra in response to access seekers' submissions to the September 2011 issues paper. Telstra's reply submission provided additional information and data on the state of competition in exempt ESAs, as well as comments on issues raised in access seekers' submissions. Telstra's submission reiterated a number of issues raised in its previous submissions, including its October submission to the ACCC's issues paper. Telstra's submission also raised some new issues.

[c-i-c]^{511 512}

[c-i-c]⁵¹³

[c-i-c]⁵¹⁴

[c-i-c]⁵¹⁵

[c-i-c]^{516 517 518 519}

▪ [c-i-c]^{520 521 522}

▪ [c-i-c]⁵²³

▪ [c-i-c]⁵²⁴

▪ [c-i-c]⁵²⁵

▪ [c-i-c]⁵²⁶

[c-i-c]⁵²⁷

[c-i-c]^{528 529}

⁵¹⁰ Telstra submission, Pub. p. 21/Conf. p. 23.
⁵¹¹ Telstra reply submission, Conf. p. 9.
⁵¹² Telstra reply submission, Conf. p. 6.
⁵¹³ Telstra reply submission, Conf. p. 9.
⁵¹⁴ Telstra reply submission, Conf. p. 8.
⁵¹⁵ Telstra reply submission, Conf. p. 5.
⁵¹⁶ Telstra reply submission, Conf. p. 12.
⁵¹⁷ Telstra reply submission, Conf. p. 13.
⁵¹⁸ Telstra reply submission, Conf. pp. 27–28.
⁵¹⁹ Telstra reply submission, Conf. p. 13.
⁵²⁰ Telstra reply submission, Conf. p. 23.
⁵²¹ Telstra reply submission, Conf. p. 23.
⁵²² Telstra reply submission, Conf. p. 32.
⁵²³ Telstra reply submission, Conf. p. 32.
⁵²⁴ Telstra reply submission, Conf. p. 33.
⁵²⁵ Telstra reply submission, Conf. p. 33.
⁵²⁶ Telstra reply submission, Conf. p. 33.
⁵²⁷ Telstra reply submission, Conf. p. 25.
⁵²⁸ Telstra reply submission, Conf. p. 34.
⁵²⁹ Telstra reply submission, Conf. p. 34.

[c-i-c]⁵³⁰

[c-i-c]⁵³¹

C.1.10 Summary of Telstra submission (received on 9 December 2011)

[c-i-c] Telstra submitted that, if the ACCC decides to remove the exemptions, the terms and conditions in the FADs should not apply to the currently exempt services.⁵³² Telstra stated that the ACCC should issue an interim access determination (IAD) for the currently exempt services at the prices proposed in the SSU and undertake proper consultation in relation to making an FAD for the currently exempt services.⁵³³

Telstra submitted that the FAD prices for fixed line services issued in July 2011 are less than Telstra's accounting costs.⁵³⁴

It stated that the exempt ESAs face a high degree of competitive discipline which has become stronger since the exemptions were made.⁵³⁵ Telstra submitted that there is a high potential risk of competitive harm if prices are re-regulated in competitive ESAs, on the incorrect basis that they constitute an enduring bottleneck.⁵³⁶ Telstra submitted that, notwithstanding the competitive nature of the supply of exempt services, the ACCC retains power under Part XIC to re-regulate the pricing of services in exempt areas in the future and also that the SSU contains measures that deal with prices for exempt services.⁵³⁷

C.2 Optus submission

C.2.1 Position on exemption provisions

Optus submitted that there is no longer any valid rationale for the exemptions and that the ACCC should remove the exemptions as soon as practicable.⁵³⁸

C.2.2 Assessment framework

Optus submitted that the proposed assessment framework is broadly appropriate. It stated that, if price and service offerings to end-users were likely to be better in the 'future with exemptions' than the 'future without exemptions' scenario, then the exemptions should remain in place.⁵³⁹

⁵³⁰ Telstra reply submission, Conf. p. 35.

⁵³¹ Telstra reply submission, Conf. p. 27.

⁵³² Telstra, Letter to the ACCC received on 9 December 2011, p. 4.

⁵³³ Telstra, Letter to the ACCC received on 9 December 2011, p. 3.

⁵³⁴ Telstra, Letter to the ACCC received on 9 December 2011, p. 2.

⁵³⁵ Telstra, Letter to the ACCC received on 9 December 2011, p. 2.

⁵³⁶ Telstra, Letter to the ACCC received on 9 December 2011, p. 2.

⁵³⁷ Telstra, Letter to the ACCC received on 9 December 2011, p. 3.

⁵³⁸ Optus, *Optus submission in response to the ACCC's issues paper*, October 2011, Pub. p. 3/Conf. p. 3.

⁵³⁹ Optus submission, Pub. p. 4/Conf. 4.

Optus submitted that if Telstra is able to exercise market power, end-users would experience reduced competition and pay relatively higher prices in the ‘future with exemptions’ scenario.⁵⁴⁰

C.2.3 Rationale for the exemptions

Optus submitted that there is no rationale for the exemptions. It stated that there would be no difference in DSLAM investment by access seekers in the ‘future with and without’ scenarios, for the following reasons:⁵⁴¹

- Access seekers faced incentives to invest in DSLAMs that were independent of the exemptions. Incentives were provided by the ULLS/WLR price differential and ability of ULLS-based access seekers to better control service quality and product offerings to retail customers. If it was feasible to invest in DSLAMs, access seekers will have done so already.
- Optus’ decision to invest in DSLAMs is not highly sensitive to the availability of regulated resale services.
- Given the extensive DSLAM infrastructure already in exempt ESAs, a new entrant would anticipate fierce competition. Further infrastructure investments are unlikely to be commercially feasible.
- The NBN deployment reduces the expected return from DSLAM investments by reducing the time recoup investment costs and increasing the risk of such investments due to uncertainty about the NBN roll-out schedule.

Optus submitted that competition will be less intense in the ‘future with exemptions’ scenario because:⁵⁴²

- Some access seekers will absorb the price increase.
- Some access seekers will go out of business.
- Some access seekers will switch to alternative ULLS-based wholesale service providers.

As a result of exercising its market power in the exempt ESAs, Telstra’s market share and revenue will increase.

Optus submitted that it is not relevant to look backwards at the ladder of investment that has been reached. It stated that a forward looking approach is needed to ensure that competition flourishes on the NBN.⁵⁴³ Optus stated that:

By removing a critical stepping stone for potential service providers, the exemptions will discourage entry and reduce the intensity of retail level competition both before and after the NBN becomes Australia’s main fixed line access platform.⁵⁴⁴

Optus stated further that the ACCC needs to look at whether higher ‘rungs’ on the ladder will be ‘prudent’ under the NBN and given that it most likely will not, in order

⁵⁴⁰ Optus submission, Pub. p. 4/Conf. 4.

⁵⁴¹ Optus submission, Pub. p. 5-6/Conf. p. 5-6.

⁵⁴² Optus submission, Pub. p. 28/Conf. 28.

⁵⁴³ Optus submission, Pub. p. 29/Conf. 29

⁵⁴⁴ *ibid.*

to encourage competition on the new platform, a similar ‘rung’ should be regulated now.⁵⁴⁵

C.2.4 Market definition

In regard to the wholesale market for resale services, Optus submitted that resale services offered by suppliers other than Telstra have different characteristics. It stated that, for some resellers, alternative resale products are not acceptable substitutes, even if Telstra were to raise its prices significantly.⁵⁴⁶

Optus submitted that alternative services are not a viable substitute for wholesale customers that require: voice-only services; a multicast service or complex services; national coverage; ubiquitous coverage within the exempt ESAs; or a ‘switchless long distance’ service to supply the long distance market. In addition, some resellers are not willing to switch away from Telstra due to switching costs.⁵⁴⁷

Optus submitted that residential and corporate/government customers have different requirements to other customer groups.⁵⁴⁸ It stated that there are a range of complex services (traditionally supplied over Telstra’s PSTN network) which are required by its corporate and government customers. Optus offers most of its products using its ‘Optus Evolve’ IP-based VPN platform delivered via Ethernet or the ULLS. [c-i-c] [c-i-c]⁵⁴⁹

Optus submitted that the nearest equivalent service to the WLR service offered by Optus Wholesale is its residential grade, RBT (Residential Broadband and Telephony) product.⁵⁵⁰ Optus submitted that the RBT product is [c-i-c] [c-i-c]⁵⁵¹ Optus submitted that it generally sells bundled voice and broadband products rather than voice-only products to its wholesale customers.⁵⁵²

C.2.5 Barriers to entry

Optus identified a number of barriers to entry. It submitted that the cost of DSLAM investment is significant and that the ACCC’s estimate of the cost of DSLAMs is incorrect. [c-i-c] [c-i-c]^{553 554 555}

Optus submitted that integrated product offerings from a single supplier, that is, the ability to procure service on a ‘whole of business’ basis, are a critical requirement for many business end-users.⁵⁵⁶ Optus submitted that it does not have the capacity to offer national service coverage without relying on Telstra’s resale services to supply customers outside its DSLAM footprint.⁵⁵⁷

⁵⁴⁵ *ibid.*

⁵⁴⁶ Optus submission, Pub. p. 12/Conf. 12.

⁵⁴⁷ Optus submission, Pub. p. 13/Conf. 13..

⁵⁴⁸ Optus submission, Pub. p. 15/Conf. 15.

⁵⁴⁹ Optus submission, Pub. p. 15/Conf. 16.

⁵⁵⁰ Optus submission, Pub. p. 17/Conf. 17.

⁵⁵¹ *ibid.*

⁵⁵² Optus submission, Pub. p. 13/Conf. 13.

⁵⁵³ Optus submission, Pub. p. 34/Conf. 35.

⁵⁵⁴ Optus, Attachment 3.

⁵⁵⁵ Optus, Attachment 2.

⁵⁵⁶ Optus submission, Pub. p. 18/Conf. 18.

⁵⁵⁷ *ibid.*

Optus stated that [c-i-c] [c-i-c]⁵⁵⁸ Optus also submitted that [c-i-c] [c-i-c]⁵⁵⁹

Optus identified [c-i-c] [c-i-c]⁵⁶⁰

Optus submitted that its IP-based VPN platform named Optus Evolve [c-i-c] [c-i-c]⁵⁶¹
562 563 564

Optus submitted that by removing a ‘critical stepping stone’ for potential service providers, the exemptions will discourage entry.⁵⁶⁵

C.2.6 State of competition

Optus submitted that the expected restraint on Telstra’s market power from alternative wholesale suppliers has failed to materialise. Optus submitted that Telstra is currently charging it [c-i-c] [c-i-c] per month for WLR.⁵⁶⁶ It noted that this is above the current regulated rate for WLR. Optus submitted that Telstra will be even less restrained in the exercise of market power in the ‘future with exemptions’ scenario, stating that it is highly likely that Telstra will take ‘more extreme action once the exemptions are confirmed.’⁵⁶⁷

Substitutability of alternative wholesale services

Optus submitted that, to the extent that the alternative resale services are not acceptable substitutes, Telstra will have market power in respect of the exempt services in the ‘future with exemptions’ scenario.⁵⁶⁸

For contestable end-users who can be served via ULLS, competition from access seekers with DSLAM infrastructure was already vigorous before the exemptions were proposed. For these contestable customers the exemptions will have no ill effects, but no benefits either. End users who cannot be served effectively via the ULLS (because of large pair gain systems or those who require ‘business grade’ SLAs) will experience less intense competition and higher retail prices due to the exemptions.⁵⁶⁹

Optus submitted that [c-i-c] [c-i-c]^{570 571}

It stated that [c-i-c] [c-i-c]

Optus contrasted Telstra’s assurance options for ULLS with the options for Telstra’s WLR service. Optus stated that, for its WLR services, Telstra offers [c-i-c] [c-i-c]⁵⁷²
In contrast, the assurance options for ULLS are as follows:

⁵⁵⁸ Optus submission, Pub. p. 18/Conf. 18-19.

⁵⁵⁹ Optus, Attachment 4A, p. 2.

⁵⁶⁰ Optus, Attachment 4A, p. 6.

⁵⁶¹ Optus submission, Pub. p. 15/Conf. 15-16.

⁵⁶² Optus submission, Pub. p. 15/Conf. 16.

⁵⁶³ Optus submission, Pub. p. 35/Conf. p. 40.

⁵⁶⁴ Optus submission, Pub. p. 35/Conf. 40.

⁵⁶⁵ Optus submission, Pub. p. 29/Conf. 29.

⁵⁶⁶ Optus submission, Pub. p. 26/Conf. 26.

⁵⁶⁷ Optus submission, Pub. p. 26-27/Conf. 26-27.

⁵⁶⁸ Optus submission, Pub. p. 12-13/Conf. 12-13.

⁵⁶⁹ Optus submission, Pub. p. 3/Conf. 3.

⁵⁷⁰ Optus submission, Pub. p. 36/Conf. 42.

⁵⁷¹ Optus submission, Pub. p. 36/Conf. 42.

⁵⁷² Optus submission, Pub. p. 36/Conf. 44-45.

Telstra Business Service Assurance Options for ULLS⁵⁷³

	CBD	Urban	Rural Centre	Remote
Availability	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Hours of Coverage	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Target restoration time	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Optus submitted that [c-i-c] [c-i-c]^{574 575}

Optus submitted that customers that cannot be effectively serviced via the ULLS must continue to be served by Telstra or by an access seeker taking resale services from Telstra. Telstra's ability to exercise market power with respect to these customers will not be restrained by the existence of retail service providers or wholesale service providers that have made DSLAM investments.⁵⁷⁶

Optus' ability to compete in wholesale market

Optus submitted that [c-i-c] [c-i-c]^{577 578}

Optus submitted:

- It is not commercially viable for ULLS-based access seekers to supply voice-only services at wholesale competition with Telstra. [c-i-c] [c-i-c].⁵⁷⁹
- Optus does not proactively offer ULLS-based voice-only wholesale services or encourage its wholesale customers to take up ULLS-based voice-only services. Optus stated that only [c-i-c] [c-i-c] of its total wholesale services are standalone voice-only customers.⁵⁸⁰
- Optus will make voice-only services available to customers but only subject to certain conditions. [c-i-c] [c-i-c].⁵⁸¹
- [c-i-c] [c-i-c].⁵⁸²
- [c-i-c] [c-i-c].⁵⁸³

Conditions relating to wholesale products are discussed further in Appendix I.

C.2.7 Industry certainty and regulatory burden

Optus did not make any specific submissions on the impact of the exemptions on industry certainty and the regulatory burden.

⁵⁷³ Optus submission, Pub. p. 36/Conf. 43.

⁵⁷⁴ Optus submission, Pub. p. 36/Conf. 43.

⁵⁷⁵ Optus submission, Pub. p. 36/Conf. 43.

⁵⁷⁶ Optus submission, Pub. p. 30/Conf. 30.

⁵⁷⁷ Optus, Attachment 4A, p. 5

⁵⁷⁸ Optus, Attachment 4B, p. 5. The ACCC notes that [c-i-c] [c-i-c]

⁵⁷⁹ Optus submission, Pub. p. 13/Conf. 13.

⁵⁸⁰ Optus submission, Pub. p. 13/Conf. 13-14.

⁵⁸¹ Optus submission, Pub. p. 13/Conf. 14.

⁵⁸² Optus submission, Pub. p. 17/Conf. 17.

⁵⁸³ Optus submission, Pub. p. 17/Conf. 18.

C.2.8 Impact of NBN

Optus submitted that, [c-i-c] [c-i-c]⁵⁸⁴

It submitted that Internode's stated intention to deploy more ADSL2+ DSLAMs is nearly two years old and the NBN deployment has become much more advanced. It stated that the economics of DSLAM investment will be less appealing in 2012 compared to 2010.⁵⁸⁵

Optus submitted that fixed line telecommunications customers do not often switch suppliers and establishing a market presence and customer base before the NBN deployment is a key imperative for prospective retail service providers.⁵⁸⁶ Optus submitted that [c-i-c] [c-i-c]⁵⁸⁷

It submitted that [c-i-c] [c-i-c]⁵⁸⁸

Optus submitted that NBN Co's 12 month construction plan includes areas of overlap with the exemption ESAs. Optus stated that access seekers will not invest in any further DSLAM infrastructure in these areas since any such investments will be overbuilt within 12 months, leaving insufficient time for the cost of the investment to be recovered.⁵⁸⁹

Optus stated that NBN Co's information release demonstrates the unusual degree of risk faced by potential investors in DSLAM infrastructure at present and that, due to the risk of NBN overbuild, it is unlikely that access seekers will begin significant new investments in DSLAMs in the post January 2012 period.⁵⁹⁰

C.3 Primus submission

C.3.1 Position on exemption provisions

Primus submitted that the exemption provisions should be removed.⁵⁹¹ Primus submitted that Telstra is the dominant supplier in all relevant markets and is using its market power to raise access charges above what would provide an acceptable commercial return. Primus stated that competition for resale services has not sufficiently emerged and is unlikely to emerge during the NBN roll-out.⁵⁹²

C.3.2 Assessment framework

Primus did not make any specific submissions on the assessment framework.

C.3.3 Rationale for the exemptions

Primus submitted that the initial rationale for exemptions—promoting infrastructure-based competition—is no longer relevant given that the NBN stifles the incentives for

⁵⁸⁴ Optus submission, Pub. p. 6/Conf. 6.

⁵⁸⁵ Optus submission, Pub. p. 6/Conf. 6.

⁵⁸⁶ Optus submission, Pub. p. 29/Conf. 29.

⁵⁸⁷ Optus, Attachment 4A, p. 5.

⁵⁸⁸ Optus, Attachment 4A, p. 5.

⁵⁸⁹ Optus, supplementary submission, October 2011.

⁵⁹⁰ Optus, supplementary submission, October 2011.

⁵⁹¹ Primus, *Submission by Primus in response to the ACCC's issues paper*, October 2011, p. 2.

⁵⁹² Primus submission, p. 2.

investing.⁵⁹³ Primus submitted that ‘if the business case existed to develop competitive supply, it would occur irrespective of whether or not the exemptions are in place’.⁵⁹⁴

Primus stated that competitive supply of wholesale services has not emerged because ULLS-based competitors cannot provide voice services without significant new investment and because these competitors are unwilling to supply wholesale services when they also compete in the retail market.⁵⁹⁵

C.3.4 Market definition

Primus submitted that the key market was for fixed line voice services.⁵⁹⁶

C.3.5 Barriers to entry

Primus submitted that while the regulatory regime supported the deployment of infrastructure based competition, the absence of regulation creates a barrier to entry.⁵⁹⁷

Primus submitted that there are economic and commercial reasons why industry does not invest in substitutable voice capabilities to provide an alternative to the Telstra regulated WLR, PSTN OA and LCS services including:

- Margins are too low.
- Alternative services are not a viable substitute due to different supply conditions and availability of the underlying ULLS.
- The uncertainty caused by both the potential for exchanges to be capped and the transition to the NBN continue to make DSLAM investments extremely risky.
- The establishment of necessary wholesale interface processes and systems.⁵⁹⁸

C.3.6 State of competition

Primus submitted that the exemptions provide Telstra with the ability to compromise competition. It stated that competition to provide resale services has not emerged across the relevant geographic areas.⁵⁹⁹ Primus submitted that Telstra’s price discrimination in relation to exempt services has dampened competition by increasing the resellers’ costs and this has had the effect of harming the LTIE.⁶⁰⁰

C.3.7 Industry certainty and regulatory burden

Primus did not submit on industry certainty and regulatory burden.

⁵⁹³ Primus submission, p. 3.

⁵⁹⁴ Primus submission, p. 4.

⁵⁹⁵ Primus submission, p. 4.

⁵⁹⁶ Primus submission, p. 2.

⁵⁹⁷ Primus submission, p. 3.

⁵⁹⁸ Primus submission, p. 4.

⁵⁹⁹ Primus submission, pp. 3-4.

⁶⁰⁰ Primus submission, p. 5.

C.3.8 Impact of NBN

Primus submitted that the transition to the NBN continues to make any possible return on investment [in substitutable voice capabilities] extremely risky.⁶⁰¹

C.4 AAPT submission

C.4.1 Position on exemption provisions

AAPT submitted that the ACCC should vary the FADs to completely remove the exemption provisions.⁶⁰² AAPT submitted that retention of the exemption provisions would result in reduced competition and would not promote the efficient use of, and investment in infrastructure.⁶⁰³

C.4.2 Assessment framework

AAPT submitted that the key issue for the ‘with and without’ assessment is the extent to which access seekers can compete in the retail market for fixed voice services using the ULLS in the absence of regulated access to WLR, LCS and PSTN OA.⁶⁰⁴ AAPT submitted that all the conditions and limitations imposed by the Tribunal should be retained in the ‘future with’ scenario and additional conditions should also be adopted. The additional conditions proposed by AAPT are:

- The exemptions do not apply to an access seeker when the access seeker is unable to retain its old supply sources, unable to enter into an alternative contract, or has no business case to invest in its own infrastructure.
- The exemptions do not apply where an access seeker requires access to five or fewer voice lines for an end-user.
- The exemptions do not apply where an end-user cannot be supplied by way of the ULLS.
- Telstra must inform access seekers about its building of, or intention to build, a sub-exchange.⁶⁰⁵

C.4.3 Rationale for the exemptions

AAPT submitted that the exemptions have not met the ACCC’s objective of encouraging investment in voice-capable infrastructure and thereby creating a wholesale market for resale services that used the ULLS as an input.⁶⁰⁶

AAPT stated that wholesale markets for resale services have not developed because the ULLS is not capable of providing the same voice functionality as WLR and LCS.⁶⁰⁷ It stated that wholesale markets for resale services are unlikely to develop

⁶⁰¹ Primus submission, p. 2 & 4.

⁶⁰² AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 2.

⁶⁰³ AAPT submission, p. 2.

⁶⁰⁴ AAPT submission, p. 10.

⁶⁰⁵ AAPT submission, pp. 11–12.

⁶⁰⁶ AAPT submission, p. 2.

⁶⁰⁷ AAPT submission, p. 8.

because the NBN roll-out is likely to discourage investment.⁶⁰⁸ Additionally, AAPT submitted that the exemptions are deterring the efficient use of installed infrastructure because, due to the price increases in exempt ESAs, LSS-based services (used in conjunction with WLR and/or other services) are now less competitively priced, meaning that existing DSLAMs at exchanges would not be fully utilised.⁶⁰⁹

AAPT submitted that the ACCC should not give much weight to the ladder of investment in its ‘future with and without’ assessment because the theory has flaws and is no longer relevant in the NBN environment (because investment in the copper network would be inefficient).⁶¹⁰

C.4.4 Market definition

AAPT submitted that there are four relevant market dimensions:

- retail markets for voice only services
- wholesale markets for voice only services
- retail markets for bundled broadband and voice services, and
- wholesale markets for bundled broadband and voice services.⁶¹¹

AAPT submitted that there is no substitutability between bundled voice and broadband services and voice-only services.⁶¹² AAPT stated that if a customer sought a single line voice-only service, access seekers could only supply the customer by purchasing WLR.⁶¹³ AAPT submitted that while VoIP services may be comparable to traditional PSTN voice services for residential customers, VoIP is not a substitute for business users as they require a higher quality of service and fast restoration times.⁶¹⁴ In addition, AAPT submitted that mobile services are not substitutable for traditional PSTN voice services.⁶¹⁵

AAPT submitted a witness statement, in response to Telstra’s witness statement, which stated that:

carrier grade VoIP cannot at this time be considered to be substitutable for POTS due to the operational limitations of the ULLS in respect of service restoration, features and other technical aspects, from the customers’ perspective or otherwise ...[and] cannot be considered an economic substitute for a single line POTS service.⁶¹⁶

AAPT submitted that there should be separate markets for residential users and corporate/government users because of the different product requirements for corporate and government users.⁶¹⁷

AAPT submitted that the ESA was not the appropriate geographic dimension of the market. It provided the following reasons to support its view:

⁶⁰⁸ AAPT submission, p. 8.

⁶⁰⁹ AAPT submission, p. 21.

⁶¹⁰ AAPT submission, pp. 15–16.

⁶¹¹ AAPT submission, p. 28.

⁶¹² AAPT submission, p. 25.

⁶¹³ AAPT submission, p. 25.

⁶¹⁴ AAPT submission, p. 31.

⁶¹⁵ AAPT submission, p. 31.

⁶¹⁶ AAPT, Statement from [c-i-c] [c-i-c], 28 November 2011, p. 2.

⁶¹⁷ AAPT submission, p. 31.

- A single ESA does not provide the necessary economies of scale to justify an access seeker creating a wholesale offering.
- Even if certain exchanges are competitive, it is not workable for access seekers to acquire wholesale inputs on an exchange-by-exchange basis.
- The removal of regulation in certain areas may have the perverse effect of reducing competition in those areas.⁶¹⁸

C.4.5 Barriers to entry

AAPT submitted that large pair gain systems (LPGS) and sub-exchanges present a barrier to entry to ULLS-based competitors by limiting the number of prospective customers that can be gained in an exchange service area.⁶¹⁹ AAPT submitted that the number of LPGS deployed, and the number of sub-exchanges created, are both increasing.⁶²⁰

AAPT stated that access to end-users served by sub-exchanges could take twice as long, and cost twice as much, as accessing end-users served by the main exchange.⁶²¹ AAPT submitted that this was because access seekers may need to queue and invest at both the main exchange and sub-exchange. Further, some sub-exchanges may be too small to accommodate access seekers' equipment.⁶²²

In addition to pair gain systems and sub-exchanges, AAPT submitted that queuing and the cost of upgrading power or Telstra Exchange Building Access (TEBA) space may deter entry by access seekers.⁶²³ AAPT submitted that other barriers to entry include the absence of: TEBA space; TEBA power, main distribution frame (MDF) cabling; and competitively-priced backhaul.⁶²⁴ AAPT's submission indicated that some of these barriers may be surmountable in some circumstances. For example, AAPT stated that it has previously deployed a DSLAM outside the exchange building and built fibre to exchanges for backhaul.⁶²⁵

AAPT submitted that the lack of access to competitively-priced resale services may form a barrier to entry. Access to competitively-priced resale services is crucial for new entrants in order to allow them to gain market share and build their reputation.⁶²⁶ AAPT submitted that access to competitively-priced resale services is also important for existing access seekers—who may use WLR, in conjunction with the LSS and DSLAMs, to provide a bundled voice and broadband service to end-users—as the WLR price impacts on decisions regarding DSLAM investments.⁶²⁷

AAPT submitted that [c-i-c] [c-i-c]⁶²⁸

⁶¹⁸ AAPT submission, p. 32.

⁶¹⁹ AAPT submission, p. 3.

⁶²⁰ AAPT submission, p. 12.

⁶²¹ AAPT submission, p. 13.

⁶²² AAPT submission, p. 14.

⁶²³ AAPT submission, p. 28.

⁶²⁴ AAPT submission, p. 22.

⁶²⁵ AAPT submission, p. 22.

⁶²⁶ AAPT submission, p. 18.

⁶²⁷ AAPT submission, p. 19.

⁶²⁸ AAPT submission, p. 23.

AAPT stated that, as it is not economically viable for AAPT to provide a voice-only resale service on a single-line, standalone basis, it has little or no incentive to supply a single-line, voice-only resale services on a wholesale or retail basis.⁶²⁹

AAPT stated that [c-i-c] [c-i-c]⁶³⁰

AAPT submitted that [c-i-c] [c-i-c]⁶³¹

C.4.6 State of competition

AAPT stated that Telstra is utilising its market power to raise the WLR price in Exemption areas above the price in declared areas, despite there being no cost-based justification for such differentiation.⁶³² AAPT stated that the price of WLR in exempt areas has been raised to [c-i-c] [c-i-c] compared to the efficient price of \$22.84 determined by the ACCC.⁶³³

AAPT stated that there is no competitive market for voice-only services as Telstra is the only wholesaler.⁶³⁴ AAPT submitted that the WLR price increases in the exempt ESAs [c-i-c] [c-i-c]⁶³⁵

AAPT submitted that some of the potential adverse effects of geographic deregulation on competition identified by the OECD have materialised.⁶³⁶ AAPT submitted that by raising the price of WLR in exempt areas, Telstra is cross-subsidising between its competitive variable charges (such as call charges) and the non-competitive WLR charge.⁶³⁷ Additionally, AAPT submitted that the exemptions give Telstra the ability to force access seekers into whole of business deals for WLR at a blended price higher than the regulated price.⁶³⁸

AAPT submitted that the lack of alternative providers of wholesale resale services reflects technical limitations that limit the ability of access seekers to provide resale services that are equivalent to Telstra's. These limitations include:

- AAPT's DSLAMs being incapable of supplying equivalent PSTN voice services
- potential loss of service due to a power failure at the customer's premises
- the need for both the customer and access seeker to purchase additional equipment, and

⁶²⁹ AAPT submission, p. 25.

⁶³⁰ AAPT submission, p. 25.

⁶³¹ AAPT, response to ACCC request for market information, p. 2.

⁶³² AAPT submission, p. 6.

⁶³³ AAPT submission, p. 6.

⁶³⁴ AAPT submission, p. 25.

⁶³⁵ AAPT submission, p. 27.

⁶³⁶ AAPT submission, p. 5. AAPT cited Organisation for Economic Co-operation and Development (OECD), 'Geographically segmented regulation for telecommunications', *OECD Digital Economy Papers*, no. 173, 2010. The adverse effects identified by the OECD include: unfair bundling of regulated and unregulated products; margin squeeze; predatory pricing and cross-subsidisation; under-investment in regulated areas; geographic price discrimination; and refusal to supply wholesale services.

⁶³⁷ AAPT submission, p. 6.

⁶³⁸ AAPT submission, p. 7.

- inferior quality of service, service level agreements and ubiquity associated with ULLS (relative to WLR).⁶³⁹

C.4.7 Industry certainty and regulatory burden

AAPT submitted that ‘if broad, complicated, impractical or onerous conditions’ are required in order for the ACCC to be satisfied that the exemptions should continue, the exemptions should be removed completely.⁶⁴⁰

C.4.8 Impact of NBN

AAPT submitted that ‘the NBN creates an additional reason to support the removal of the Exemptions’, because further investments in the copper network would ‘clearly be inefficient’.⁶⁴¹

AAPT submitted that the NBN will have a positive impact on its ability to offer wholesale services as AAPT will no longer be competing against a vertically-integrated carrier.⁶⁴² However, AAPT submitted that the ‘full impact of the NBN will not be felt for a number of years’.⁶⁴³

C.5 Macquarie Telecom submission

C.5.1 Position on exemption provisions

Macquarie Telecom submitted that the exemptions should be removed. It stated that ‘the geographic exemptions are a leftover of the pre-NBN environment and have no place in the transition to the NBN’.⁶⁴⁴ Macquarie Telecom stated that regulated access to WLR, LCS and PSTN OA services should be provided until Telstra’s copper network is completely decommissioned.⁶⁴⁵

Macquarie Telecom stated that [c-i-c] [c-i-c] Without exemptions, Macquarie would be paying the regulated price of \$22.84 per month.

C.5.2 Assessment framework

Macquarie Telecom submitted that it supports the proposed ‘future with and without’ framework. Macquarie Telecom submitted that:

the “future with” exemptions scenario should be aligned with the existing conditions and limitations as set out in the Tribunal’s Metropolitan Orders and the Fixed FADs.⁶⁴⁶

C.5.3 Rationale for the exemptions

Macquarie Telecom submitted that the ladder of investment theory should not be given any weight in the ‘with and without’ assessment as investments in DSLAMs/MSANs are of no use in the NBN environment. Macquarie Telecom stated

⁶³⁹ AAPT submission, pp. 23–24.

⁶⁴⁰ AAPT submission, p. 11.

⁶⁴¹ AAPT submission, p. 3.

⁶⁴² AAPT submission, p. 26.

⁶⁴³ AAPT submission, p. 26.

⁶⁴⁴ Macquarie Telecom, *Inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, 14 October 2011, p. 1.

⁶⁴⁵ Macquarie Telecom submission, p. 3.

⁶⁴⁶ Macquarie Telecom submission, p. 2.

that it is inefficient to invest in assets that will become stranded before the end of their useful lives (even where the investment costs could be recovered) when sunk assets with the necessary capacity already exist.⁶⁴⁷

C.5.4 Market definition

Macquarie Telecom submitted an appropriate market construct is:

- the downstream supply of fixed voice-only services
- the downstream supply of bundles of voice and data services
- the upstream supply of inputs to fixed voice-only services and
- the upstream supply of inputs to bundles of voice and data services.⁶⁴⁸

Macquarie Telecom submitted that there is a market for voice-only services that is distinct from a market for bundled voice and broadband services. It stated that bundled offerings meet the needs of some, but not the majority of, end-users.

Macquarie Telecom submitted that 60 per cent of Telstra's fixed lines in operation are voice-only.⁶⁴⁹ It stated that some voice-only customers purchase lines for alarms and point of sale equipment [c-i-c] [c-i-c] For these customers, bundled voice and broadband services are not effective substitutes for voice-only services.⁶⁵⁰

Macquarie Telecom stated that mobile services are not adequate substitutes for fixed line voice services because of service quality differences including call clarity, network reliability and the personal, mobile nature of mobile services.⁶⁵¹

It submitted that VoIP services are not effective substitutes for reasons including inability to trace a caller's location, vulnerability to a loss of power and call quality variation.⁶⁵²

Macquarie Telecom submitted that there are separate residential and corporate/government market segments for retail voice services. Residential consumers choose a service based on price and service performance whereas corporate/government consumers are most interested in service performance, reliability and responsiveness. Residential consumers require discrete service offerings, which they purchase 'off-the-shelf', while corporate/government consumers require a total service solution which they purchase using tenders.⁶⁵³

Macquarie Telecom submitted that the geographic market is national. Differentiated services do not exist to meet the needs of customers located in specific geographic areas. Moreover, a business /government customer is likely to require services in multiple ESAs.⁶⁵⁴

⁶⁴⁷ Macquarie Telecom submission, p. 3.

⁶⁴⁸ Macquarie Telecom submission, p. 18.

⁶⁴⁹ Macquarie Telecom submission, p. 11.

⁶⁵⁰ Macquarie Telecom submission, pp. 11-12.

⁶⁵¹ Macquarie Telecom submission, p. 19.

⁶⁵² Macquarie Telecom submission, p. 19.

⁶⁵³ Macquarie Telecom submission, p. 20.

⁶⁵⁴ Macquarie Telecom submission, p. 21.

C.5.5 Barriers to entry

Macquarie Telecom stated that supplying a retail voice-only service using the ULLS and its own DSLAM/MSAN infrastructure is likely to be uneconomic because of [c-i-c] [c-i-c].⁶⁵⁵

Macquarie Telecom submitted a detailed business case for meeting its existing use of WLR with self-supply of voice services via DSLAMs. The modelling indicated that it was uneconomic for Macquarie Telecom to make such investments. Such investments would become commercially viable only if [c-i-c] [c-i-c].⁶⁵⁶

Macquarie Telecom stated that scale economies and uncertainty around the NBN rollout are ‘material barriers to entering the voice-only market’.⁶⁵⁷

It stated that the existence of only one wholesale supply option, in conjunction with the price difference between exempt and non-exempt ESAs, also poses a barrier to market entry.⁶⁵⁸⁶⁵⁹

C.5.6 State of competition

Wholesale competition

Macquarie Telecom submitted that there is effectively no wholesale competition in supplying voice-only services and only limited wholesale competition in supplying broadband and bundled services.⁶⁶⁰ The primary reason why access seekers invest in infrastructure like DSLAMs and MSANs is so that they can provide broadband and bundled voice and broadband retail services, not to supply wholesale voice-only services.⁶⁶¹

Macquarie Telecom considers that the development of wholesale competition has been constrained by a number of factors, including concerns about Telstra’s capacity to use its market power to ‘circumvent competition via predatory retail conduct’ and its ability to interfere with the provision of ULLS services.⁶⁶²

In addition, Macquarie Telecom submitted that a retail service provider has little incentive to supply its competitors with wholesale products as it would prefer to make its own retail sale than facilitate a competitor’s sale.⁶⁶³ Further Macquarie Telecom stated that potential wholesale suppliers may choose not to supply wholesale services because such activities are viewed as ‘distraction[s] to their core business of selling to retail customers’.⁶⁶⁴

Macquarie Telecom stated that it has attempted to obtain alternative wholesale supply [c-i-c] [c-i-c].⁶⁶⁵

⁶⁵⁵ Macquarie Telecom submission, p. 11.

⁶⁵⁶ Macquarie Telecom supplementary submission.

⁶⁵⁷ Macquarie Telecom submission, p. 12.

⁶⁵⁸ Macquarie Telecom submission, p. 17.

⁶⁵⁹ Macquarie Telecom submission, p. 12.

⁶⁶⁰ Macquarie Telecom submission, p. 1.

⁶⁶¹ Macquarie Telecom submission, p. 8.

⁶⁶² Macquarie Telecom submission, p. 8.

⁶⁶³ Macquarie Telecom submission, p. 6.

⁶⁶⁴ Macquarie Telecom submission, p. 12.

⁶⁶⁵ Macquarie Telecom submission, p. 10.

Retail competition for corporate and government customers

Macquarie Telecom submitted that, by setting a price for WLR in excess of \$30 per month in exempt ESAs, Telstra has shown that it can ‘effectively increase prices by much more than a SSNIP’ without constraint from the retail or wholesale level.⁶⁶⁶

Macquarie Telecom submitted that Telstra currently charges it [c-i-c] [c-i-c] per month for WLR in exempt ESAs.⁶⁶⁷ [c-i-c] [c-i-c]⁶⁶⁸

Macquarie Telecom submitted further that [c-i-c] [c-i-c]⁶⁶⁹

Service standards for wholesale services

Macquarie Telecom submitted information regarding the service standards provided by Telstra in respect of the WLR and ULLS. Macquarie stated that fault rectification for WLR service occurs within the following time frames:

Geographic Area	Rectification Time Frame
Urban	[c-i-c]
Rural	[c-i-c]
Remote	[c-i-c]

[c-i-c] [c-i-c] In contrast, Macquarie submitted that, regarding ULLS, it has the option to purchase [c-i-c] [c-i-c] which provide the following fault rectification standards:⁶⁷⁰

Package	Cost	Time	Geographic Area	Rectification Time Frame
[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
			[c-i-c]	[c-i-c]
			[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

PSTN OA services

Macquarie Telecom submitted that [c-i-c] [c-i-c]⁶⁷¹

C.5.7 Industry certainty and regulatory burden

Macquarie Telecom did not make a specific submission on the impact of the exemptions on industry certainty and the regulatory burden.

⁶⁶⁶ Macquarie Telecom submission, p. 18.

⁶⁶⁷ Macquarie Telecom submission, p. 2.

⁶⁶⁸ Macquarie Telecom submission, p. 17..

⁶⁶⁹ Macquarie Telecom submission, p. 5.

⁶⁷⁰ Macquarie Telecom, Letter to the ACCC, 16 November 2011, p. 4.

⁶⁷¹ Macquarie Telecom, Letter to the ACCC, 16 November 2011, p. 4.

C.5.8 Impact of NBN

Macquarie Telecom submitted that, faced with scarce resources for investment, access seekers now prefer to invest in NBN related projects, such as content, transmission, data centres and cloud computing, rather than in DSLAMs/MSANs.⁶⁷²

Macquarie Telecom stated that the importance of resale services is heightened by the transition to the NBN because retail service providers need a customer base for migration to NBN services. Macquarie Telecom stated that it is concerned that the exemptions will constrain the capacity of non-Telstra retailers to ‘take advantage of the opportunities afforded by the NBN’.⁶⁷³ It stated that Telstra has an incentive to maximise its retail market share before transition to the NBN and that Telstra can achieve this by increasing its resale prices.⁶⁷⁴

Macquarie Telecom stated that the NBN is now ‘well underway and enshrined in legislation’.⁶⁷⁵ Accordingly, the threat of wholesale self-supply provides little constraint on Telstra’s prices for its resale services.⁶⁷⁶

Macquarie Telecom submitted that transition to the NBN has created an uncertain environment for retail service providers. It stated that investor certainty is essential for the development of wholesale competition because it reduces the riskiness of investments.⁶⁷⁷

C.6 Herbert Geer submission (on behalf of Adam Internet, Internode and iiNet)

C.6.1 Position on exemption provisions

Herbert Geer submitted that the exemptions should be removed as they are not in the LTIE.⁶⁷⁸

C.6.2 Assessment framework

In support of its submission, Herbert Geer submitted a brief ‘with’ and ‘without’ assessment that identified the effects on competition, investment in infrastructure, consumers, regulatory burden and regulatory uncertainty.⁶⁷⁹

C.6.3 Rationale for the exemptions

Herbert Geer submitted that the underlying rationale for the exemptions appeared to have been:

- The exemptions would encourage competition based on the ULLS.
- ULLS based competition in retail markets is superior to resale based competition.
- The exemptions are consistent with the ‘ladder of investment’ theory.

⁶⁷² Macquarie Telecom submission, p. 3.

⁶⁷³ Macquarie Telecom submission, p. 5.

⁶⁷⁴ Macquarie Telecom submission, p. 15.

⁶⁷⁵ Macquarie Telecom submission, p. 14.

⁶⁷⁶ Macquarie Telecom submission, pp. 14-15.

⁶⁷⁷ Macquarie Telecom submission, p. 7.

⁶⁷⁸ Herbert Geer submission, p. 1.

⁶⁷⁹ Herbert Geer submission, p. 5.

Herbert Geer stated that these underlying justifications are problematic.⁶⁸⁰

C.6.4 Market definition

Herbert Geer submitted that there are separate wholesale and retail markets for voice services and bundled voice/broadband services.⁶⁸¹

C.6.5 Barriers to entry

Herbert Geer submitted that, in the absence of a competitive wholesale market, Telstra could prevent new entry to retail market by raising the price of WLR, thereby making it impossible for new entrants using the WLR to compete with Telstra and ULLS-based access seekers.⁶⁸²

C.6.6 State of competition

Herbert Geer submitted that Telstra will be unconstrained in the wholesale markets for voice and bundled voice/broadband services in the ‘future with’ the exemptions.⁶⁸³

Herbert Geer submitted that the availability of regulated access to both ULLS and WLR services promotes greater competition, and provides greater consumer choice, than access to only the ULLS.⁶⁸⁴

Herbert Geer provided a supplementary submission from Simon Hackett of Internode which described an example of how lower service standards for the ULLS, compared to the WLR, could inhibit competition in supplying retail services to certain segments of the market by ULLS-based access seekers.⁶⁸⁵

C.6.7 Industry certainty and regulatory burden

Herbert Geer submitted that the exemptions increase regulatory uncertainty because the exemption footprint may increase every six months.⁶⁸⁶

Herbert Geer stated that the exemptions increase the regulatory burden as the ACCC is required to monitor the scope of the exemption footprint and, although not compelled to, Telstra and the access seekers collect and provide data to the ACCC regarding service numbers and DSLAM capacity.⁶⁸⁷

C.6.8 Impact of NBN

Herbert Geer submitted that:

While ... the NBN has not yet totally extinguished every conceivable business case for continued investments in ULLS based infrastructure, there will come a point when all ULLS based infrastructure investment is no longer viable due to the fact that NBN will make ULLS based infrastructure obsolete.⁶⁸⁸

⁶⁸⁰ Herbert Geer submission, pp. 1-3.

⁶⁸¹ Herbert Geer submission, p. 5.

⁶⁸² Herbert Geer submission, pp. 4-5.

⁶⁸³ Herbert Geer submission, p. 5.

⁶⁸⁴ Herbert Geer submission, p. 3.

⁶⁸⁵ Herbert Geer supplementary submission.

⁶⁸⁶ Herbert Geer submission, p. 5.

⁶⁸⁷ Herbert Geer submission, pp. 4-5.

⁶⁸⁸ Herbert Geer submission, p. 2.

Herbert Geer stated that the ACCC is required to take a long term view and the negative impact of the NBN roll-out on the viability of DSLAM investments must be given sufficient weight.⁶⁸⁹ It stated the NBN will have a major impact on determining when it ceases to be efficient to invest in new ULLS based infrastructure in any given case.⁶⁹⁰

Herbert Geer submitted that the exemptions create a risk that access seekers may be forced into inefficient investment in ULLS based infrastructure, despite the NBN roll-out making these investments redundant.

C.7 Competitive Carriers' Coalition submission

C.7.1 Position on exemption provisions

The Competitive Carriers' Coalition (CCC) submitted that the ACCC should remove the exemptions at the earliest opportunity.⁶⁹¹

The CCC submitted that there has been serious harm to the interests of competitors as a result of Telstra's ability to use the exemptions to increase prices above the ACCC's price determinations for services that competitors have no choice but to acquire.

C.7.2 Assessment framework

The CCC did not make a specific submission regarding the proposed assessment framework for the inquiry.

C.7.3 Rationale for the exemptions

The CCC stated that it is 'concerned that there has been a continual shifting of the goal posts by the ACCC as to the intentions of the exemptions and the conditions that would justify them.'⁶⁹² The CCC submitted that:

... while the ACCC is entitled to have new objectives on which it can rely to maintain and potentially extend the exemptions, the objective of stimulating investment by access seekers for self-supply only is ... doomed to fail.⁶⁹³

C.7.4 Market definition

The CCC submitted that there is a separate market for fixed line voice-only services.⁶⁹⁴

C.7.5 Barriers to entry

The CCC stated that its members do not plan to make investments in voice capabilities to provide alternatives to the WLR, PSTN OA and LCS services because:

- retail margins are too low

⁶⁸⁹ Herbert Geer submission, p. 2.

⁶⁹⁰ Herbert Geer submission, p. 5.

⁶⁹¹ CCC submission, p. 1.

⁶⁹² CCC submission, p. 1.

⁶⁹³ CCC submission, p. 2.

⁶⁹⁴ CCC submission, p. 1.

- the alternative services would be unable to provide a substitute to the Telstra services because of the different supply conditions and availability pertaining to the underlying ULLS, and
- the uncertainty caused by both the potential for exchanges to become capped and the transition to the NBN makes payback too unpredictable.⁶⁹⁵

C.7.6 State of competition

The CCC submitted that Telstra remains the dominant supplier of resale services in all markets relevant to the inquiry.⁶⁹⁶ It submitted that competition for fixed line services (or resale services) is not effective in any geographic area.⁶⁹⁷

The CCC stated that there is no realistic prospect of new sources of fixed line voice services emerging that would have any material impact on Telstra's market power in the supply of resale services.⁶⁹⁸

C.7.7 Industry certainty and regulatory burden

The CCC did not make a specific submission on the impact of the exemptions on industry certainty and the regulatory burden.

C.7.8 Impact of NBN

The CCC submission questioned why anyone would invest in copper infrastructure when industry is moving to the NBN, even if a business case could be made for such investment.⁶⁹⁹

The CCC submitted that Telstra retains market power in an environment where the transition to the NBN creates a powerful incentive for it to exploit its market power.⁷⁰⁰ The CCC also stated that it is clear that Telstra has a strategy to retain its fixed line customer base with a view to migrating customer to the NBN and at the same time weaken the position of competing retail service providers.⁷⁰¹

C.8 Frontier Economics submission (on behalf of AAPT, Macquarie Telecom, and Optus)

Frontier Economics was commissioned by Macquarie Telecom, AAPT and Optus to prepare a response to Telstra's submission to the issues paper. Frontier Economics was asked to assess if Telstra or its experts provided new evidence or information on the ladder of investment theory and if Telstra and its experts overlooked any relevant information that would assist the ACCC in its exemptions variation inquiry.

⁶⁹⁵ CCC submission, pp. 2-3.

⁶⁹⁶ CCC submission, p. 1.

⁶⁹⁷ CCC submission, p. 1.

⁶⁹⁸ CCC submission, p. 1.

⁶⁹⁹ CCC submission, p. 1.

⁷⁰⁰ CCC submission, p. 1.

⁷⁰¹ CCC submission, p. 1.

C.8.1 Position on exemption provisions

Frontier Economics submitted that the exemptions are likely to hinder, rather than promote, competition in the relevant downstream retail voice market.⁷⁰²

C.8.2 Assessment framework

Frontier Economics did not make any specific submissions on the proposed assessment framework.

C.8.3 Rationale for the exemptions

Frontier Economics submitted that Professor Cave's claims that prices in exempt areas have not been raised by Telstra is incorrect. The WLR prices charged to Macquarie Telecom and AAPT have increased, in part due to the withdrawal of previous rebates.

Frontier Economics submitted that Professor Cave's analysis of European regulators' exemptions policies relates to Wholesale Broadband Access rather than to wholesale voice services. Frontier Economics further submitted that nearly all other European regulators still regulate the equivalent WLR (narrowband) services.⁷⁰³ It referred to a recommendation by the European Commission that countries that do not regulate WLR should reconsider their decision.⁷⁰⁴

C.8.4 Market definition

Frontier Economics submitted that voice-only services are distinct from bundled services. Regulation of the ULLS has benefited retail customers who purchase a bundle of ADSL and fixed line voice services. Serving retail consumers of voice-only services still requires the purchase of WLR, LCS and PSTN OA services.⁷⁰⁵

Frontier Economics further submitted that the voice market is still significant. It stated that, based on Telstra data, the number of voice-only services in the 380 Attachment A ESAs could be between [c-i-c] [c-i-c]

In relation to the substitutability of VoIP services, Frontier Economics submitted that Telstra's submission overlooked small to medium enterprises (SMEs).⁷⁰⁶ Some of these businesses require a fixed voice line for services such as EFTPOS, fax machines and alarms. For these services VoIP is not a suitable substitute.⁷⁰⁷

Even when VoIP is a technical substitute for PSTN voice, it may not be an economic substitute. Frontier Economics submitted that there does not seem to be any evidence of retail supply of stand-alone VoIP. Frontier Economics submitted that it is likely to be economic only to supply both voice and data services using the ULLS.⁷⁰⁸

Frontier Economics stated that retail purchases of bundled voice and broadband services indicates that many end-users still place value on receiving a traditional

⁷⁰² Frontier submission, p. 21.

⁷⁰³ Frontier submission, p. 15

⁷⁰⁴ Frontier submission, p. 17.

⁷⁰⁵ Frontier submission, p. 10.

⁷⁰⁶ Frontier submission, p. 11.

⁷⁰⁷ Frontier submission, p. 11.

⁷⁰⁸ Frontier submission, p. 13.

PSTN voice service.⁷⁰⁹ In addition, Frontier Economics submitted that Telstra requires a customer to purchase a PSTN voice service in order to obtain a Telstra fixed line broadband service. Since they are required to take a PSTN voice service, they are unlikely to gain value from substituting a VoIP service for the PSTN voice service.⁷¹⁰

C.8.5 Barriers to entry

Frontier Economics submitted on barriers to entry in its June 2011 submission. It stated then that the three main reasons why switching to ULLS-based supply was implausible were:

- New entry is uneconomic, given the scale of existing entry and customer distribution in existing exemption areas.
- Suppliers of services using ULLS will not find it economic to supply wholesale or retail voice-only services
- The NBN creates a substantial risk that new investments will become stranded before a reasonable return has been recovered.⁷¹¹

Frontier Economics further noted that Telstra has reportedly stated that the ‘average payback time for new DSLAMs... was four to five years’.⁷¹² Frontier Economics stated that the payback period would be longer if voice-only services were provided because these services provide only around half the revenue per line that can be obtained compared with the supply of both broadband and voice services.⁷¹³

C.8.6 State of competition

Frontier Economics submitted that it did not agree with Professor Cave’s views on the effectiveness of indirect competition from retail markets on the wholesale market for resale services.⁷¹⁴ Frontier Economics submitted that the benefits to Telstra from raising wholesale WLR/LCS prices seem to outweigh the wholesale revenue lost as a result of resale customers switching to self-supply or supply of resale services by ULLS-based access seekers.⁷¹⁵

The ineffectiveness of indirect constraints is demonstrated by Telstra’s ability to charge a higher price for business WLR than residential WLR although the ACCC has set a single price for WLR in non-exempt areas.⁷¹⁶

Consumers that wish to purchase voice-only services remain dependent on Telstra access seekers that acquire WLR, LCS and PSTN OA services.⁷¹⁷

⁷⁰⁹ Frontier submission, p. 14.

⁷¹⁰ Frontier submission, p. 14.

⁷¹¹ Frontier submission, p. 14.

⁷¹² Frontier submission, p. 21

⁷¹³ Frontier submission, p. 21

⁷¹⁴ Frontier submission, p. 12.

⁷¹⁵ Frontier submission, p. 13.

⁷¹⁶ Frontier submission, p. 13.

⁷¹⁷ Frontier submission, p. 10.

C.8.7 Industry certainty and regulatory burden

Frontier Economics did not make a specific submission on the impact of the exemptions on industry certainty and the regulatory burden.

C.8.8 Impact of NBN

Frontier Economics submitted that Telstra's claims that DSLAM investment is not being negatively affected by the deployment of the NBN are based on out-of-date, backward-looking evidence. Further, Frontier Economics submitted that even if some further DSLAM investments occur, there is no evidence that any access seekers have, or will, invest to supply services to voice-only wholesale or retail customers.⁷¹⁸

C.9 ACN Pacific submission

ACN Pacific submitted that the exemptions have a materially adverse impact on competition in retail markets, and in particular, on smaller service providers.⁷¹⁹

It submitted that retail prices are higher than they would otherwise be if there were no exempt ESAs. In addition, it stated that there has been 'no discernible effect on product range or quality of service'. Thus, the overall impact on end-users has been negative.⁷²⁰

ACN Pacific stated that wholesale markets for resale products, particularly WLR, are uncompetitive. It stated that Telstra is the only viable supplier and has demonstrated that it can and will raise prices in exempt ESAs relative to prices in non-exempt ESAs.⁷²¹

⁷¹⁸ Frontier submission, p. 20.

⁷¹⁹ ACN submission, p. 1.

⁷²⁰ ACN submission, p. 1.

⁷²¹ ACN submission, p. 1.

Appendix D: Summary of resubmitted Telstra submissions

In response to the issues paper, Telstra resubmitted a large number of documents. Telstra provided these documents to the ACCC on three CDs. The documents resubmitted by Telstra are:

- Attachment A – Telstra’s submissions dated 3 June 2011 and annexures
- Attachment B – Telstra’s submissions dated 15 July 2011 and annexures
- Attachment C – Telstra’s letter to the ACCC dated 2 September 2011 in response to the ACCC’s request for market information
- Attachment D – all other previous submissions and evidence made in the WLR/LCS exemptions application process
- Attachment E – all other previous submissions and evidence made in the PSTN OA exemptions application process.

Telstra has stated in its 17 October 2011 letter to the ACCC that it is relying on all these documents in its submission to the issues paper.

This appendix summarises the information provided in these documents under the following sections: barriers to entry, market definition, indirect constraints from retail level competition, incentives on vertically integrated firms and strength of competition.

D.1 Barriers to entry

Telstra has previously provided information relating to the barriers to entry via self-supply, including the costs of installing DSLAMs and obtaining access to infrastructure.

D.1.1 DSLAM cost

Telstra submitted that there are no material barriers to competitor entry and expansion using DSLAM-based infrastructure for the following reasons:⁷²²

- Entrants do not face materially higher sunk costs than Telstra in relation to investments in DSLAMs, for the following reasons:
 - DSLAMs have short asset lives
 - DSLAMs can be redeployed
 - the cost of DSLAMs form a relatively small part of total costs
 - access to switching and transmission infrastructure can be purchased from a range of network operators such as Optus, Primus, AAPT, Soul and Telstra
 - advertising and marketing costs are minimal as wholesalers can readily identify and directly approach their potential customers.

⁷²² Telstra, *Telstra’s PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, p. 41.

- Entrants do not face materially higher minimum efficient scale barriers than Telstra, in investing in DSLAMs, as long as they have access to financing.⁷²³
- There are no technical constraints on DSLAM-based competitors providing a standard telephone service (STS) of an equivalent quality to Telstra's STS.
- Entrants do not face materially higher backhaul transmission costs than Telstra, in relation to investment in DSLAMs. This is because the backhaul transmission market is mature and new entrants are able to purchase backhaul transmission from a number of providers.
- Non-price impediments to DSLAM-based entry and expansion do not pose material barriers to competitors. Telstra would potentially breach the CCA, standard access obligations and Operational Separation Requirements if it were to impose any impediments through non-price conduct (e.g. providing a lower quality service than that provided to itself or intentionally delaying the provision of the service).

Telstra stated that the number of DSLAM-based operators can grow within an ESA once the initial conditions for deployment of a single non-Telstra DSLAM are met.⁷²⁴ It stated that the presence of a single DSLAM-based network operator in an ESA proves there are no material barriers to entry and provides a sufficient competitive constraint on its PSTN OA, WLR and LCS products.⁷²⁵

Telstra submitted that Chime took a relatively short time to plan and built its DSLAM network. Chime built a national DSLAM-based network, spanning some 300 ESAs, in less than two years. Chime took no more than six months to build out its entire DSLAM-based network in any given state.⁷²⁶

Telstra further submitted that once a DSLAM investment has been made, the cost of connecting an extra customer is limited to connection costs.⁷²⁷

D.1.2 Estimates of DSLAM investment costs

In 2007, Telstra stated that the costs of DSLAM investment comprised⁷²⁸:

Equipment purchase costs

- \$30 per port for data-only equipment

⁷²³ Supporting data is provided in Paterson, *Report on the economic considerations for LCS and WLR exemptions - Annexure A to Telstra's Supporting Submission*, 9 July 2007, p. 33.

⁷²⁴ Telstra, *Telstra's PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, p. 23.

⁷²⁵ Telstra, *Telstra's PSTN Originating Access exemption applications – supporting submission*, 5 October 2007, p. 31; *Telstra's Local Carriage Service and Wholesale Line Rental exemption applications – supporting submission*, July 2007, p. 23.

⁷²⁶ Telstra, *Telstra's outline of submissions in reply*, 17 April 2009, p. 19.

⁷²⁷ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 19.

⁷²⁸ Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, pp. 29-30; *Telstra's written outline of submissions*, 3 April 2009, pp. 14–17; More detailed cost estimates are provided in Telstra, *Costs and revenues for the supply of ULLS and LSS, revised Annexure 1 to Telstra's PSTN Originating Access Exemption Applications – supporting submission*, undated, pp. 1-2.

- \$35 per port for voice and data capable equipment, rising to approximately \$60 per port where less than 25 services in operation (SIOs) are serviced.⁷²⁹

Installation costs

- \$2500 to install a 300 port DSLAM
- \$9000 to install a 1200 port DSLAM.⁷³⁰

Voice switching and transmission

- \$4.55 and \$4.74 per SIO per month for an access seeker providing ULLS-based services in Band 1 and Band 2 respectively.⁷³¹

Marketing and billing costs

- The ongoing cost of marketing broadband via ULLS is likely to be \$15.20 per SIO per month
- The voice transformation cost (including the avoidable retailing cost of the voice products and the network non-originating/terminating access cost) is likely to be \$12.39 per ULLS-based SIO per month
- Accordingly, the total cost of marketing and billing voice and data services is likely to be \$28 per ULLS-based SIO per month
- For LSS, the broadband on-going retail cost is likely to be \$15.20 per SIO per month.⁷³²

ULLS/LSS access charges and minimum efficient scale

At the time of Telstra's 2007 submission, the ULLS rental charge per SIO, per month was [c-i-c] [c-i-c] for Band 1 and [c-i-c] [c-i-c] for Band 2. The LSS rental charge per SIO, per month was \$3.20.^{733 734}

In the 2011 final access determinations for the fixed line services, the ACCC set a Band 1 to 3 price of \$16.21 per SIO, per month for the ULLS and a line rental charge of \$1.80 per SIO, per month for LSS.⁷³⁵

Tables D.1 and D.2 show Telstra's estimates of the total monthly cost per service in operation (SIO) for ULLS-based and LSS-based services respectively. Monthly costs vary according to the number of access seeker SIOs in the exchange and the band in which the exchange is located. Costs are higher when fewer customers are serviced in an exchange and when the exchange is located in a less densely populated band.

⁷²⁹ C Lordan, *Technical Feasibility of using ADSL Networks to Supply Voice Services that Replicate PSTN Services*, 30 October 2007, p. 9.

⁷³⁰ C Lordan, *Technical Feasibility of using ADSL Networks to Supply Voice Services that Replicate PSTN Services*, 30 October 2007, p. 11.

⁷³¹ Telstra, *Costs and revenues for the supply of ULLS and LSS, revised Annexure I to Telstra's PSTN Originating Access Exemption Applications – supporting submission*, undated.

⁷³² Telstra, *Costs and revenues for the supply of ULLS and LSS, revised Annexure I to Telstra's PSTN Originating Access Exemption Applications – supporting submission*, undated.

⁷³³ ACCC, *Review of the Line Sharing Service Declaration – Final Decision*, October 2007, p. 17.

⁷³⁴ Telstra, *Costs and revenues for the supply of ULLS and LSS, revised Annexure I to Telstra's PSTN Originating Access Exemption Applications – supporting submission*, undated.

⁷³⁵ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final Report*, July 2011, p. 8.

Table D.1: Telstra’s estimate of total costs per month for a ULLS-based SIO ⁷³⁶

	Band 1	Band 2	Band 3	Band 4
Number of SIOs in exchange	\$ per month	\$ per month	\$ per month	\$ per month
30 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
60 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
90 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Table D.2: Telstra’s estimate of total costs per month for an LSS-based SIO ⁷³⁷

	Band 1	Band 2	Band 3	Band 4
Number of SIOs in exchange	\$ per month	\$ per month	\$ per month	\$ per month
30 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
60 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
90 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
120 SIOs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Telstra estimated that revenue per month was [c-i-c] [c-i-c] for a ULLS-based SIO and [c-i-c] [c-i-c] for an LSS.-based SIO.

These cost and revenues estimates suggested that DSLAM deployment would be profitable when a competitor is able to service a minimum of [c-i-c] [c-i-c] ULLS-based SIOs or [c-i-c] [c-i-c] LSS-based SIOs within a given ESA. These numbers of SIOs represented the minimum efficient scale for DSLAM investments using the ULLS and LSS respectively.⁷³⁸

Telstra’s consultant, Dr Paterson, noted that Frontier Economics’ estimate of [c-i-c] [c-i-c] and Optus’ estimate of [c-i-c] [c-i-c] were higher than Telstra’s estimates of the minimum efficient scale. However, Dr Patterson considered that Frontier Economics’ and Optus’ estimates still fell short of an insurmountable barrier to entry. He noted that the number of SIOs in an exemption ESA ranged from 1,308 to 32,633 and the average number of SIOs was nearly 14,000. Consequently, even if the highest

⁷³⁶ Telstra, ‘Costs and revenues for the supply of ULLS and LSS’, revised Annexure I to Telstra’s *PSTN Originating Access Exemption Applications – supporting submission*, undated, and Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, p. 28.

⁷³⁷ Telstra, Costs and revenues for the supply of ULLS and LSS, revised Annexure I to Telstra’s *PSTN Originating Access Exemption Applications – supporting submission*, undated, and Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, p. 28.

⁷³⁸ Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, p. 27.

estimate of minimum efficient scale was accepted, an entrant would only need to capture less than [c-i-c] [c-i-c] of lines in an average sized ESA to justify entry.⁷³⁹

Dr Paterson further stated that there should be no distinction made between ULLS DSLAMs and LSS DSLAMs as the incremental cost of upgrade is small.⁷⁴⁰

Updated costs

Telstra's consultant, Mr Lordan, updated Telstra's cost estimates for equipment and installation. Lordan considered that a \$30 to \$35 cost per port is still valid. To reflect the increase in the cost of labour since October 2007, Lordan applied an 8.2 per cent increase to the cost of installation. The estimated price for a 300 port DSLAM/MSAN (multi-service access node) sub-rack is now between \$11,705 and \$13,705.⁷⁴¹

D.1.3 Pair gain systems

A pair gain system is an electronic device that enables several subscribers to share a single physical telephone line. An access-seeker is unable to supply an end-user with a ULLS-based service when there is a pair gain system at some point along the metallic path. The presence of a pair-gain system on a line creates a barrier to entry to ULLS-based supply of services on that line.

In May 2009, the Australian Competition Tribunal decided to impose a 'pair gain condition' on the exemption orders. As a result, the exemption orders would not apply where a line was affected by a pair gain system.

Telstra considered a pair gain condition unworkable, unnecessary and inappropriate. A 'pair gain condition' would be inconsistent with, and undermine, the WLR/LCS Exemption Orders and would likely lead to regulatory uncertainty and distortions. Telstra submitted that the required upgrades to billing systems would be even more complex and costly than they would have been in the WLR/LCS Proceeding. Telstra estimated that the work required for the implementation of a billing system would be at least two and a half times more expensive than the implementation cost as submitted in the WLR/LCS Proceeding. That is, at least \$5 million.⁷⁴²

While Telstra submitted that 'there is limited evidence on the magnitude of the costs relating to the implementation of a billing system to effect a pair gain condition',⁷⁴³ it maintained the required upgrades to billing systems would be complex and costly.⁷⁴⁴

⁷³⁹ P Patterson, 'Expert Report by Dr Paul Paterson of Concept Economics for Mallesons Stephen Jaques on the responses to the ACCC Discussion Paper 'Telstra's local carriage service and wholesale line rental exemption applications' August 2007, Attachment to *Telstra further submission - Response to ACCC information request dated 12 March 2008*, 30 April 2008, p. 14.

⁷⁴⁰ Expert Report by Dr Paul Paterson of CRA International for Mallesons Stephen Jaques on the ACCC Discussion Paper 'Telstra's domestic PSTN OA originating access service exemption applications' August 2007, December 2007, pp. 10-11

⁷⁴¹ Letter from Craig Lordan, Gravelroad Consulting to Neil Perl, Mallesons Stephen Jaques dated 30 May 2011, pp. 2-3.

⁷⁴² Telstra, *Telstra's Submissions in reply to Optus' Submissions on Pair Gains*, 7 September 2009, p. 9.

⁷⁴³ Telstra, *Telstra's Submissions in reply to Optus' Submissions on Pair Gains*, 7 September 2009, p. 4.

⁷⁴⁴ Telstra, *Telstra's Submissions in reply to Optus' Submissions on Pair Gains*, 7 September 2009, pp. 5-6.

Dr Paterson submitted that the deployment of RIMs/LPGS (remote integrated multiplexers/large pair gain systems) would not materially affect competitive conditions in exemption areas for the following reasons:

- In most cases, only a small number of customers are affected
- Exemption ESAs are defined by entrant DSLAM deployment. This demonstrates that scale has not been a prohibitive entry issue in any of these ESAs, even those with a relatively large proportion of customers serviced by RIMs/LPGS lines.⁷⁴⁵

In September 2009, the Australian Competition Tribunal reviewed and subsequently set aside its decision to impose a pair gain condition on the exemption orders. The Tribunal considered that Telstra had demonstrated that the imposition of such a condition would be overly complex and costly.⁷⁴⁶

In its submissions to the ACCC's 2011 inquiry into making FADs for the declared fixed line services, Telstra stated that the New Zealand Commerce Commission had proposed that there is no distinction between cabinetised and non-cabinetised lines which are akin to pair gain systems.⁷⁴⁷

Telstra noted that, as at the end of March 2011, approximately seven per cent of lines were affected by pair gain systems in the 380 Exemption ESAs.⁷⁴⁸

D.1.4 Capped exchanges

Telstra submitted that, as at 2 January 2008, a total of 506 Telstra exchanges were enabled as Telstra exchange building access (TEBA) sites. Of these 463 were not capped and 43 were on the January capped list. There were 33 other exchanges, which were not then TEBA sites, but were listed as being capped in some way.⁷⁴⁹

At that time, there was an average of five carriers in each TEBA enabled exchange utilising a total of eight equipment racks per site.

D.2 Market definition

In its previous submissions, Telstra stated that there are four types of markets: the product, geographic, temporal and functional markets.⁷⁵⁰

⁷⁴⁵ P Paterson, *Responses to the ACCC Discussion Paper 'Telstra's local carriage services and wholesale line rental exemptions applications'* August 2007, April 2008, p. 27.

⁷⁴⁶ Australian Competition Tribunal, *Application by AAPT Limited (No 2)* [2009] ACompT 9 (9 September 2009).

⁷⁴⁷ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 24.

⁷⁴⁸ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 24.

⁷⁴⁹ Powerpoint presentation by Telstra, TEBA and related exchange capacity issues, 17 January 2008.

⁷⁵⁰ Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, pp. 5-9; *Telstra submission – response to questions from ACCC discussion paper*, 1 November 2007.; P Paterson, 'Report on the economic considerations for LCS and WLR exemptions' Annexure A to *Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission* 9 July 2007, pp. 6-15.

D.2.1 Product market

Telstra agreed with the view expressed by the ACCC in its 2006 draft decision that, in the case of the LCS, there are no overwhelming efficiencies from vertical integration.⁷⁵¹ Therefore, it is appropriate to distinguish between wholesale and retail markets.⁷⁵²

Retail product market

Telstra submitted that ‘the relevant retail market includes the full bundle of fixed voice services: local, long-distance, international and fixed-to-mobile calls; it also potentially includes broadband services’.⁷⁵³

In regard to supply-side substitution, Telstra stated that barriers to substitution across call types were relatively low and that there was a trend of substituting PSTN-based voice services with VoIP services, which were experiencing substantial growth.

In regard to demand side substitution, Telstra submitted that fixed line consumers have an increasing preference for bundled products. This constrains a ‘hypothetical monopolist’ offering just one voice product from imposing a price increase as consumers could switch to bundled offerings, rendering the price increase unsustainable.

Telstra stated that there was likely to be a cluster market for a full bundle of retail fixed line voice services. It submitted that a cluster market for two (or more) products exists when there are strong demand and/or supply-side unbundling costs within the group of products, with the result that unbundled supply is not a close substitute for, or competitive constraint on, bundled supply.⁷⁵⁴

Telstra’s consultant, Dr Paterson, stated that customers’ unbundling costs may include the inconvenience of receiving multiple bills from splitting voice services between multiple providers and, more generally, having to deal with multiple providers.⁷⁵⁵ On the supply-side, unbundling costs may relate to the customer-specific economies of scope associated with billing, as well as customer acquisition and retention costs. Dr Paterson also stated that many underlying network costs are shared by one or more customers and do not change with call types and volumes. By pursuing economies of scope in retailing costs, retail service providers have a commercial incentive to sell as many fixed-voice products as possible.⁷⁵⁶

⁷⁵¹ Telstra, *Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission*, 9 July 2007, p. 58.

⁷⁵² Telstra, *Telstra submission - response to questions from ACCC discussion paper*, 1 November 2007, p. 16.

⁷⁵³ Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, p. 5.

⁷⁵⁴ P Paterson, ‘Report on the economic considerations for LCS and WLR exemptions’ Annexure A to *Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission* 9 July 2007, p. 10.

⁷⁵⁵ Paterson, Report on the economic considerations for LCS and WLR exemptions - Annexure A to Telstra’s Supporting Submission, 9 July 2007, p. 10.

⁷⁵⁶ Paterson, Economic Considerations for a PSTN Originating Access Exemption - Annexure A to Telstra’s PSTN Originating Access Exemption Applications – supporting submission’, 4 October 2007, pp. 8-10.

Wholesale product market

Telstra submitted that there is a relatively broad wholesale market, which includes at least the ULLS, Optus HFC network and other competing fixed line networks.

Retailers without their own network could consider a range of wholesale options from which to obtain the necessary input services. These included, in order of increasing sophistication: a full resale suite from Telstra; resale broadband to provide VoIP; LSS/ULLS, together with other inputs, to provide VoIP; ULLS, together with other inputs, to provide STS; and self-supply of all network facilities.⁷⁵⁷

D.2.2 Geographic markets

Metropolitan areas

Telstra considered an exchange-based approach was suitable. However, broader geographic markets could also be defined based on ESAs with similar competitive characteristics and possibilities for supply-side substitution.⁷⁵⁸

CBD areas

Telstra considered an exchange-based approach was suitable, but that a CBD-wide definition was also a possibility.

D.2.3 Temporal markets

Telstra considered that three years is a useful period within which the likely emergence of substitution possibilities may be assessed.

D.2.4 Functional markets

Telstra considered the exemption provisions should be based on discrete retail and wholesale markets.

Telstra submitted that there were two broad markets appropriate for assessing exemptions in respect of WLR/LCS:⁷⁵⁹

- downstream markets that encompass the supply of all fixed voice services and broadband data services
- upstream markets that encompass the supply of upstream inputs for the supply of fixed line voice services and potentially broadband and mobile services.

Downstream markets

The downstream market includes at least the full bundle of POTS or PSTN equivalent voice services (basic access, local calls, national long distance, international long distance and fixed-to-mobile calls) and potentially broadband, VoIP and mobile services.

⁷⁵⁷ Telstra, Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service, 14 December 2007, p. 7.

⁷⁵⁸ Telstra, Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service, 14 December 2007, p. 8.

⁷⁵⁹ Telstra, Telstra's Written Outline of Submissions, 3 November 2008, pp. 10-12.

Upstream markets

The upstream market includes the WLR/LCS, as well as a range of other means of providing equivalent services, that is, a full resale suite from Telstra; resale broadband to provide VoIP; LSS/ULLS, together with other inputs, to provide VoIP; ULLS, together with other inputs, to provide STS; and self-supply of all network facilities.

D.2.5 Alternative networks

Telstra submitted that a variety of competing networks constrained the pricing and supply of its PSTN OA service. These include: fibre-based networks; fixed wireless networks; HFC networks; mobile networks; and satellite. Professor Cave considered microwave links were also a substitute.⁷⁶⁰

Telstra submitted that several operators offered substitutes to the wholesale PSTN OA service. For example, Optus offered wholesale access and local calling products throughout its DSLAM-based ULLS network in direct competition with Telstra's PSTN offerings. AAPT, Powertel, Nextep and Optus offered a range of wholesale products on their own DSLAM-based networks across Australia.

These products enabled resellers to provide high speed broadband services, access services and fixed voice services (using VoIP) which were competitive substitutes to retail products. Telstra also stated that mobile substitution for fixed voice calls was a growing trend. Therefore, mobile networks would increasingly provide a constraint on the price of fixed voice services.⁷⁶¹

VoIP

Telstra submitted that VoIP telephony products were increasingly being offered as fully featured substitutes to traditional PSTN telephony. It was estimated that there was more than 260 VoIP providers throughout Australia. The figure of almost 100,000 VoIP services in operation was predicted to climb to more than 2.8 million services by 2011.⁷⁶²

Dr Paterson distinguished between carrier-grade and application-layer VoIP. It was submitted that, given the likelihood of demand-side substitution, carrier-grade VoIP should be considered in the relevant market. Conversely, because application-layer VoIP requires a particular handset or software installed on a computer, it was not a strong substitute.⁷⁶³

⁷⁶⁰ Statement by Professor Martin Cave of Warwick Business School, University of Warwick, UK for Mallesons Stephen Jaques on Infrastructure Investment Consideration in relation to Telstra's Request for a PSTN Originating Access (OA) exemption, Attachment to *Telstra further submission - Response to ACCC information request dated 12 March 2008*, p. 6.

⁷⁶¹ Telstra, *Telstra's PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, p. 39.

⁷⁶² Telstra, *Telstra's PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, p. 36.

⁷⁶³ Paterson Telstra's PSTN originating access service exemption applications - Annexure 1 to Telstra submission to the ACCC – PSTN OA Exemption applications response to ACCC Draft Decision', 26 September 2008, p. 6.

Mobile networks

Telstra submitted that mobile calls were increasingly a substitute for fixed voice telephony services and provided data on fixed-to-mobile substitution.⁷⁶⁴

Other issues

Telstra submitted that the current state of competition in downstream markets was of little relevance. Rather, the fundamental point was that barriers to entry, in relation to quasi-facilities and facilities-based supply, are surmountable such that there are viable substitutes in the upstream market.⁷⁶⁵

Telstra stated that WLR and LCS no longer constituted the kind of ‘enduring bottleneck’ to which the declared access provisions of Part XIC were originally intended to apply.⁷⁶⁶

D.3 Indirect constraints from retail level competition

Telstra submitted that the presence of only one alternative DSLAM-based network would act as a competitive constraint on Telstra.⁷⁶⁷ Telstra further submitted that the economics of DSLAM-based infrastructure were such that there were no material barriers to entry and expansion of competition in the exemption areas. Almost every ESA in the exemption areas contained multiple alternative infrastructure networks.

Telstra’s consultant, Dr Paterson, submitted that if the retail price were to fall, this would reduce the percentage of viable ULLS-based voice-only customers available to Telstra’s competitors. The reduction in viability would reflect an increase in competitive constraints.⁷⁶⁸

D.4 Incentives of vertically integrated firms

On the basis of information provided by Dr Paterson, Telstra submitted that for a vertically integrated firm to be able to leverage a competitive advantage in a downstream market, it must have substantial market power over the supply of inputs necessary for downstream rivals to compete.

Dr Paterson considered that the vertically integrated firm would not be able to engage in such behaviour where the upstream market was competitive. If any one of the upstream firms attempted to foreclose the wholesale market, the downstream operators were likely to migrate to an alternative supplier.⁷⁶⁹

⁷⁶⁴ Telstra, Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service, 14 December 2007, pp. 24-25.

⁷⁶⁵ Telstra, Telstra’s outline of submissions in reply, 17 April 2009, p. 6.

⁷⁶⁶ Telstra, Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission, 12 October 2007, p. 2.

⁷⁶⁷ Telstra, Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission, 9 July 2007, p. 23.

⁷⁶⁸ Paterson, Report on the economic considerations for LCS and WLR exemptions - Annexure A to Telstra’s Supporting Submission, , 9 July 2007, pp. 45-46.

⁷⁶⁹ P Paterson, ‘Economic Considerations for a PSTN Originating Access Exemption’, Annexure A to *Telstra’s PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, pp. 50-51.

Telstra submitted that it did not have sufficient market power to leverage any competitive advantage in downstream markets. This was because facilities-based competition in the exemption areas was strong and there were no barriers to entry.⁷⁷⁰

Telstra submitted that there was adequate protection against anti-competitive vertical pricing behaviours in the Australian telecommunications sector. This included:

- regulatory monitoring of margins between Telstra's retail and wholesale prices
- legal risks to Telstra of 'price squeeze' behaviour and

the operational separation aspect of the telecommunications regulatory regime.⁷⁷¹

D.5 Strength of competition

Telstra's consultant, Dr Paterson, submitted that the retail market was workably competitive based the following evidence:

- Telstra's loss of market share
- increasing substitution to alternative technologies (mobile voice, VoIP, SMS, email)
- low retail switching costs
- significant churn away from Telstra in retail fixed voice and broadband services.⁷⁷²

Dr Paterson submitted that facilities-based competition is the form of competition that best promotes efficiency because it allows for greater innovation and more robust price competition. He stated that access regulation dampens efficient levels of infrastructure investment by truncating investment returns and creating the potential for arbitrage and regulatory dependence. He considered competition was a better stimulant for efficient investment than access regulation.⁷⁷³

He submitted that the markets in which the LCS and WLR were supplied were contestable and workably competitive, as evidenced by: changes in market shares; the existence of viable substitution possibilities; and the lack of meaningful barriers to entry.⁷⁷⁴

In its 2011 submission, Telstra stated that its retail market share in the currently exempt ESAs was lower than across the CAN as a whole. From September 2007 to March 2011, Telstra's market share in exempt ESAs declined by [c-i-c] [c-i-c].⁷⁷⁵

⁷⁷⁰ Telstra, *Telstra's PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, p. 45.

⁷⁷¹ Telstra, *Telstra Response to Questions from ACCC Discussion Paper of October 2007 in respect of the PSTN Originating Access Service*, 14 December 2007, p. 38.

⁷⁷² P Paterson, 'Economic Considerations for a PSTN Originating Access Exemption', Annexure A to *Telstra's PSTN Originating Access Exemption Applications – supporting submission*, 5 October 2007, pp. 102-11.

⁷⁷³ P Paterson, 'Report on the economic considerations for LCS and WLR exemptions', Annexure A to *Telstra's Supporting Submission*, 9 July 2007, pp. 47-57.

⁷⁷⁴ Telstra, *Telstra submission - response to questions from ACCC discussion paper*, 1 November 2007, p. 24.

⁷⁷⁵ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 8.

Telstra submitted that customers have benefitted from increased DSLAM-based competition. Since September 2007, the prices paid by end-users for voice-only and bundled plans have decreased.⁷⁷⁶

Telstra submitted that in the wholesale market there are a number of competitors offering wholesale services in exempt ESAs. Telstra's consultant, Mr Sundakov, submitted that substantial self supply of WLR by DSLAM-based operators is evidence that the current prices are competitive. Therefore, it is not attractive for ULLS acquirers to wholesale line rental and local calls to other suppliers.⁷⁷⁷

Telstra submitted that the corporate and government customer market is highly competitive. Whole-of-business supply by an access seeker is not threatened by having to purchase WLR because fixed line voice services constitute a small proportion of the services supplied to these customers. Telstra stated that it intends to continue to supply LCS, WLR and PSTN OA services in exempt areas.⁷⁷⁸

⁷⁷⁶ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 11.

⁷⁷⁷ A Sundakov, *On-going exemption from access regulation for WLR, LCS and PSTN-OA services where workable infrastructure competition exists*, Schedule 1 to Telstra's response to Access Seekers' submissions regarding the public inquiry to make final access determinations for fixed line services, July 2011, p. 11.

⁷⁷⁸ Telstra, *Telstra's response to access seekers' submissions regarding the public inquiry to make final access determinations for the declared fixed line services*, July 2011, p. 21.

Appendix E: Summary of resubmitted Optus submissions

This appendix summarises the exemptions-related documents that were resubmitted by Optus on 22 June 2011. These documents include specified attachments from the September 2008 PSTN OA and WLR/LCS exemptions decisions that Optus requested the ACCC have regard to in its current inquiry.

E.1 Barriers to entry

E.1.1 Long distance market

Optus submitted that the barriers to entry in the long distance market were quite low. Pre-selection, the availability of wholesale transmission and switch-less interconnection meant that new entry is relatively low cost. As a result, there were a large number of competitive telecommunications companies providing long distance services.⁷⁷⁹

Optus submitted that the ACCC's draft decision on Telstra's PSTN OA exemption applications did not take adequate account of investments that were made in reliance upon the availability of regulated access to preselected long distance telecommunication services by carriage service providers and by their customers. The proposed exemption was likely to reduce the efficient use of these investments and deter future investments for these services.⁷⁸⁰

E.1.2 DSLAM infrastructure

Optus submitted that entry into the market for provision of bundled telecommunications services would involve significant investment in DSLAM infrastructure and other business costs not required for competition in the long distance market. Optus estimated that the minimum efficient scale required for DSLAM based entry by a competitor was around [c-i-c] [c-i-c] SIOs. Capacity constraints and other issues also impeded entry into the market as a ULLS provider.⁷⁸¹

Optus submitted that Telstra's analysis understated the minimum efficient scale because it appeared to:

- overstate the average revenue per customer. Optus stated that Telstra's assumptions were not supported by the results of its own imputation test reports.
- understate the costs associated with supporting ULLS-based supply, particularly the costs associated with the back-end support systems.

⁷⁷⁹ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 8.

⁷⁸⁰ Optus, *Confidential Submission to the ACCC in response to its Draft Decision on Telstra's PSTN OA Exemption Applications*, September 2008, p. 22.

⁷⁸¹ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 8.

- overstate customer tenure and the life of the asset.⁷⁸²

Optus submitted that a number of actual or potential issues could limit or adversely impact access seekers' use of ULLS. Optus stated that:

- There were ongoing regulatory and legal proceedings in relation to ULLS access and pricing.
- Access disputes could limit access seekers ability to compete with ULLS based services.
- Lines with pair gains systems or a RIM between the exchange and the customer premise are not serviceable via the ULLS.
- Limitations on access to space within exchanges can prevent the deployment of DSLAM equipment.
- Telstra had announced plans to upgrade or augment its network in ways that could prevent access to the ULLS.⁷⁸³

E.1.3 Payback period

Optus submitted that an efficient access seeker would require longer than two years to make a return on its investment. It stated that while an efficient access seeker could make a return, on an incremental investment in DSLAM equipment in an individual exchange, within two to three years, this was not the relevant question.

Optus submitted that the costs of switching to DSLAMs were more than the costs of the electronics in an exchange. It stated that, even if backhaul could be leased, new provisioning systems and network management systems would still be required.

Optus' payback period for its own consumer DSLAM rollout in its entirety was [c-i-c] [c-i-c].⁷⁸⁴

Optus stated that it was unlikely that any access seeker contemplating making an investment, as a result of the exemption application, would have sufficient time to recoup their investment before that investment was stranded by the deployment of fibre.⁷⁸⁵

E.1.4 Complex features

Optus stated that the investments required to enable complex features on its own network were very costly. Relevant costs included software and hardware costs, licensing fees paid to the switch vendor, development costs and changes to billing and IT provisioning systems.

Optus submitted that the 2004-2006 BNP Enhancement project introduced four new features and cost [c-i-c] [c-i-c]. The revenue-generating phase of the project took [c-i-c] [c-i-c] to complete. The expected payback period for the project was [c-i-c] [c-i-c].

⁷⁸² Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 32.

⁷⁸³ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 21.

⁷⁸⁴ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 15.

⁷⁸⁵ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 15.

As some features were already available for some Optus projects, Optus considered the BNP Enhancement project to have been a relatively simple project.⁷⁸⁶

Optus gave details on the migration of [c-i-c] [c-i-c] as an example of a typical migration of a corporate customer to a new platform.⁷⁸⁷

E.2 Market definition

E.2.1 Modes of infrastructure based competition

Optus submitted that, to be considered a viable mode of infrastructure-based competition, an alternative to Telstra's resale services must:

- allow an access seeker to provide its customers with the relevant services via fixed line voice telephony
- address the competitive impact of the exemption application at both the wholesale and retail level, and
- allow service provision to all customers in each exchange area via fixed line voice telephony.⁷⁸⁸

E.2.2 Corporate and government

Optus submitted that either a separate retail market can be defined for the provision of services to corporate and government customers or there is a very significant market segment, made up of corporate and government customers with particular service requirements, that is distinct from the mass market.

Optus submitted that in the product dimension, corporate and government customers typically require distinct services delivered using specialised technologies. Mass market offerings are not substitutable for those services.⁷⁸⁹

The boundaries of a market may be defined using the 'hypothetical monopolist' test, which employs a SSNIP analysis to investigate substitution possibilities.

Optus further submitted that if the monopolist chose to implement a SSNIP, that SSNIP could not be defeated by potential competitors operating in the mass market. This was because complex features are provided using specialised technologies which are not required for mass market service provision.⁷⁹⁰

E.3 Incentives of vertically integrated firms

Optus submitted that the availability of ULLS within the ACCC's exemption footprint did not provide an adequate substitute for the WLR service in the corporate and government market. In the event the exemptions were granted, Optus considered that

⁷⁸⁶ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 18.

⁷⁸⁷ Optus, *Appendix C: Evidence Relating to Corporate and Government Customers*, December 2007

⁷⁸⁸ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 13.

⁷⁸⁹ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 34

⁷⁹⁰ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 35.

Telstra would be free from competitive constraint when pricing WLR and LCS services for carriage service providers supplying services to corporate and government customers. The exemptions would allow Telstra to grow its market share at the expense of its competitors through a refusal to supply the affected services. Optus submitted that Telstra would entrench its dominant position in fixed line telecommunications as the new NBN environment approached.⁷⁹¹

E.4 Incentives of a fibre to the node (FTTN) operator

Optus submitted that the ESAs within the ACCC's exemption footprint were those most commercially attractive to telecommunications providers. This was due to the size of the addressable market and the number of existing ULLS competitors. These ESAs would be the most attractive to the FTTN operator for the same reason.⁷⁹²

Optus further submitted that ULLS-based competition, compared to resale competition, has a substantial negative impact on Telstra's profits since ULLS prices are based on cost, rather than on what the market will bear. Optus submitted that this gave Telstra an incentive to eliminate ULLS-based competition. If Telstra was the preferred FTTN operator, Optus stated that it was likely to prioritise FTTN rollout to the ESAs where there was most ULLS-based competition.⁷⁹³

E.5 Impact on competition

Optus submitted that the PSTN OA exemptions would restrict competition to a smaller number of DSLAM infrastructure suppliers and restrict the ability of pure long distance operators to participate in the market. Optus submitted that granting the PSTN OA exemptions would reduce the efficient use of the existing long distance network and switching infrastructure.⁷⁹⁴

Optus submitted that given constraints on ULLS based access and the limitations of other options, it was concerned about whether infrastructure-based competition was sufficient to ensure that the retail market for the bundle of telecommunications services, including line rental and long distance services, was sufficiently contestable and workably competitive. Optus submitted that the ULLS is potentially a viable mode of competition, subject to caveats. However, the LSS and alternative technologies, such as HFC and mobile, are subject to limitations that render them unable to exert an effective competitive constraint on Telstra's pricing.⁷⁹⁵

Optus submitted that resellers exert competitive pricing pressure at the margin which extends beyond the number of customers they supply. Optus further submitted that resellers supply a large number of end-users. The total number of end-users supplied

⁷⁹¹ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 24.

⁷⁹² Optus, *Response to Draft Decision on PSTN OA Exemptions*, Appendix A: Likely Timing of NBN Fibre Roll-out to ACCC's ESA Footprint, June 2008, p. 2.

⁷⁹³ Optus, *Response to Draft Decision on PSTN OA Exemptions*, Appendix A: Likely Timing of NBN Fibre Roll-out to ACCC's ESA Footprint, June 2008, p. 3.

⁷⁹⁴ Optus, *Confidential Submission to the ACCC in response to its Draft Decision on Telstra's PSTN OA Exemption Applications*, September 2008, p. 22.

⁷⁹⁵ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 3.

with long distance services via Optus Wholesale was [c-i-c] [c-i-c], the majority of which are located in [c-i-c] [c-i-c].⁷⁹⁶

Where ULLS-based competition was insufficient to constrain Telstra, the PSTN OA would remain an enduring bottleneck because it is essential to providing services to end-users in downstream markets.

Optus submitted that it was already investing in IP-based technologies, independent of Telstra's exemption application. Despite this, high switching costs would prevent existing customers from making the transition to IP for some years since their systems were configured for legacy technologies.

Optus submitted that the migration must therefore be gradual. It stated that it required access to Telstra's legacy network during the migration period. If there were exemptions, Optus would have to invest in old technology or lose customers who are unable to migrate rapidly to IP. This would reduce the viability of Optus' investment in IP. Consequently, Optus considered that the exemptions would impede, rather than drive, investment in new technology.⁷⁹⁷

E.5.1 Impact on competition in long distance services

Optus submitted that the PSTN OA service plays a role in promoting competition in long distance telecommunications services (including international services). If the requested exemption was granted, infrastructure-based competitors could not entirely substitute for that role.⁷⁹⁸ In the context of a stand-alone market for long distance services, the relevant bottleneck infrastructure is the individual customer's line.

Optus submitted that ULLS is potentially a viable mode of competition, subject to caveats. However, the LSS and alternative technologies such as HFC and mobile are each subject to limitations and so could not exert an effective competitive constraint on Telstra's pricing.

E.5.2 Competition in the mass market

Optus stated that the limitations on the exemption, as imposed by the ACCC, would not do much to mitigate the exemption's impact on competition in the mass market. Optus considered that removing regulated access to LCS and WLR would not encourage access seekers to invest in their own infrastructure. This is because the imminent deployment of NBN would promptly strand any such investment.

Optus submitted that a refusal to supply by Telstra would result in some access seekers being unable to compete in the mass market in at least some ESAs. [c-i-c] [c-i-c]⁷⁹⁹

⁷⁹⁶ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 7.

⁷⁹⁷ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 4.

⁷⁹⁸ Optus, *Submission to the ACCC on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 3.

⁷⁹⁹ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 28.

E.5.3 Competition in the corporate and government market

Optus submitted that granting the exemptions would likely weaken competition in the corporate and government market and entrench Telstra's dominance leading into the new NBN environment. The exemptions would not provide a competitive constraint on Telstra and prevent it raising the price of WLR and LCS used to supply corporate and business customers.⁸⁰⁰

Optus submitted that the revenue it received from managed services contracts with large corporate and government customers that are supplied using WLR and LCS was substantial. If the services were deregulated and Telstra stopped supplying, Optus' annual revenue at risk was estimated to be [c-i-c] [c-i-c]. This estimate was based on Optus receiving a total of [c-i-c] [c-i-c] of revenue from Managed Services customers that are supplied using WLR and LCS. Optus estimated that [c-i-c] [c-i-c] of these customers would be lost if Optus was unable to obtain the resale services.⁸⁰¹

⁸⁰⁰ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, p. 4.

⁸⁰¹ Optus, *Confidential Submission to the ACCC in response to Draft Decision on Telstra's LCS and WLR Exemption Applications*, June 2008, pp. 26-27

Appendix F: Information on the state of competition in wholesale markets

To inform itself of the state of competition in wholesale markets, the ACCC has considered information contained in:

- the Customer Access Network Record Keeping Rule (CAN RKR)
- the Regulatory Accounting Framework (RAF) reports
- information submitted to the ACCC's six-monthly exemptions calculation processes
- Telstra annual financial reports
- submissions to the ACCC's September 2011 issues paper and
- responses to the ACCC's 18 August 2011 request for market information relevant to the current state of competition in exempt and non-exempt areas.

Responses to the ACCC's request for market information were received from Telstra, Optus, AAPT, Macquarie Telecom, Aussie Broadband, iiNet and M2. The ACCC requested, on an ESA-by-ESA basis, information on:⁸⁰²

- the respondent's supply of retail and wholesale fixed line services
- the number of digital subscriber line access multiplexers (DSLAMs), multi-service access nodes (MSANs), DSLAMs with voice ports and DSLAMs without voice ports that can be upgraded to provide voice capability
- the respondent's purchases of wholesale fixed line voice-only services (that is, resale services)
- the supply of resale services by access providers other than Telstra, the prices charged for those services (and any rebates or discounts offered) and terms and conditions of supply for those services
- whether the terms and conditions on the supply of wholesale resale products are also imposed on the retail products sold by that wholesale service provider, and
- the charges and any past and/or current rebates paid by access seekers for resale services.

Where available, information is provided for the Band 1 ESAs and the 215 Band 2 ESAs that have met the criteria to be exempted from the Standard Access Obligations (SAOs) in relation to the LCS, WLR and PSTN OA services.

F.1 General trends

From the available information, the ACCC identified a number of general trends in the wholesale market for fixed line services.

⁸⁰² Further details on the ACCC's information request are available at: <http://www.accc.gov.au/content/index.phtml/itemId/1014319>.

Access seekers are increasingly self-supplying some of the inputs for retail voice and data services. This is done by using the ULLS in conjunction with their own infrastructure investments. Table F.1 shows that from 2006–07 to 2010–11, ULLS SIOs increased at a compound annual growth rate of 43.1 per cent, although growth slowed to around 20 per cent over the last two years.

Over the same period, sales of wholesale voice-only services provided by Telstra have fallen. WLR SIOs and PSTN OA call minutes decreased at an annual rate of 11.6 per cent and [c-i-c] [c-i-c] respectively. The ACCC also notes that demand for LCS decreased significantly between 2006–07 and 2010–11.⁸⁰³

Table F.1: Number of Telstra wholesale services, 2006–07 to 2010–11 (in millions)

	2006-07	2007-08	2008-09	2009-10	2010-11	Compound Annual Growth Rate 2006-07 to 2010-11
WLR SIOs ^a	1.981	1.496	1.285	1.253	1.212	
<i>Annual change</i>		-24.5%	-14.1%	-2.5%	-3.3%	-11.6%
ULLS SIOs ^a	0.239	0.527	0.698	0.831	1.001	
<i>Annual change</i>		120.5%	32.4%	19.1%	20.5%	43.1%
PSTN OA call minutes ^b	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
<i>Annual change</i>	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Source: ^a Based on information from Telstra annual financial reports. ^b Based on information from Schedule 8 of RAF reports.

Responses to the ACCC's information request indicates support for these trends. The respondent access seekers acquire more than 50 per cent of total WLR SIOs and around 80 per cent of ULLS SIOs.⁸⁰⁴

Respondent access seekers, as a whole, continued to make infrastructure investments in the year to March 2011. The total number of DSLAMs, and the number of DSLAMs able to provide a POTS emulation voice service, increased by [c-i-c] [c-i-c] respectively between March 2010 and March 2011 (see table F.2).

The ACCC notes that the information provided by the respondent access seekers indicates that less than half of their infrastructure investments are capable, without further significant further investment, of providing a traditional POTS voice service.

⁸⁰³ Telstra, *Pricing principles supplementary response to the ACCC's draft report-Schedule 2* (confidential), November 2010; *Response to the ACCC's inquiry into varying the exemption provisions in the FADs for the WLR, LCS and PSTN OA services-issues paper* (confidential), October 2011, p. 39.

⁸⁰⁴ Based on respondent access seeker data, CAN RKR and Telstra's annual financial reports.

Table F.2: Number of DSLAMs installed by respondent access seekers, March 2010 to March 2011

	March 2010	March 2011	Change	Percentage change
Total number of DSLAMs ^a	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Number of DSLAMs able to provide a POTS emulation voice service ^b	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Notes: ^a Based on responses from AAPT, iiNet, Macquarie and Optus. ^b Based on responses from AAPT, iiNet and Optus. The ACCC considers the following infrastructure is capable of providing a POTS emulation service: MSANs, DSLAMs with voice ports and DSLAMs without voice ports upgradeable to provide voice services.

F.2 Purchases of resale services

As noted in section F.1, purchases of resale voice-only services have been declining.

Information submitted to the ACCC's exemptions calculation process indicates that the largest declines in WLR SIOs between March 2010 to March 2011 occurred in the [c-i-c] [c-i-c] (see table F.3). In contrast, the number of WLR SIOs increased in [c-i-c] [c-i-c].

Table F.3: Number of WLR SIOs by band, as at March 2010 and March 2011

	March 2010	March 2011	Change in WLR SIOs	Percentage change
Band 1	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 2	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 3	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 4	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 1 ESAs and exempted Band 2 ESAs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Information submitted by Telstra shows that there were [c-i-c] [c-i-c] WLR resellers as at March 2011. Most resellers were not significant acquirers of WLR services; [c-i-c] [c-i-c] per cent of WLR resellers acquired less than [c-i-c] [c-i-c] SIOs each.

Respondents to the ACCC's information request reduced their purchases of WLR services by a greater percentage than the overall decline in WLR SIOs. This suggests that other access seekers are still growing their retail customer bases by purchasing WLR services from Telstra.

Overall the respondent access seekers have reduced the number of ESAs in which they acquire WLR services (see table F.5).

Table F.5: Change in number of ESAs where WLR is acquired by respondent access seekers, March 2010 to March 2011

Respondent access seekers	Change in the number of ESAs						
	Band 1	Band 2			Band 3	Band 4	Total
		Exempt	Non-exempt	Total			
AAPT	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Aussie BB / Wideband	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
iiNet	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Macquarie	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Optus	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Note: [c-i-c]

Nevertheless, the respondent access seekers still acquired the majority of WLR services in March 2011, with approximately [c-i-c] [c-i-c] per cent of all WLR SIOs and [c-i-c] [c-i-c] per cent of Exempt WLR SIOs.

The decline in WLR purchases by the respondent access seekers, and investment in their own DSLAM networks, was reflected by a decline in purchases of LCS and PSTN OA services:

- In the year to March 2011, the total number of PSTN OA minutes acquired by Optus Wholesale from Telstra decreased by [c-i-c] [c-i-c] and the number of services using PSTN OA decreased by [c-i-c] [c-i-c].
- Macquarie Telecom's response indicated the number of LCS calls declined by [c-i-c] [c-i-c] in the year to March 2011.

F.3 DSLAM investments

Using the CAN RKR data, the presence of a ULLS or LSS SIO in an ESA can be used as an indication of the presence of a DSLAM or MSAN. Table F.6 shows the number of ESAs with DSLAM investments by band and whether the ESA is exempt.

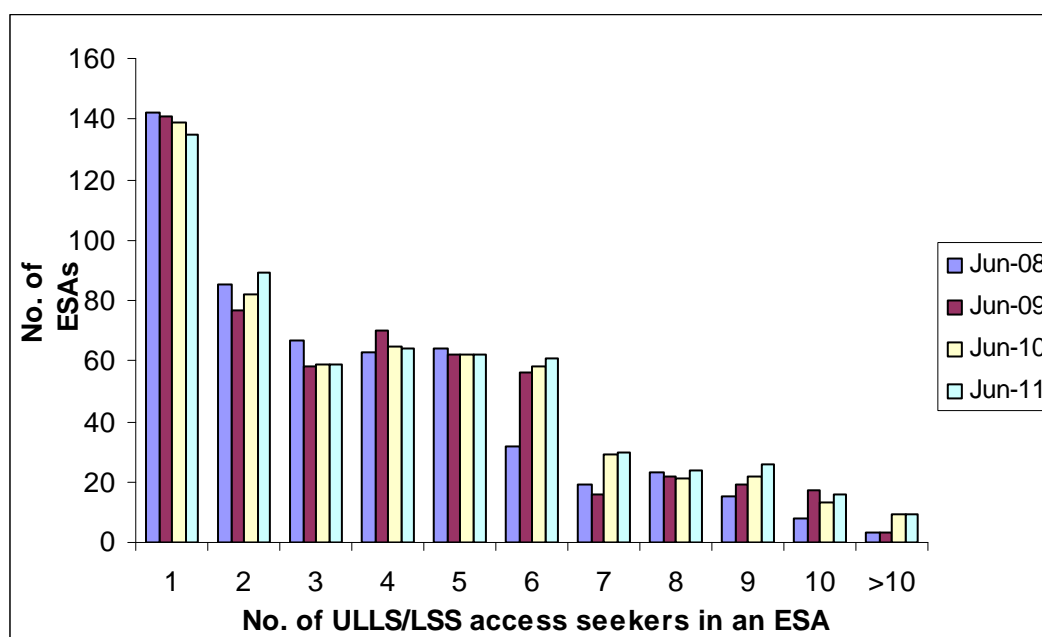
Table F.6: Access seekers' DSLAM presence by band, June 2011

	Band 1 ESAs (exempt)	Non-exempt Band 2 ESAs	Exempt Band 2 ESAs	Band 3 ESAs	Band 4 ESAs
Number of ESAs	16	585	215	749	3717
Number of ESAs with access seeker DSLAM presence	16	458	215	89	12
Number of ESAs with at least 3 access seekers	16	327	215	8	0
Number of access seekers with a DSLAM presence	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Source: CAN RKR June 2011; Telstra, *Response to the ACCC's information request*, September 2011.

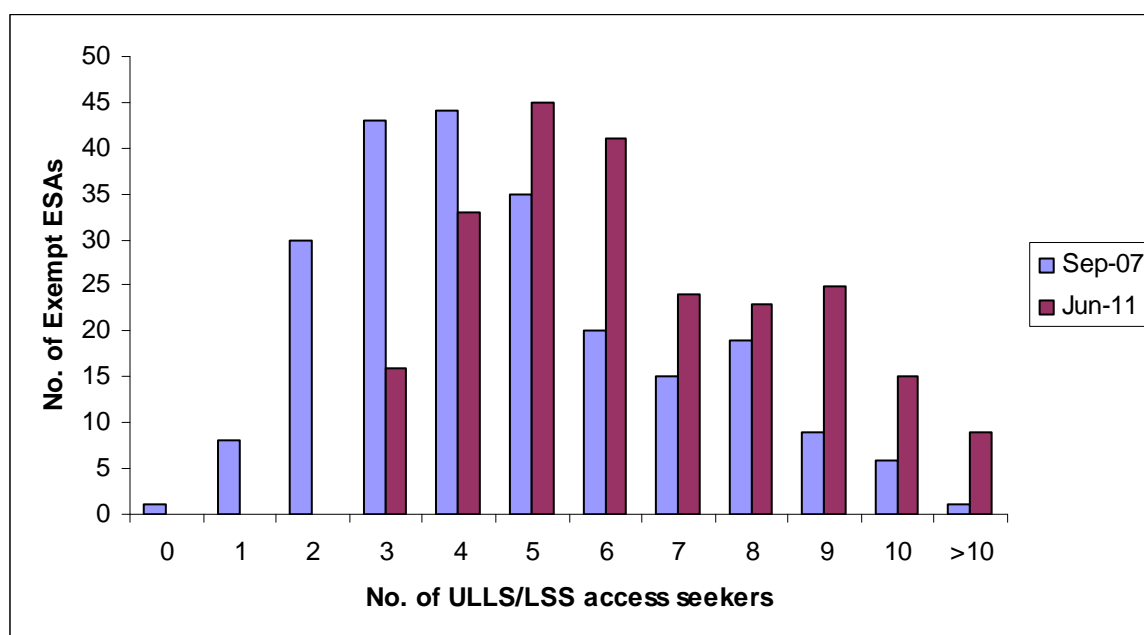
Figure F.1 shows that the number of ESAs with ULLS/LSS-based access seekers has increased since 2007-08. The figure also indicates that an increasing number of ESAs contain multiple ULLS/LSS access seekers. Figure F.2 shows that an increasing number of exempt ESAs contain five or more ULLS/LSS-based access seekers. These trends reflect increasing investments in DSLAMs.

Figure F.1: Number of ESAs with ULLS/LSS access seekers, by number of access seekers



Source: CAN RKR.

Figure F.2: Number of Exempt ESAs with ULLS/LSS access seekers, by number of access seekers



Source: CAN RKR.

Access seekers' DSLAM footprint has expanded. From September 2007 to June 2011, the number of ESAs with at least one ULLS or LSS SIO increased by 81 ESAs, as shown in table F.7. The largest increase was in Band 2 where DSLAM coverage increased by 58 ESAs.

Table F.7: Number of ESAs with at least one ULLS/LSS SIO, by band and currently exempt ESAs, September 2007 to June 2011

	September 2007	June 2011	Change
Band 1	17	16	-1
Band 2	400	458	58
Band 3	65	89	24
Band 4	12	12	0
Total	494	575	81
Band 1 ESAs and currently exempt Band 2 ESAs	231	231	0

Source: CAN RKR.

Expansion of the DSLAM footprint seems to have slowed. The CAN RKR data shows that the number of ESAs with at least one ULLS or LSS SIO grew by only 1.8 per cent in the year to March 2011. This suggests that access seekers are investing in ESAs with existing DSLAM investment rather than expanding into ESAs without previous infrastructure investment.

From September 2007 to June 2011, the number of access seekers with their own DSLAM equipment increased in all ESAs except for Band 4 ESAs. This is shown in table F.8.

Table F.8: Number of access seekers with DSLAM investments in each band and in exempt ESAs, September 2007 to June 2011

	September 2007	June 2011
Band 1	[c-i-c]	[c-i-c]
Band 2	[c-i-c]	[c-i-c]
Band 3	[c-i-c]	[c-i-c]
Band 4	[c-i-c]	[c-i-c]
Band 1 ESAs and currently exempt Band 2 ESAs	[c-i-c]	[c-i-c]

Source: CAN RKR.

Increased access seeker investment in DSLAMs has resulted in a growing number of SIOs provided by access seeker infrastructure. From September 2007 to June 2011, the number of SIOs served by access seeker infrastructure increased by 167.4 per cent to 1,723,320 SIOs, as shown in table F.9. Most of this gain—[c-i-c] [c-i-c]—occurred in the currently exempt ESAs.

Table F.9: Number of SIOs served by access seeker DSLAMs (ULLS/LSS SIOs), by band, September 2007 to June 2011

	September 2007	June 2011	Change	Percentage change
Band 1	38,044	69,318	31,274	82.2%
Band 2	596,578	1,608,268	1,011,690	169.6%
Band 3	9,112	44,476	35,364	388.1%
Band 4	714	1,258	544	76.2%
Total	644,448	1,723,320	1,078,872	167.4%
Band 1 ESAs and currently exempt Band 2 ESAs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Source: CAN RKR.

F.4 Investment in voice-capable DSLAMs

There are several methods access seekers can self-supply voice services through MSAN and DSLAM infrastructure:

- The combination of a voice card/MSAN, soft switching and the ULLS enables the provision of a POTS emulation service. Depending on the end-user, a POTS emulation service may or may not be substitutable for traditional voice services. End-users of voice services are not required to change their standard PSTN telephony equipment as the voice service remains analogue from the end-user premises to the infrastructure within an exchange.

- The combination of internet access device (IAD), soft switching and the ULLS⁸⁰⁵ enables the provision a VoIP service. The VoIP service can be carrier-grade, which is similar in quality to a POTS service. Alternatively, the VoIP service can be a 'best efforts' or application-layer VoIP service, which provides a lower quality of service than a POTS service.

In addition to voice services, access seekers that have invested in DSLAMs can self-supply a range of services such as standalone broadband and bundled voice and broadband services. The majority of access seekers with infrastructure investment are vertically integrated where the infrastructure is used to self-supply the wholesale services needed to supply retail services.

F.4.1 POTS emulation

Using the POTS emulation method requires the access seeker to install MSANs or DSLAMs with voice ports at the exchange. Other types of DSLAMs are not capable of providing a POTS emulation voice service.

In its 18 August 2011 request for market information, the ACCC sought information on the number of MSANs, DSLAMs with voice ports and DSLAMs upgradeable to provide voice services that the respondent access seekers currently have installed in exchanges. The ACCC considers this equipment represents DSLAMs able to provide POTS emulation services.

The information provided by respondent access seekers on their investment in DSLAMs able to provide POTS emulation services is summarised in table F.12. The number of DSLAMs able to provide POTS emulation services increased by approximately [c-i-c] [c-i-c] per cent to [c-i-c] [c-i-c] in the year to March 2011. The majority of the growth is was in [c-i-c] [c-i-c]. The data also suggests that some existing DSLAMs were upgraded to provide voice services during the period.

⁸⁰⁵ An access seeker would also be able to supply VoIP via the LSS. However an LSS-based service can only be supplied when a traditional voice service is already being supplied to the premises. As a result, VoIP services are unlikely to be supplied in addition to a traditional LSS-based voice service.

Table F.12: Number of DSLAMs able to provide POTS emulation services

DSLAMs able to provide voice service	MSAN		DSLAM with voice ports		DSLAM upgradeable to provide voice		Total	
	Mar-10	Mar-11	Mar-10	Mar-11	Mar-10	Mar-11	Mar-10	Mar-11
Band 1	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 2	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 3	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 4	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 1 ESAs and currently exempt Band 2 ESAs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Of the total number of DSLAMs owned by respondent access seekers, the proportion of DSLAMs able to provide POTS emulation services increased slightly from [c-i-c] [c-i-c] per cent to [c-i-c] [c-i-c] per cent between March 2010 and March 2011. [c-i-c] [c-i-c] per cent of DSLAMs able to provide POTS emulation services are in Band 1 ESAs and currently exempt Band 2 ESAs.

As at March 2011, Optus owned [c-i-c] [c-i-c] per cent of respondent access seeker owned DSLAMs with POTS emulation capability. [c-i-c] [c-i-c] Optus advised that [c-i-c] [c-i-c] in the year to March 2011.

Table F.13: Change in Optus DSLAMs able to provide POTS emulation service from March 2010 to March 2011

ESAs	No. of DSLAMs with voice ports		No. of DSLAMs upgradeable to provide voice services	
	Mar-10	Mar-11	Mar-10	Mar-11
Band 1	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 2	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 3	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 4	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 1 ESAs and currently exempt Band 2 ESAs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

F.4.2 Carrier-grade and application-layer VoIP

Carrier-grade and application-layer VoIP can be supplied using the ULLS and a DSLAM. Based on CAN RKR data on the take-up of ULLS and LSS, the following conclusions about DSLAM investments can be drawn:

- There has been significant DSLAM investment by access seekers (from figures F.1 and F.2). These DSLAMs are capable of providing carrier-grade or application-layer VoIP.
- DSLAM coverage, and the number of ESAs where VoIP services can potentially be supplied to, expanded by [c-i-c] [c-i-c] from September 2007 to June 2011.
- the number of ULLS and LSS SIOs, and therefore the number of SIOs served by DSLAMs, increased by 167.4 per cent to 1,723,320 SIOs from September 2007 to June 2011.

AAPT was the only respondent access seeker to provide information on its use of DSLAMs to provide VoIP services. AAPT submitted that, [c-i-c] [c-i-c] AAPT has submitted that [c-i-c] [c-i-c]⁸⁰⁶

The ACCC notes that AAPT [c-i-c] [c-i-c]

⁸⁰⁶ AAPT submission, pp. 23 & 25.

Table F.14: Number of ESAs served by AAPT DSLAMs capable of providing voice services

ESAs	ESAs with Hatteras DSLAMs			Number of Hatteras DSLAMs		
	March 2010	March 2011	Percentage change	March 2010	March 2011	Percentage change
Band 1	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 2	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 3	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 4	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Band 1 ESAs and currently exempt Band 2 ESAs	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

F.4.3 Alternative measures of the ability to self-supply voice services

Telstra stated that, rather than focusing on the number of access seeker DSLAMs, the number of ULLS or LSS ports access seekers have installed is a more relevant measure of the capacity to self-supply fixed line services. Telstra considered a suitable proxy for these ports is the number of interconnect pairs access seekers have connected to the Telstra MDF in an exchange. Telstra submitted that:

- [c-i-c] [c-i-c]
- [c-i-c] [c-i-c]

The number of interconnect pairs measures the capacity to provide fixed line voice and/or data services using the ULLS or LSS but it does not provide information on whether a POTS emulation voice service can be provided. The presence of interconnect pairs indicates that an access seeker could provide VoIP services, but not whether the service would be carrier-grade or application-layer VoIP.

F.5 Alternative wholesale voice services

Several access seekers supply wholesale voice and broadband services for resale to retail customers. This section summarises information on wholesale suppliers and the type of resale products they offer.

F.5.1 Optus

Optus provides wholesale voice and broadband products. It supplies a residential grade ULLS-based resale product called Residential Broadband and Telephony (RBT) and a [c-i-c] [c-i-c]. Optus submits that the RBT product is its 'nearest equivalent to a Telstra [WLR] service' [c-i-c] [c-i-c]⁸⁰⁷

Optus stated that [c-i-c] [c-i-c]

⁸⁰⁷ Optus, *Submission in response to the ACCC's issues paper*, October 2011, Pub. p. 11 & 17/Conf. p. 11 & 17.

The number of wholesale RBT accounts increased by [c-i-c] [c-i-c]

Table F.17: Number of wholesale Optus RBT accounts by type

Type of RBT service	March 2010	March 2011
[c-i-c]	[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]
[c-i-c]	[c-i-c]	[c-i-c]

The majority of RBT services consist of bundled offerings. In March 2011, standalone telephony accounted for [c-i-c] [c-i-c] of Optus' RBT accounts. Optus submitted that [c-i-c] [c-i-c]⁸⁰⁸.

Optus submitted that charges for RBT services are [c-i-c] [c-i-c]⁸⁰⁹ (Supply conditions are discussed further in appendix I.)

F.5.2 AAPT

In its response to the ACCC's information request, AAPT provided information on the following wholesale products: [c-i-c] [c-i-c].⁸¹⁰ AAPT stated that [c-i-c] [c-i-c]⁸¹¹

[c-i-c]

▪

▪ [c-i-c]

Table F.18: Provision of MBE services

	Band 1	Band 2			Band 3	Band 4
		<i>Exempt</i>	<i>Non-exempt</i>	<i>Total</i>		
Number of ESAs where MBE is supplied	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Number of MBE retail service providers	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Number of MBE service addresses	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

[c-i-c] [c-i-c]

AAPT's [c-i-c] [c-i-c]⁸¹²

⁸⁰⁸ Optus, *Appendix A: Optus responses to ACCC request for market information*, 6 September 2011.

⁸⁰⁹ Optus, *Appendix A: Optus responses to ACCC request for market information*, 6 September 2011.

⁸¹⁰ AAPT, *Fixed line services geographic exemptions – request for market information*, 21 September 2011.

⁸¹¹ AAPT submission, p. 23 & 25.

⁸¹² AAPT, *Fixed line services geographic exemptions – request for market information*, 21 September 2011.

F.5.3 Other wholesale products

Telstra submitted that at least four service providers supply resale voice services: AAPT, People Telecom, Primus and Optus.⁸¹³ Telstra also submitted that iTelecom offers wholesale voice-only, wholesale broadband-only and bundled broadband/voice services. Telcoinabox and M2 offer wholesale voice-only and bundled broadband/voice services.⁸¹⁴

The ACCC notes that there is a wholesale ‘sub-market’ of access seekers selling Telstra’s resale services. [c-i-c] [c-i-c]^{815 816}

⁸¹³ Telstra, Response to the ACCC’s inquiry into varying the exemption provisions in the FAD for the WLR, LCS and PSTN OA services – Issues Paper, October 2011, p. 31 (public) p. 40 (confidential).

⁸¹⁴ Telstra, Response to the ACCC’s inquiry into varying the exemption provisions in the FAD for the WLR, LCS and PSTN OA services – Issues Paper, October 2011, p. 31 (public) p. 40 (confidential).

⁸¹⁵ Email from M2 on 5 September 2011: ‘Re: letter from ACCC’.

⁸¹⁶ AAPT, *Fixed line services geographic exemptions – requestion for market information*, 21 September 2011; email from iiNet on 2 September 2011: ‘Re: letter from ACCC’.

Appendix G: Retail price comparisons

This appendix describes the retail market analysis undertaken by the ACCC to inform its consideration of the relevant market definition. The ACCC also had regard to the retail market information collected for this analysis in assessing the state of retail competition.

The first section of the appendix describes the purpose and provides a broad overview of the ACCC's analysis. It is followed by a description of the methodology and assumptions used by the ACCC. Finally, the results of the comparisons are presented.

G.1 Purpose

The ACCC has analysed the availability and prices of different retail voice services to determine the demand-side substitutability of these alternative services in the event of a small but significant and non-transitory increase in price (SSNIP) of a retail fixed line voice service. The ACCC compared prices and product offerings for the following services:

- fixed line voice-only
- bundled fixed line voice and broadband
- bundled broadband and voice over internet protocol (VoIP), and
- mobile.⁸¹⁷

An end-user is able to make and receive calls if they acquire any of these products. While an end-user may have a preference for a particular product because of its underlying characteristics—for example, the mobility they may enjoy with a mobile service—an end-user may choose to switch to an alternative product if the price differential between their preferred product and another suitable product is sufficiently large (for example, due to a SSNIP for fixed line voice-only services).

The ACCC's focus in this analysis is on the substitution possibilities for a fixed line voice-only user. Accordingly, the ACCC's analysis is focused on the voice component of different products. The benefits an end-user obtains from other product features, such as the data allowance, have not been taken into account in analysing the potential substitutes for fixed line voice services. The end-user is assumed to simply select the cheapest plan from each provider, given their assumed call usage.⁸¹⁸

⁸¹⁷ The ACCC's analysis only includes post-paid mobile services. The ACCC considers that post-paid services may be more comparable to the other types of products assessed. However, the ACCC recognises that for users with very low usage, where the user primarily receives calls and makes very few calls, the optimal plan may be a prepaid service. These users may select a cheap mobile handset and a plan such as Vodafone's '365 day' recharge option, which allows them to make \$20 of calls over a one-year period.

⁸¹⁸ The ACCC recognises that, in practice, end-users select a plan based on its overall features, and some end-users will be willing to select a plan that costs an extra few dollars per month if this plan will provide them with a significantly greater data allowance. However, the ACCC has simply selected the cheapest plan for each end-user from each provider, given the call usage assumptions for that end-user. The ACCC has focused on the voice component of plans because the three declared services subject to this variation inquiry are all voice services.

The ACCC recognises that, in practice, an end-user will weigh up a number of factors in choosing a suitable telecommunications service.

The results of this analysis have informed the ACCC's market definition (see chapter 2). The following section outlines the ACCC's methodology and assumptions in conducting its retail price comparisons.

G.2 Methodology and assumptions

G.2.1 Selection of retail service providers

The ACCC selected a range of retail service providers (RSPs) to include in its analysis. The ACCC initially gathered a list of RSPs by viewing several plan comparison websites.⁸¹⁹ The ACCC selected a smaller number of providers from this list to include in its analysis.

The providers selected were broadly representative of the retail market. The ACCC focused on relatively large RSPs since these providers serve most end-users but included some smaller RSPs for a broader comparison.

In addition, the ACCC included RSPs operating at all levels of the market, that is: providers that completely self-supply (where the RSP has its own network which it uses to supply retail voice services); providers that use the unconditioned local loop service (ULLS) and their own digital subscriber line access multiplexer (DSLAM) to provide services; and providers that resell wholesale services purchased from Telstra, an access seeker or a mobile network operator.

Based on these criteria, the ACCC selected the following RSPs of fixed line services:

- Telstra
- Optus
- TPG
- Dodo
- iPrimus
- Internode
- iiNet
- Exetel, and
- Southern Cross Telco.

The ACCC selected the following RSPs of mobile services:

- Telstra
- Optus
- Vodafone
- Virgin Mobile

⁸¹⁹ The ACCC used the following comparison websites: <http://youcompare.com.au/>; <http://mobile-phones.smh.com.au/MobilePhones>; <http://www.phonesandplans.com.au/>; and <http://www.phonechoice.com.au/>.

- Amaysim
- TPG
- Savvytel, and
- iiNet.

After selecting the RSPs to include in its comparisons, the ACCC gathered information from the RSPs' websites about the plans available to residential end-users and selected the optimal plan for each type of user.

G.2.2 Usage Assumptions

Usage assumptions for fixed line voice services

The ACCC made usage assumptions for three 'typical' types of residential end-users—low, medium and high users of voice services. There is insufficient information available, and too much diversity between these users, to conduct the analysis for business and government end-users.

The ACCC derived its usage assumptions from regulatory accounting framework (RAF) data reported by Telstra for the 2009–10 financial year.⁸²⁰ The RAF includes information on the number of connected calls and the number of call minutes—for each of local, national, international and fixed to mobile (FTM) calls—as well as the total number of end-user access lines. The ACCC calculated the average number of calls of each type per month by dividing the annual number of connected calls by the number of lines and dividing this figure by 12. The average length of each call was calculated by dividing the total number of call minutes by the total number of connected calls.

The ACCC assumed that a medium user would make the same number of calls of each type as the RAF averages for that call type. A low user was assumed to make half as many calls (of each type) as a medium user; a high user was assumed to make twice as many calls as a medium user. The ACCC assumed that all user types made calls with the same call duration: the RAF average duration for each call type.

The ACCC also made some other specific assumptions:

- The number of calls to 13 or 1300 numbers will be an additional ten per cent as many as the number of national calls.
- International calls are assumed to be to the USA to simplify the calculations.

⁸²⁰ While the ACCC receives RAF data from a number of other providers—Optus, AAPT, Primus and VHA—it decided to only use Telstra's RAF data to derive usage assumptions. There is significant variation in the average number of calls made per month among different carriers, which may be due to alternative business models. For example, some providers may focus on serving business customers rather than residential customers: the call structure and length of calls for business customers may be quite different relative to residential customers' call structure and call length. The ACCC considers that Telstra's usage figures are likely to be most representative of a typical residential end-user.

- In the absence of RAF data on the number of on-net and off-net calls to mobiles (from fixed lines), the ACCC assumed that half of all fixed to mobile calls are made on-net and half are made off-net.⁸²¹
- VoIP users are assumed to make fewer calls to mobiles than other fixed line users. A medium VoIP user is assumed to make one on-net and one off-net FTM call per month while low and high users make half and twice as many calls as a medium user, respectively.
- Finally, the ACCC did not include a call duration for local calls and calls to 13 or 1300 numbers because these calls are untimed.

Table G.1 shows the ACCC's usage assumptions for fixed line voice services.

Table G.1: Assumed number of calls and call duration for fixed line voice services

	Call type					
	Local	National	International	13, 1300	FTM on-net ^a	FTM off-net ^a
	Number of calls per month (by user type)					
Low	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Medium	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
High	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
	Length of calls (for all user types)					
Call duration (minutes)	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

^a A VoIP user is assumed to make fewer calls to mobiles than other fixed line users. A medium VoIP user is assumed to make a total of 2 FTM calls per month, divided equally between on-net and off-net. Low users make half as many calls as a medium user per month, and high users make twice as many calls as a medium user per month.

Usage assumptions for mobile voice services

While the ACCC recognises that, in practice, mobile users may have different calling patterns relative to fixed line users, the ACCC has assumed that an end-user of a mobile voice service makes the same number of calls per month as a fixed line voice service end-user. The ACCC has made this assumption because the purpose of its

⁸²¹ A call is on-net when it is made to a receiving party on the same network. Several RSPs offer discounted rates for on-net fixed to mobile calls.

analysis is to assess the potential substitutability of mobile voice services for fixed line voice services.⁸²²

Unlike fixed line voice services, mobile plans offered by RSPs do not distinguish between local and national calls. Therefore, the ACCC assumed that a medium user of mobile services makes [c-i-c] [c-i-c] domestic (that is, within Australia) calls per month—the sum of local, national, fixed to mobile and 13 or 1300 calls for a medium fixed line voice user. A medium mobile user is assumed to make [c-i-c] [c-i-c] international calls per month, the same as a medium fixed line user. As with fixed line voice services, a low user is assumed to make half as many calls per month as a medium user while high users are assumed to make twice as many calls per month as a medium user.

Some mobile RSPs offer discounted on-net mobile calls. However, the ACCC has not taken into account these discounts in its analysis. Because the market shares of the mobile RSPs vary significantly, it would be too difficult to estimate the number of calls made by a customer on each network at an on-net rate since this would likely depend on the total number of customers served by that RSP.

The ACCC also made the assumption that the average call duration of domestic calls is equal to the average call duration of local, national and FTM call types for fixed line services.⁸²³ The call duration of domestic calls was calculated as follows:

$$\text{Domestic Call Duration} = \frac{\text{Local Call Minutes} + \text{National Call Minutes} + \text{FTM Call Minutes}}{\text{Local Calls} + \text{National Calls} + \text{FTM Calls}}$$

The duration of mobile international calls was assumed to be the same as for fixed line international calls. International calls are assumed to be made to the USA.⁸²⁴ Table G.2 shows the ACCC's usage assumptions for mobile voice services.

⁸²² The ACCC has cross-checked these usage assumptions against sample customer bills for 3G and GSM mobile services provided to the ACCC under the Division 12 record keeping rule. The sample bill data suggest that the ACCC's usage assumptions are not substantially different to actual usage of mobile voice services.

⁸²³ As noted above, the ACCC considers that this assumption is reasonable, since the purpose of the analysis is to compare the substitutability of mobile voice services for fixed line voice services. The ACCC recognises that, in practice, mobile users may have different calling patterns because they use their mobile phone to make different types of calls than they would on a fixed line voice service.

⁸²⁴ Some mobile plans allow international calls to be made as part of the plan's included value, while others do not. The ACCC has altered the relevant formulas in its spreadsheet—used to calculate the total monthly bill for each plan—to reflect this.

Table G.2: Assumed number of calls and call duration for mobile voice services

	Call type	
	Domestic	International
	Number of calls per month (by user type)	
Low	[c-i-c]	[c-i-c]
Medium	[c-i-c]	[c-i-c]
High	[c-i-c]	[c-i-c]
	Length of calls (for all user types)	
Call duration (minutes)	[c-i-c]	[c-i-c]

G.2.3 Other assumptions

Treatment of up-front costs

Many plans in the ACCC's price comparisons contain up-front (set-up) charges. Examples of these charges include: connection charges; charges for a modem/router (for broadband services); and charges for a VoIP-capable handset or modem/router, or an analogue telephone adapter (to enable the provision of VoIP services). Where a plan has a contract for a certain length—typically, 6, 12, 18 or 24 months—the ACCC has amortised up-front costs over the length of the contract; where a plan does not have a contract, the ACCC has amortised the cost over 12 months.

The ACCC selected the cheapest option for up-front charges.⁸²⁵ For example, some plans offer a standard modem/router for free but allow a user to upgrade to modem/router with greater features for a higher price. The ACCC has selected the cheapest option that enables an end-user to use the service. Where mobile handsets are not included in post-paid plans, the ACCC has assumed that an end-user simply purchases the cheapest handset available: the ACCC used a \$10 handset such as those available from some Coles supermarkets.

Capped call rates

Some RSPs offer capped rates for calls up to a certain length. Where the capped rate is cheaper than the variable charge that would be incurred, given the assumed call duration, the ACCC has used the capped rate. This charge is entered into the spreadsheet as a flagfall, or connection, charge for the purpose of calculating the total monthly bill.

⁸²⁵ The ACCC used the equipment prices of equipment supplied by the RSP of each plan. In practice, end-users may prefer to source equipment from other suppliers for price and/or technological reasons.

G.3 Results of the ACCC's retail price comparisons

This section begins with a description of the results of the ACCC's retail price comparisons. It is followed by an analysis of substitution possibilities for fixed line voice-only users.

G.3.1 Results

Table G.3 compares the average monthly bills for a low, medium and high user of a voice-only service and a bundled fixed voice and broadband service. The cheapest and most expensive voice-only plans cost less than the cheapest and most expensive bundled fixed voice and broadband plans, for all user types. However, for each user type, at least one bundled voice and broadband offering is available that is cheaper than the average voice-only bill.

Table G.3: Comparison of monthly bills for residential customers—fixed voice and bundled fixed voice and broadband

User type ^a	Fixed voice-only			Bundled fixed voice and broadband			
	Ranking ^b	Service provider	Monthly bill ^c	Ranking ^b	Service provider	Monthly bill ^c	Data allowance
Low	Lowest	Optus	\$29.95	Lowest	Dodo	\$43.82	2.5GB peak + 2.5GB off-peak
	Highest	Southern Cross	\$63.65	Highest	Southern Cross	\$112.73	5GB
	Average ^d		\$48.05	Average ^d		\$79.37	
Medium	Lowest	Optus	\$49.95	Lowest	Dodo	\$60.94	2.5GB peak + 2.5GB off-peak
	Highest	TPG	\$74.68	Highest	Southern Cross	\$114.42	5GB
	Average ^d		\$62.21	Average ^d		\$90.93	
High	Lowest	Optus	\$49.95	Lowest	Dodo	\$60.94	2.5GB peak + 2.5GB off-peak
	Highest	Telstra	\$107.74	Highest	Exetel	\$129.34	50GB
	Average ^d		\$83.11	Average ^d		\$106.91	

Notes: ^a Defined as low, medium and high on the basis of assumptions about the number of voice calls made. See table G.1. ^b Based on total bill spend per month. ^c Bundled plan prices include equipment and set-up costs (including switching costs), amortised over the length of the contract, or 12 months. ^d Average prices are the average of all plans included in the ACCC's analysis.

Table G.4 compares the average monthly bills for a low, medium and high user of a voice-only service and a bundled VoIP and broadband service. The average price of a

VoIP service is more expensive than a voice-only service for low and medium users. However, for a high user, the average price of a VoIP service is lower than the average price of a fixed line voice-only service. For a low user, the cheapest voice-only service is cheaper than the cheapest bundled VoIP and broadband service. A medium user would pay less for the cheapest VoIP service than he/she would for the cheapest voice-only service.

Table G.4: Comparison of monthly bills for residential customers—fixed voice and bundled VoIP and broadband

User type ^a	Fixed voice-only			Bundled VoIP and broadband			
	Ranking ^b	Service provider	Monthly bill ^c	Ranking ^b	Service provider	Monthly bill ^c	Data allowance
Low	Lowest	Optus	\$29.95	Lowest	Dodo	\$39.15	2.5GB peak + 2.5GB off-peak
	Highest	Southern Cross	\$63.65	Highest	iiNet	\$90.64	50GB peak + 50GB off-peak
	Average ^d		\$48.05	Average ^d		\$70.04	
Medium	Lowest	Optus	\$49.95	Lowest	Dodo	\$44.46	2.5GB peak + 2.5GB off-peak
	Highest	TPG	\$74.68	Highest	iiNet	\$95.17	50GB peak + 50GB off-peak
	Average ^d		\$62.21	Average ^d		\$73.34	
High	Lowest	Optus	\$49.95	Lowest	Dodo	\$55.09	2.5GB peak + 2.5GB off-peak
	Highest	Telstra	\$107.74	Highest	iiNet	\$104.22	50GB peak + 50GB off-peak
	Average ^d		\$83.11	Average ^d		\$81.35	

Notes: ^a Defined as low, medium and high on the basis of assumptions about the number of voice calls made. See table G.1. ^b Based on total bill spend per month. ^c Bundled plan prices include equipment and set-up costs (including switching costs), amortised over the length of the contract, or 12 months. ^d Average prices are the average of all plans included in the ACCC's analysis.

Table G.5 compares the average monthly bills for a voice-only service and a mobile service for a low, medium and high user. The lowest, highest and average prices for mobile services are significantly cheaper than the corresponding prices for voice-only services for all user types.

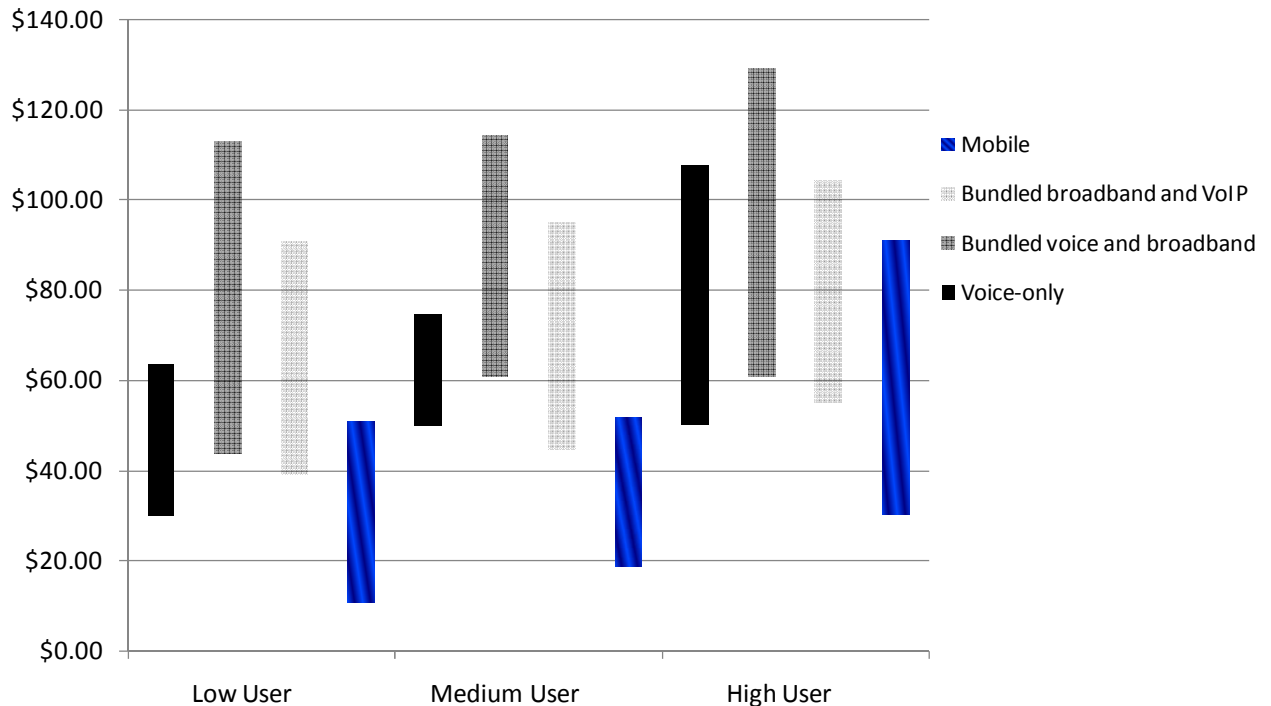
Table G.5: Comparison of monthly bills for residential customers—fixed voice and mobile

	Fixed voice-only			Mobile		
User type ^a	Ranking ^b	Service provider	Monthly bill ^c	Ranking ^b	Service provider	Monthly bill ^c
Low	Lowest	Optus	\$29.95	Lowest	TPG	\$10.82
	Highest	Southern Cross	\$63.65	Highest	Telstra	\$50.82
	Average ^d		\$48.05	Average ^d		\$26.06
Medium	Lowest	Optus	\$49.95	Lowest	TPG	\$18.82
	Highest	TPG	\$74.68	Highest	Telstra	\$51.82
	Average ^d		\$62.21	Average ^d		\$36.80
High	Lowest	Optus	\$49.95	Lowest	Virgin Mobile	\$30.31
	Highest	Telstra	\$107.74	Highest	Amaysim	\$90.94
	Average ^d		\$83.11	Average ^d		\$61.99

Notes: ^a Defined as low, medium and high on the basis of assumptions about the number of voice calls made. See tables G.1 and G.2. ^b Based on total bill spend per month. ^c Mobile plan prices include equipment and set-up costs, amortised over the length of the contract, or 12 months. ^d Average prices are the average of all plans included in the ACCC's analysis.

Figure G.1 shows the information presented in tables G.3 to G.5 graphically. Each column in the chart shows the range of prices for a given service, for a given user type.

Figure G.1: Ranges of prices for voice-only, bundled voice and broadband, VoIP and mobile services



G.3.2 Substitution possibilities

This section outlines the substitution possibilities for a fixed line voice-only end-user. The substitution possibilities focus on price and ignore any differences in features or quality of service of the different types of services (for example, the benefits of a broadband connection).

In identifying substitution options, the ACCC has not taken into account the impact of fixed term contracts—which may require an end-user to commit to a period of up to 24 months—on an end-user’s decision to switch to a different type of service. Most bundled voice and broadband services in the ACCC’s comparisons have a contract length of 24 months. The locked-in nature of fixed term contacts may be seen as a significant negative feature of such plans by some end-users, such as lower-income end-users who see such features as imposing financial risk.

Low users

A low user of a fixed line voice-only service pays an estimated average bill of \$48.05 per month. In the event of a SSNIP, this user could:

- switch to Dodo’s bundled voice and broadband service, which would save them over \$4 per month.
- switch to Dodo’s bundled VoIP and broadband service, which would save them almost \$8 per month, or
- switch to TPG’s mobile service, which would save them over \$37 per month. Almost every mobile service in the ACCC’s selection of mobile plans for low users is cheaper than the average bill for a low voice-only user.

Medium users

A medium user of a fixed line voice-only service pays an estimated average bill of \$62.21 per month. In the event of a SSNIP, this user could:

- switch to Dodo's bundled voice and broadband service, which would save them over \$1 per month.
- switch to Dodo's bundled VoIP and broadband service, which would save them almost \$18 per month, or
- switch to TPG's mobile service, which would save them over \$43 per month. Every mobile service in the ACCC's selection of mobile plans for medium users is cheaper than the average bill for a medium voice-only user.

High users

A high user of a fixed line voice-only service pays an estimated average bill of \$83.11 per month. In the event of a SSNIP, this user could:

- switch to Dodo's bundled voice and broadband service, which would save them over \$22 per month.
- switch to Dodo's bundled VoIP and broadband service, which would save them over \$28 per month, or
- switch to Virgin Mobile's mobile service, which would save them almost \$53 per month. Almost every mobile service in the ACCC's selection of mobile plans for high users is cheaper than the average bill for a high voice-only user.

In practice, a retail consumer's choice between different types of voice services, and his/her assessment of the substitutability of different types of services, will depend on a range of factors, including the value obtained from the features of the product (including data allowances, ability to send and receive SMS messages and/or emails, and mobility), the terms and conditions associated with the product (such as contract length and any exit fees), and personal preferences.

Appendix H: Information on the state of retail market competition

H.1 Take up and usage

H.1.1 Voice-only

In recent years, the number of fixed line voice-only SIOs has decreased. As shown in table H.1, the number of fixed line voice SIOs has decreased from 10.9 million in 2007 to 10.6 million in 2010. Similarly, the number of fixed line voice-only SIOs has decreased from 6.8 million in September 2007 to 6.1 million in June 2010.

Table H.1: Number of fixed voice and fixed voice-only SIOs, 2006–07 to 2009–10

	2006–07	2007–08	2008–09	2009–10
Fixed voice SIOs (millions) ⁸²⁶	10.9	11	10.7	10.6
Fixed line <u>voice-only</u> SIOs (millions) ⁸²⁷	6.8	6.5	6.2	6.1
Percentage	62%	59%	58%	58%

It should also be noted that here the absolute numbers of fixed line voice-only SIOs may be overstated. This is because there may be customers who obtain internet services by means of dial-up, HFC or wireless that separately connect to a fixed voice service.

When combining CAN RKR data with ABS statistics on broadband usage, the ACCC has previously estimated that the number of voice-only services account for at least 40 per cent of all fixed network services.⁸²⁸

As shown in figure H.1, the voice call minutes or usage of fixed line voice services appears to be decreasing. However, one explanation for this is that dial-up internet subscriptions have decreased from approximately 2.8 million in June 2006 to 0.8 million in June 2010.⁸²⁹ Despite this, fixed line voice minutes are still significantly greater than mobile voice minutes.

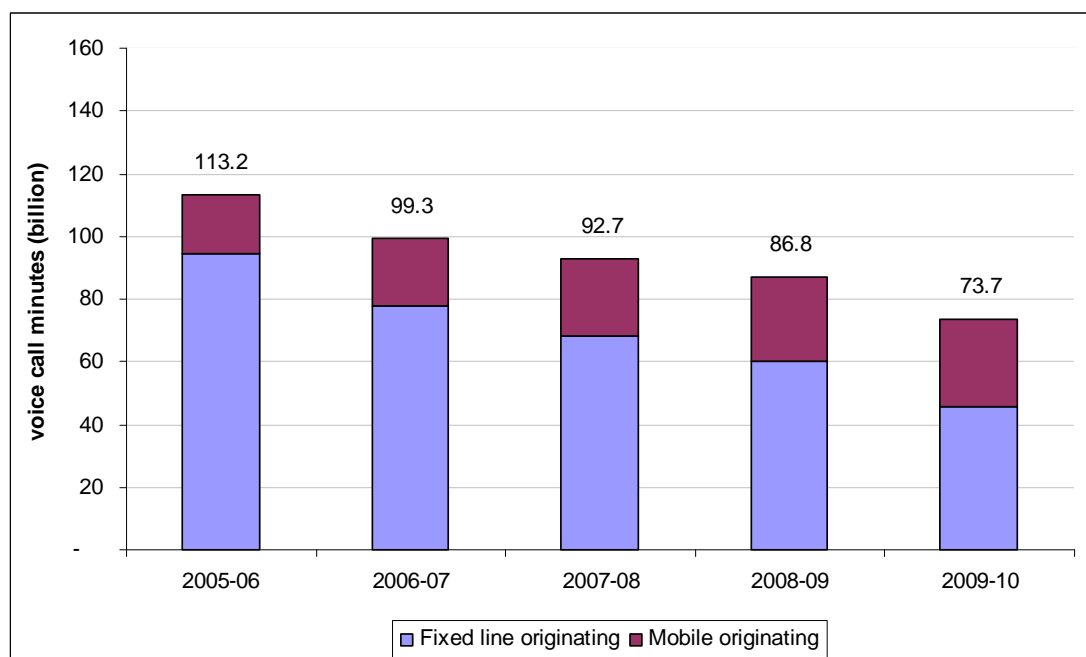
⁸²⁶ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 16.

⁸²⁷ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 19.

⁸²⁸ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 6.

⁸²⁹ CCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 19.

Figure H.1: RAF reporting companies: fixed and mobile call minutes 2005–06 to 2009–10⁸³⁰



H.1.2 Bundled with broadband

In the table in ‘voice-only’ the number of fixed line voice-only SIOs, as a proportion of fixed line voice SIOs, has been slowly decreasing (62 per cent in 2006-07 to 58 per cent in 2009-10). This implies that there is a shift toward bundled fixed line voice and broadband internet services.

ACMA consumer survey data indicates that 52 per cent of Australian households have elected to take up bundled communications services. Of those, 95 per cent included a fixed line voice service and 84 per cent included internet in that bundle.⁸³¹

On the basis of these figures, it is reasonable to consider take-up and usage of broadband services to be an approximation of these figures for bundled voice and broadband services (noting that such figures will also include figures for broadband only or broadband that is bundled with a non-fixed line voice service).

The ABS statistics on broadband take-up indicate that DSL connections have been steadily growing year on year at about 4 per cent between December 2007 and June 2011 to from 3.78 million (2007) to 4.49 million subscribers (2011).

⁸³⁰ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 17.

⁸³¹ ACMA, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, p. 26. The ACMA considers a range of communications services that may form part of a bundle, including fixed line voice, internet, mobile and pay TV.

Table H.2: Number of fixed broadband subscribers for DSL and Cable, for ISPs with more than 1,000 subscribers (in thousands)⁸³²

	Dec 2007	Jun 2008	Jun 2009	Jun 2010	Jun 2011	
DSL	3,787	3,936	4,171	4,212	4,493	
<i>DSL Growth</i>		3.93%	5.97%	0.98%	6.67%	4.37% (average)
Cable	na	na	na	na	881	

H.1.3 VoIP

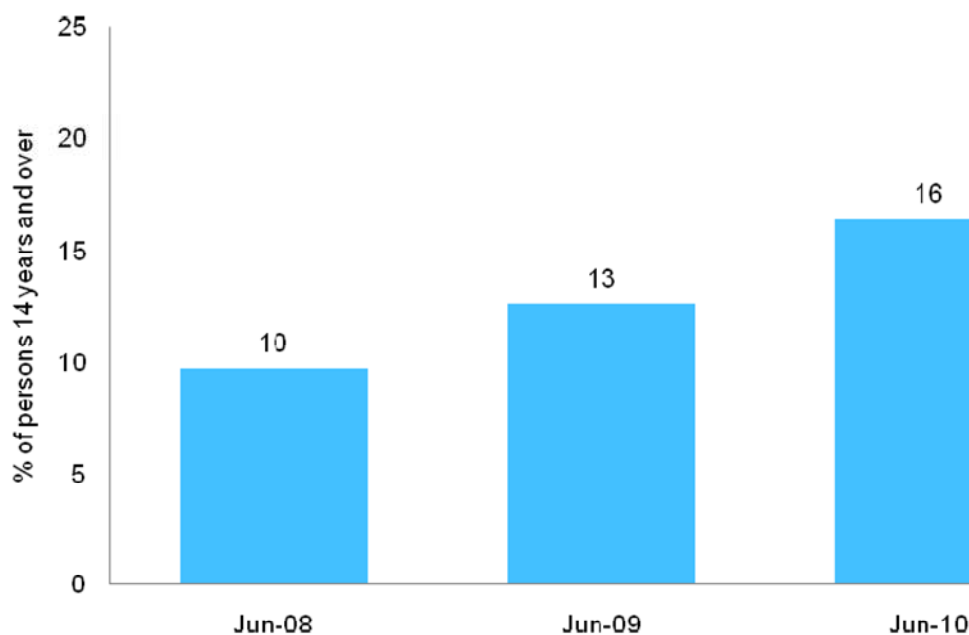
According to Roy Morgan research, as referred to by ACMA, use of VoIP has been steadily increasing. In June 2008 10 per cent of all persons aged over 14 years said they used VoIP at home. By June 2010, this had increased to 16 per cent.⁸³³ The ACMA does not breakdown this percentage into carrier-grade and/or other types of VoIP. However, as discussed below, the ACMA also states that 86 per cent of VoIP calls are made using PC/laptops,⁸³⁴ indicating a form of VoIP other than carrier-grade.

⁸³² ABS, 8153.0 - Internet Activity, Australia, June 2011.

⁸³³ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, p. 14.

⁸³⁴ ACMA, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, p. 18.

Figure H.2: Household consumers using VoIP at home (ACMA)⁸³⁵



Although 80 per cent of broadband users were aware of VoIP in June 2010, only 23 per cent of broadband users with access to it had taken up a service.⁸³⁶ One explanation for the low, but growing, take-up rate is that 47 per cent of those who elected not to use a VoIP did not know enough about it.⁸³⁷ This indicates that deeper consumer education may be required before awareness of VoIP will develop into en masse adoption.

In April 2010, 64 per cent of VoIP users indicated they made international calls. By contrast, only 40 per cent of VoIP users said that they made local calls, with a reduction to 20 per cent in the case of calls to mobiles⁸³⁸. This implies that VoIP users are those with usage preferences that may at present not be representative of those that traditionally use fixed line voice services.

Further, consumption of VoIP is frequently facilitated by using a PC or laptop. As shown below, the traditional methods of making a phone call (i.e. home phone and mobile) are not being utilised at this time.⁸³⁹ This could suggest VoIP users are predominantly early adopters.

⁸³⁵ ACMA, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, p. 14.

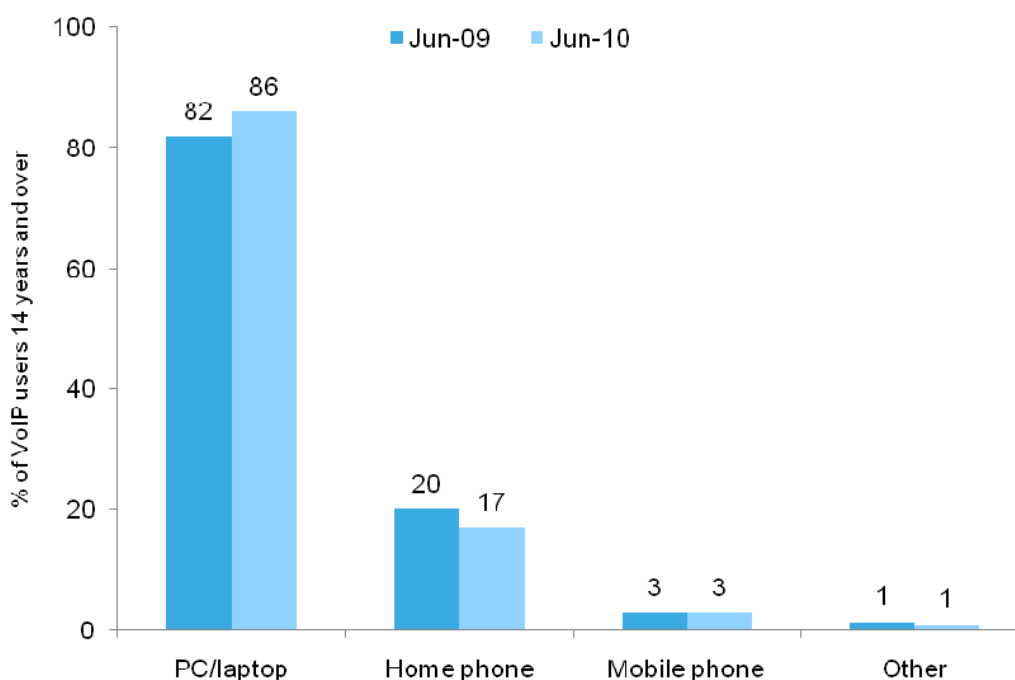
⁸³⁶ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 16.

⁸³⁷ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 16.

⁸³⁸ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 15.

⁸³⁹ Australian Communications and Media Authority, *Communications report 2009–10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 19.

Figure H.3: Device used by consumers to access VoIP services at home (ACMA)⁸⁴⁰



H.1.4 Mobiles

Mobile voice services are expanding, both in take up (see below) and usage (see earlier ‘fixed and mobile minutes’ chart). Coverage by mobile networks is also expanding with GSM and 3G networks, as at June 2010, providing coverage for 96.22 per cent and 99.09 per cent of the population.⁸⁴¹

ACMA has indicated that the large number of mobile SIOs suggests that penetration in Australia has exceeded the level of saturation. Despite this, take up of mobile phones has increased by 4.7 million SIOs during the period of 2006-07 to 2009-10. Further, 85 per cent of people over the age of 14 have a mobile service, which leaves potential for mobile SIOs to rise further.

Table H.3: Fixed voice and mobile SIOs

	2006-07	2007-08	2008-09	2009-10
Fixed voice SIOs (millions) ⁸⁴²	10.9	11	10.7	10.6
Mobile SIOs ⁸⁴³	21.3	22.1	24.2	26.0

⁸⁴⁰ Australian Communications and Media Authority, *Communications report 2009-10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 15.

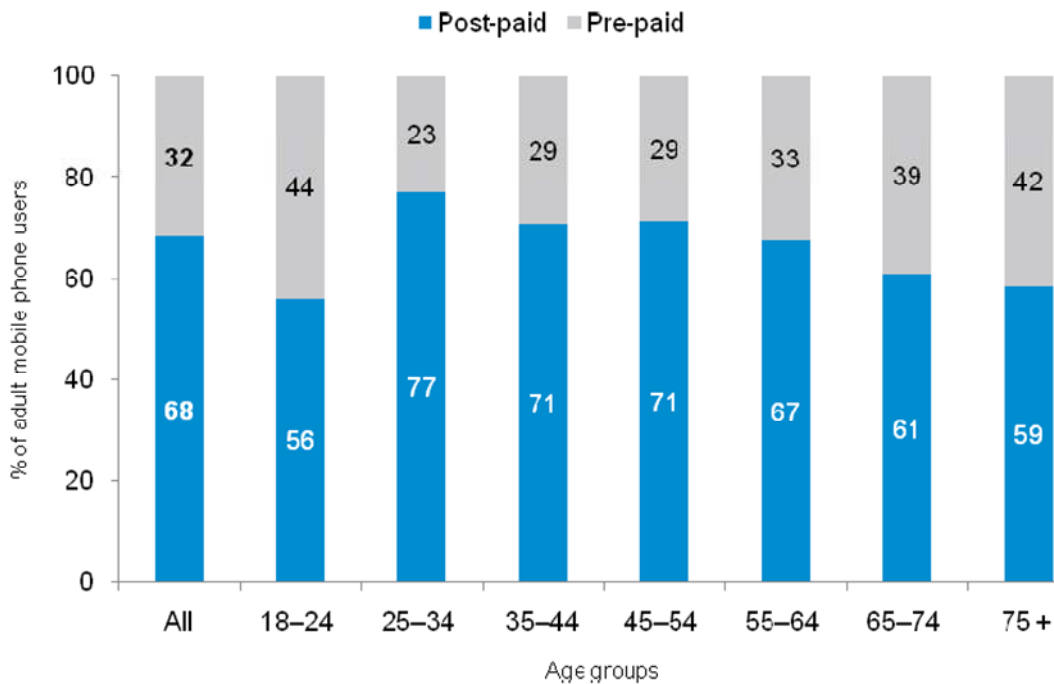
⁸⁴¹ Australian Communications and Media Authority, *Communications report 2009-10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 32.

⁸⁴² ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 16.

⁸⁴³ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 16.

Although there is a preference toward post-paid plans, 32 per cent of all adult mobile phone users engage their mobile services on a pre-paid basis. As shown below, consumers in the younger and older age groups tend to have the highest take up for pre-paid plans. These age groups are often associated with lower income levels and seek to avoid unexpected bills.⁸⁴⁴

Figure H4: Type of mobile phone plan, by age, April 2010



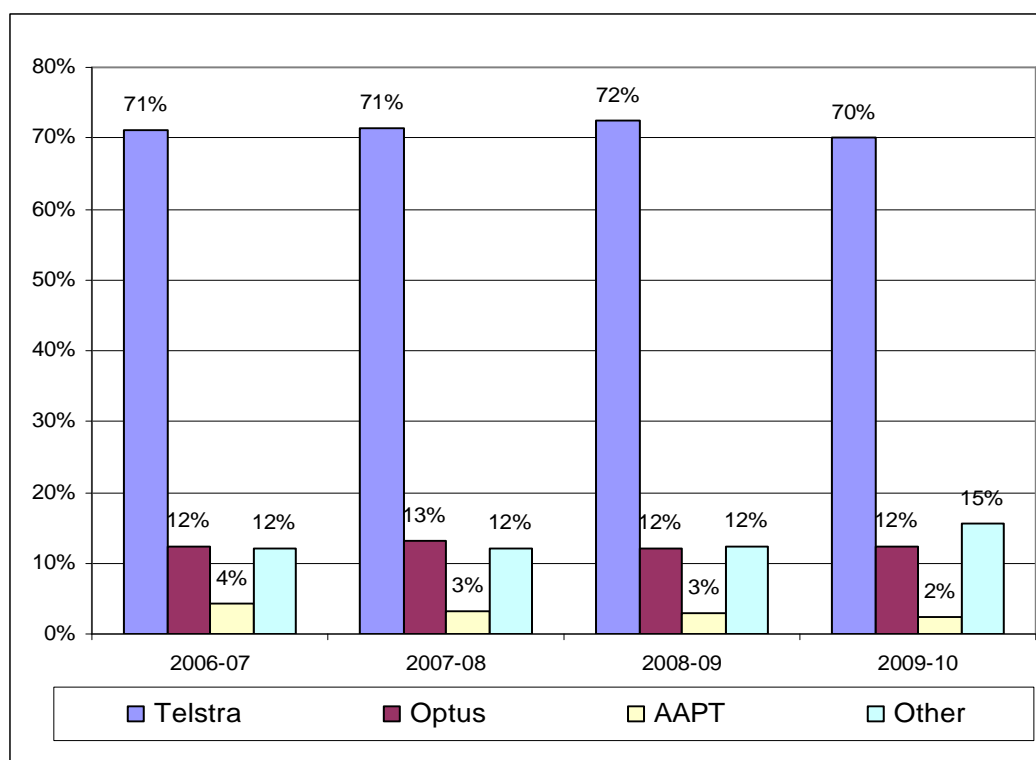
H.2 Concentration

H.2.1 Voice-only

During 2009-10, the level of concentration in the provision of fixed voice services decreased slightly. However, Telstra continues to dominate the retail fixed voice market with its market share remaining at 70 per cent. Optus is the second largest provider and has maintained its market share at approximately 12 per cent. Other providers account for approximately 17 per cent of the market.

⁸⁴⁴ Australian Communications and Media Authority, *Communications report 2009-10 series: Report 2 – Take-up and use of voice services by Australian consumers*, ACMA, November 2010, viewed 29 November 2011, p. 10-11.

Figure H.5: Fixed voice service shares by subscriber numbers 2006–07 to 2009–10⁸⁴⁵



During the same period, the total number of providers in the market for fixed voice services reduced by 85 to 306.⁸⁴⁶

Consistent with this is that while Telstra continues to dominate the provision of fixed voice services over its copper CAN, its retail share has decreased. This is attributable to the proportion of ULLS SIOs growing.

H.2.2 Bundled with broadband

Data specifically referring to market concentration of bundled fixed line voice and broadband internet is not readily available. As a result, broadband market share should be used as a representation.

It should be noted that the sale of products such as naked DSL (a product which utilises ULLS to provide DSL broadband without any fixed line voice service) and broadband-only HFC may alter the accuracy of this proxy.

Shown below is the DSL and DSL+HFC market shares of ISPs. In 2009-10, Telstra had a market share of approximately 40 per cent. While iiNet has become the second largest provider of DSL broadband, Optus (when its HFC network is included) is the second largest provider of fixed line broadband.

There is less market concentration for provision of broadband services than for fixed line voice-only services.

⁸⁴⁵ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 20.

⁸⁴⁶ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 20.

Figure H.6: DSL broadband share 2007–08 to 2009–10⁸⁴⁷

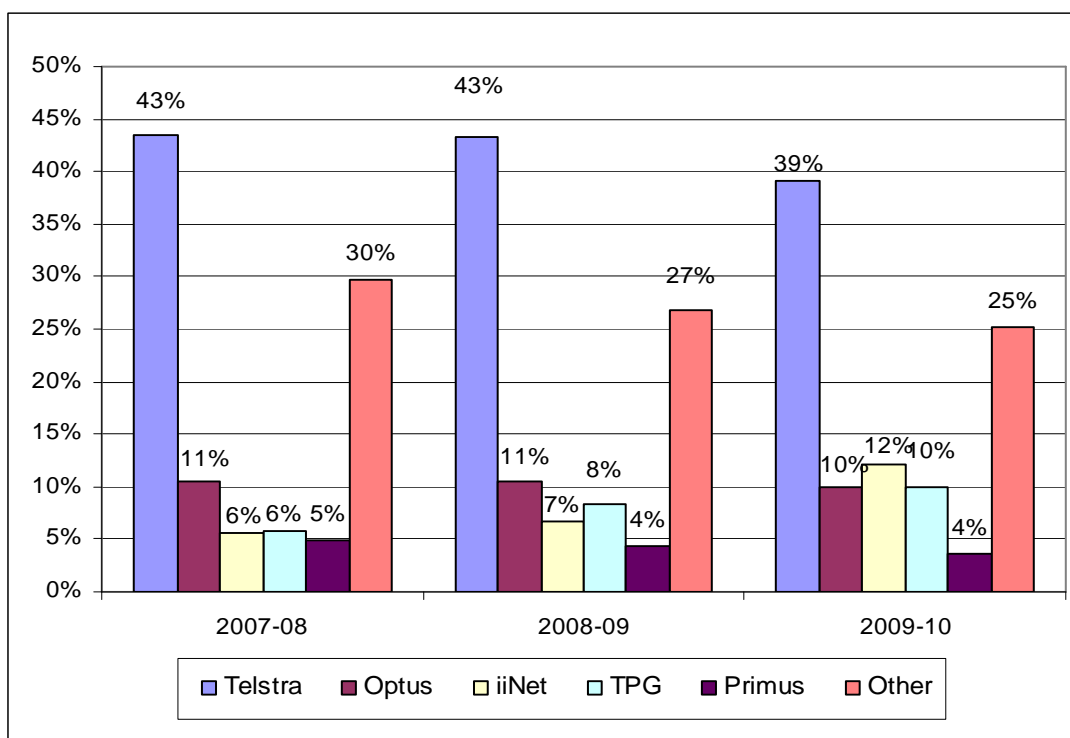
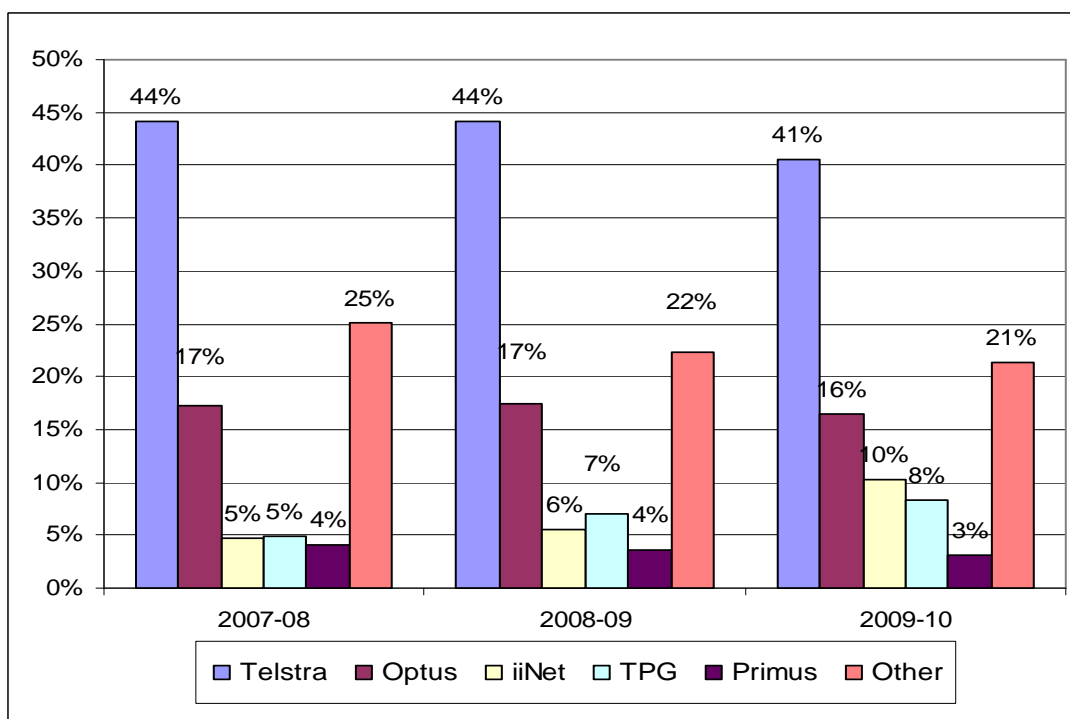


Figure H.7: Fixed broadband (DSL plus HFC) market share 2007–08 to 2009–10⁸⁴⁸



⁸⁴⁷ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 32.

⁸⁴⁸ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 34.

H.2.3 VoIP

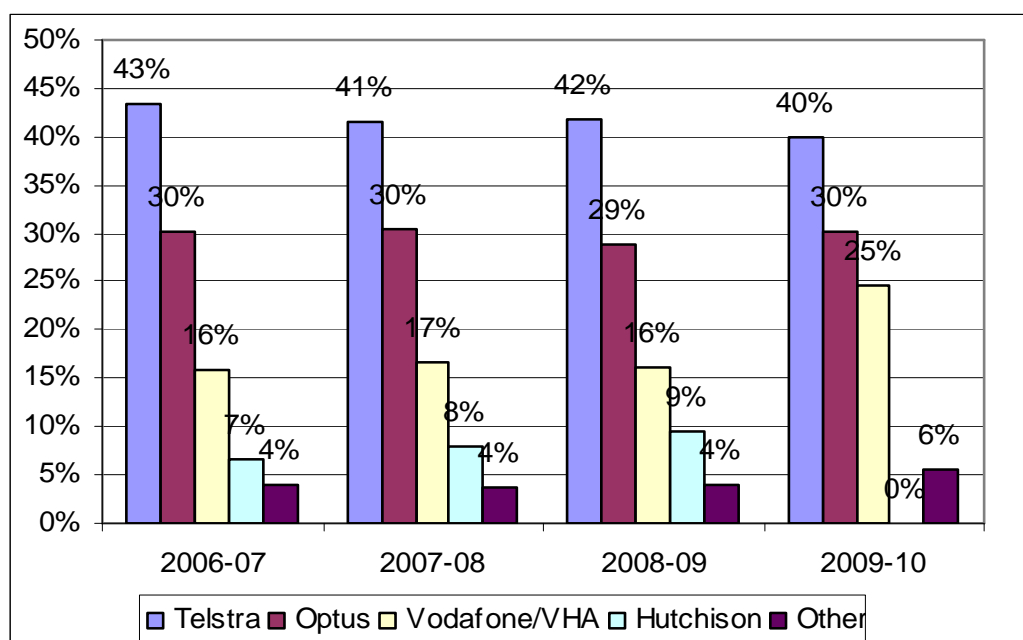
Detailed information on VoIP market shares is not readily available.

According to the Australian Bureau of Statistics, 61 per cent of ISPs offered VoIP services in June 2011.⁸⁴⁹ It is unclear whether VoIP in this instance refers to carrier grade VoIP or application-layer ('best efforts') VoIP services. It should also be noted that Telstra does not currently offer a high-volume VoIP service to residential customers.

H.2.4 Mobiles

In 2009 Vodafone and Hutchinson merged to reduce the number of Mobile Network Operators (MNO) from four to three. As depicted below, the market shares of the three remaining MNOs (Telstra, Optus and VHA) have converged.

Figure H.8: Market shares of major mobile carriers 2006–07 to 2009–10⁸⁵⁰



Another noticeable trend is that of the small increases in market share of the Virtual Mobile Network Operators (VMNO). In 2009-10, VMNOs accounted for 6 per cent of the mobile market, which was an increase from 2 per cent in the previous year.⁸⁵¹ VMNOs (e.g. Dodo, TPG, Amaysim, AAPT and Woolworths) are resellers of wholesale mobile services that are provided by the MNOs.

H.3 Price trends

H.3.1 Voice-only

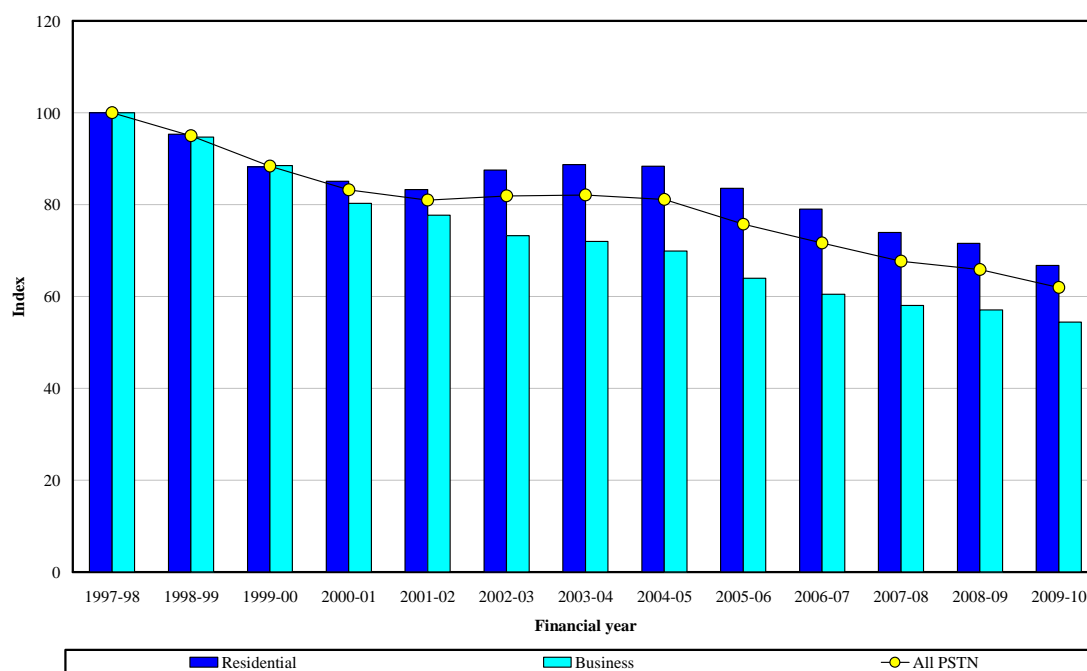
Average real prices for PSTN fixed line services decreased by 5.8 per cent in 2009-10. Since 1997-98, the PSTN fixed line index, as reported by the ACCC, has decreased by 38.0 per cent.

⁸⁴⁹ ABS, *8153.0-Internet Activity*, June 2011.

⁸⁵⁰ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 25.

⁸⁵¹ ACCC, *Telecommunications competitive safeguards for 2009-10*, May 2011, p. 25.

Figure H.9: PSTN services index by residential and business consumer group, 1997–98 to 2009–10⁸⁵²

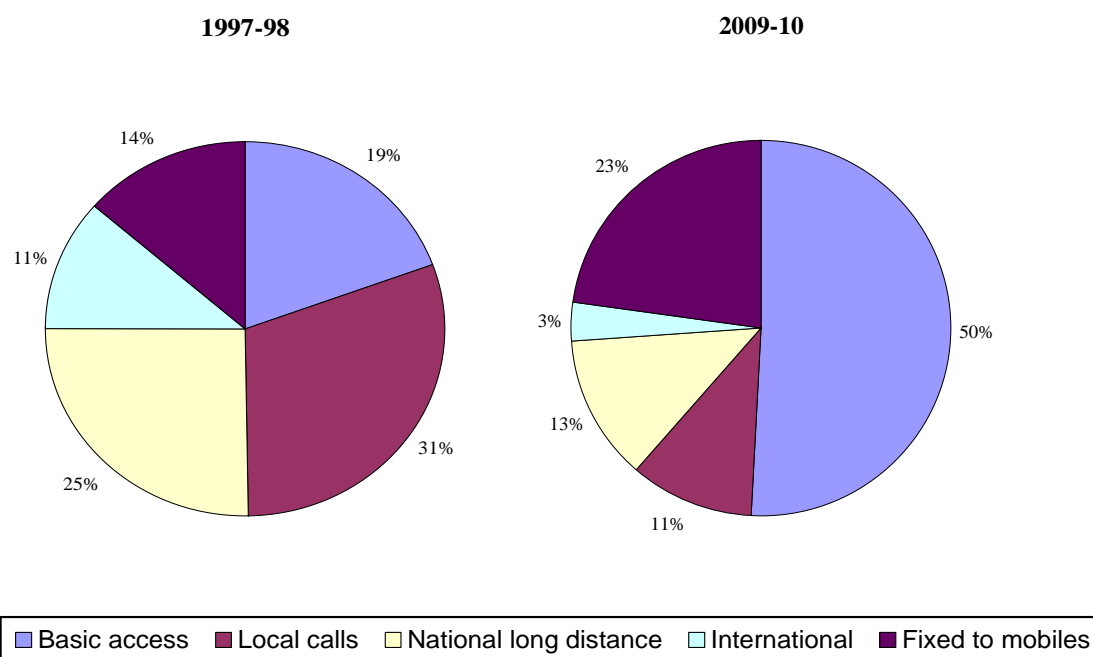


Consumers have benefited from decreasing real prices for all PSTN service types, with the exception of basic access.⁸⁵³ This has resulted in an increase in basic access as a proportion of consumer expenditure on all PSTN service types. In 1997-98, basic access accounted for 19 per cent relevant expenditure. By 2009-10, this number had risen to 50 per cent.

⁸⁵² ACCC, *Changes in the prices paid for telecommunications services in Australia 2009-10*, May 2011, p. 97.

⁸⁵³ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009-10*, May 2011, p. 97.

Figure H.10: Comparison of share of total consumer PSTN expenditure by service, 1997–98 and 2009–10⁸⁵⁴



H.3.2 Bundled with broadband

As identified earlier, prices for PSTN services have been trending downwards. Shown below, the real prices of unbundled DSL and HFC based broadband have been decreasing through the period of 2007-08 to 2009-10.

Table H.4: Year-on-year percentage changes in price indexes for internet services⁸⁵⁵

	2007–08	2008–09	2009–10
Dial-up	-11.0	-13.8	13.1
DSL	-5.2	-0.4	-2.0
Cable	-5.9	0.5	-1.1
Wireless	N/A	-18.5	-14.7
Overall	-6.2	-4.6	-4.9

The prices of bundled fixed line voice and broadband services should be assumed to be effectively linked to the prices of both unbundled services. This suggests that with

⁸⁵⁴ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009-10*, May 2011, p. 98.

⁸⁵⁵ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009-10*, May 2011, p. 119.

real prices of PSTN, DSL and HFC services decreasing, bundled fixed line voice and broadband services prices are expected to have decreased by a similar amount.

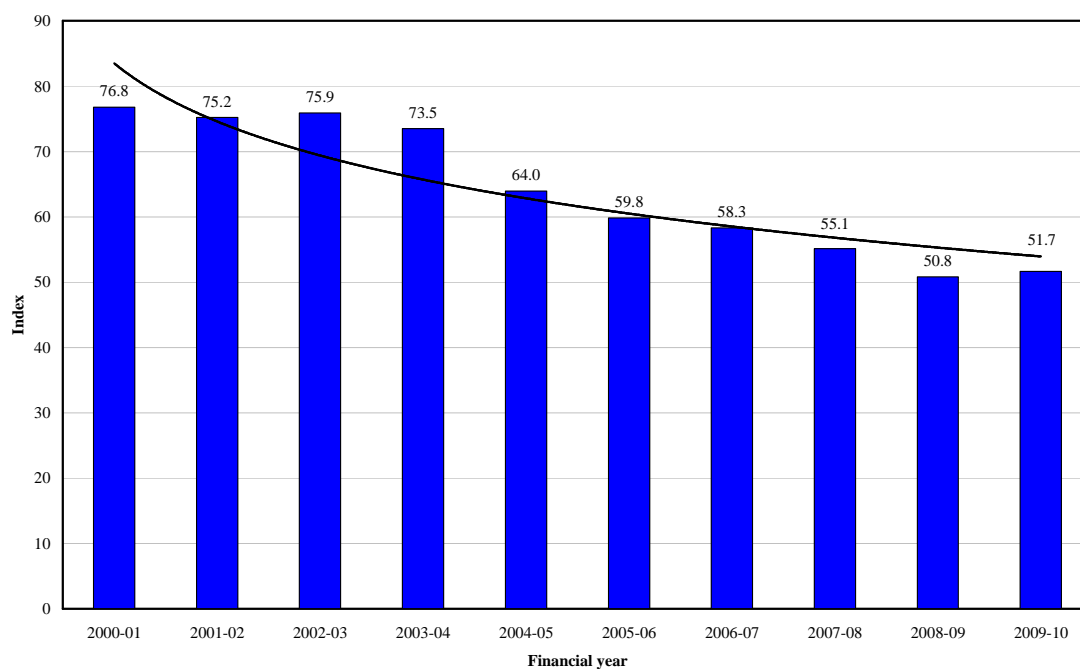
H.3.3 VoIP

VoIP price trend data is not readily available. Prices can vary depending on a number of factors. Such factors include whether supply of the VoIP service is on a pre-paid or contractual basis, a part of a bundle and whether it is carrier grade or application-layer ('best efforts') VoIP.

H.3.4 Mobiles

Since 1997-98, average prices for mobile phone services decreased by 48.3 per cent. In 2009-10, overall prices increased by 1.8 per cent. This slight increase appears to be due to a 10.5 per cent increase in the price of GSM services, a significant turnaround from the 10.8 per cent decrease in 2008-09. In 2009-10, the price of 3G mobile services decreased by 3.6 per cent.

Figure H.11: Overall mobile services index, 2000-01 to 2009-10⁸⁵⁶



⁸⁵⁶ ACCC, *Changes in the prices paid for telecommunications services in Australia 2009-10*, May 2011, p. 112.

Appendix I: Conditions on wholesale supply of voice-only services

This appendix identifies conditions placed by access providers on supplying wholesale voice-only services. Such conditions may increase the effective cost of purchasing a wholesale voice-only service from the access provider.

On 18 August 2011, the ACCC wrote to Telstra and a number of access seekers requesting market information relevant to the current state of competition in exempt and non-exempt areas. In its letter, the ACCC requested information about conditions on the supply of voice-only resale services, specifically any conditions on minimum contract length, minimum number of voice lines per address, and minimum purchase requirements. The ACCC received responses from AAPT⁸⁵⁷, Optus⁸⁵⁸ and Telstra.⁸⁵⁹

Access seekers also made submissions that identified conditions placed on the wholesale supply of resale voice-only services.

I.1 AAPT

In AAPT's response to the ACCC's request for information, AAPT submitted that it offers various wholesale voice-only products that are not based on reselling Telstra resale products.⁸⁶⁰ These products are: SIP [session initiation protocol] Trunks using VoIP; ISDN, which is a time-division multiplexing voice offering; and Access Advantage POTS and basic rate interface (BRI). Conditions are placed on the supply of these services:

- [c-i-c] [c-i-c]

[c-i-c] [c-i-c]⁸⁶¹

AAPT's ULLS-based voice service requires the customer to purchase [c-i-c] [c-i-c]⁸⁶²

AAPT submitted that [c-i-c] [c-i-c]⁸⁶³

I.2 Optus

Optus' closest equivalent to WLR is a residential grade service called Optus Wholesale Residential Broadband/Telephony (RBT). Optus' wholesale customers

⁸⁵⁷ AAPT, *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 21 September 2011.

⁸⁵⁸ Optus, *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 6 September 2011.

⁸⁵⁹ Telstra *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 2 September 2011.

⁸⁶⁰ AAPT, *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 21 September 2011, pp. 4-5.

⁸⁶¹ AAPT, *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 21 September 2011, p. 4.

⁸⁶² AAPT, Submission, October 2011, p. 29.

⁸⁶³ AAPT, Submission, October 2011, p. 6.

have the option to purchase voice-only services but these services must be purchased [c-i-c] [c-i-c].⁸⁶⁴

Optus provides [c-i-c] [c-i-c].^{865 866}

Optus Wholesale customers that purchase a business plan are charged [c-i-c] [c-i-c]

Optus imposes conditions on the supply of retail voice-only products, which [c-i-c] [c-i-c]

I.3 Telstra

Telstra submitted that [c-i-c] [c-i-c].⁸⁶⁷

Telstra does impose other wholesale customer terms.⁸⁶⁸ Telstra wholesale customers must have a centralised help desk to handle enquiries from end-users and perform initial diagnosis for end-users' service difficulties. Access seekers are charged \$50 if an end user incorrectly contacts Telstra's help desk.

Telstra wholesale customers may also have to pay a utilities tax charge in relation to the infrastructure used to provide services to the customer. Some Telstra plans are available to customers only if they preselect Telstra such as Telstra's various HomeLine plans.⁸⁶⁹

I.4 Macquarie Telecom

Macquarie Telecom noted that the conditions imposed on the supply of wholesale services by alternative suppliers to Telstra, [c-i-c] [c-i-c]. Macquarie Telecom stated: [c-i-c] [c-i-c].⁸⁷⁰

I.5 Primus

Primus submitted that 'alternative services cannot provide a viable substitute to Telstra services due to different supply conditions and availability relevant to the underlying ULLS'.⁸⁷¹

⁸⁶⁴ Optus, Submission, October 2011, p. 14.

⁸⁶⁵ Optus, Submission, October 2011, pp. 18-19.

⁸⁶⁶ Optus, Submission, October 2011, pp. 32-33.

⁸⁶⁷ Telstra *Fixed line services geographic exemptions – request for market information, Letter to the ACCC* (confidential), 2 September 2011.

⁸⁶⁸ The full set of wholesale customer terms and conditions is at <http://www.telstra.com.au/customer-terms/>.

⁸⁶⁹ Telstra, *Our customer terms: wholesale services*, p. 5, available at <http://www.telstra.com.au/customer-terms/download/document/hf-fixed-homeline.doc>.

⁸⁷⁰ Macquarie Telecom, Submission, October 2011, p. 10.

⁸⁷¹ Primus, Submission, October 2011, p. 4.

Appendix J: Cost of infrastructure investments

This appendix outlines information submitted in response to the ACCC's September 2011 issues paper and during previous inquiry processes on the costs of, and barriers to, infrastructure investment.

The first section of this appendix summarises parties' views on the costs of infrastructure investment. The second section identifies other potential barriers to infrastructure investments identified by access seekers. The final section sets out the parties' estimates of payback periods for infrastructure investments.

J.1 Costs of infrastructure used to provide voice services

This section summarises the information submitted on digital subscriber line access multiplexer (DSLAM) installation costs, associated costs and expansion costs. It also includes information on other costs incurred in providing voice services.

J.1.1 DSLAM installation costs

Information received in previous exemption inquiries

In its supporting submission to its application for exemption in relation to public switched telephone network originating access (PSTN OA) in October 2007, Telstra submitted that the sunk costs faced by access seekers investing in DSLAMs are not a material barrier to entry.⁸⁷² Telstra submitted that access seekers did not face material barriers to entry for several reasons:

- Entrants do not face materially higher sunk costs than Telstra in relation to investments in DSLAMs—a significant proportion of the costs associated with DSLAM investments is unlikely to be sunk.
- Entrants do not face materially higher minimum efficient scale barriers than Telstra in relation to investments in DSLAMs—DSLAMs are becoming increasingly scalable and access seekers are able to supply both voice and data services over their network infrastructure. Therefore, access seekers will not face prohibitive difficulty in reaching minimum efficient scale.
- There are no technical constraints on DSLAM-based competitors providing a standard telephone service (STS) of an equivalent quality to Telstra's STS.
- Entrants do not face materially higher backhaul transmission costs than Telstra in relation to investment in DSLAMs—backhaul transmission can be purchased from a number of providers in Telstra's proposed exempt exchange service areas (ESAs).
- Non-price impediments to DSLAM-based entry and expansion do not pose material barriers to competitors—Telstra must comply with the standard access obligations in relation to the ULLS and LSS, and would be constrained under

⁸⁷² Telstra, *Submission to the ACCC: Telstra's PSTN originating access exemption applications – Supporting submission*, October 2007, p. 41.

Part XIB of the *Trade Practices Act 1974* from engaging in anti-competitive conduct.⁸⁷³

In October 2007, Telstra submitted a report by Mr Craig Lordan estimating the costs of DSLAM materials and installation. In this report, Lordan estimated that the total cost of installing a 300-port DSLAM would be \$13,000, based on a per port charge of \$35 and an installation cost of \$2,500.⁸⁷⁴ Telstra submitted Lordan's updated cost estimates in June 2011, which are summarised below, and in sections J.1.2 and J.1.3. A more detailed summary of Telstra's past submissions to exemption inquiries, including Lordan's previous report, is provided in Appendix D.

Submissions to the September 2011 issues paper

AAPT submitted that DSLAM installation costs are unlikely to exceed [c-i-c] [c-i-c], although the cost will vary depending on the amount of cabling required at a particular DSLAM. However, backhaul costs could increase installation costs significantly.⁸⁷⁵

Optus submitted that the ACCC had underestimated the costs of installing a DSLAM. It estimated that the cost of installing a single DSLAM is around [c-i-c] [c-i-c].⁸⁷⁶ This figure includes costs associated with: [c-i-c] [c-i-c].⁸⁷⁷ Optus submitted that further costs must be considered when investing in DSLAMs. Optus makes the following cost assumptions per DSLAM: [c-i-c] [c-i-c].⁸⁷⁸ Optus submitted two examples of costs it had incurred in investing in DSLAMs: the first example showed materials costs from vendors of [c-i-c] [c-i-c] and the second example showed that Optus incurred [c-i-c] [c-i-c].

Telstra referred to a report on DSLAM costs prepared for it by its consultant, Mr Lordan, on 30 May 2011. Lordan estimated that the total cost associated with the supply and installation of a 300-port DSLAM is between \$11,705 and \$13,705, consisting of a per port cost of between \$30 and \$35, and an infrastructure installation cost of \$2,705.⁸⁷⁹ Lordan stated that the estimated cost includes the cost of equipment and labour but excludes other costs such as third party site costs, costs of network management, power cabling to rack, backhaul transmission infrastructure, carrier management and service activation.⁸⁸⁰

Macquarie Telecom submitted a detailed model on the business case for investing in DSLAMs to replace the PSTN and ADSL resale services it acquires. Macquarie submitted that the model shows that [c-i-c] [c-i-c]. It submitted that the total capital

⁸⁷³ *ibid.*

⁸⁷⁴ Telstra, *Public inquiry to make Final Access Determinations for the declared fixed line services – Part C of Telstra's response to the Commission's discussion paper: Schedule C.1 – Update of expert opinion on the cost of DSLAM infrastructure*, June 2011, p. 2.

⁸⁷⁵ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 23.

⁸⁷⁶ Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 35 (public p. 34).

⁸⁷⁷ *ibid.*

⁸⁷⁸ *ibid.*, confidential p. 38 (public p. 34).

⁸⁷⁹ Telstra, *Public inquiry to make Final Access Determinations for the declared fixed line services – Part C of Telstra's response to the Commission's discussion paper: Schedule C.1 – Update of expert opinion on the cost of DSLAM infrastructure*, June 2011, p. 3.

⁸⁸⁰ *ibid.*

expenditure needed to supply these services at a new exchange would be [c-i-c] [c-i-c].⁸⁸¹

J.1.2 Other costs associated with DSLAM investments

Submissions to the September 2011 issues paper

Optus submitted that there are three types of ‘operating costs’ incurred ‘per DSLAM build’: Telstra fees; site establishment fees; and common build costs.⁸⁸² Optus submitted that the average cost of power per DSLAM per year was [c-i-c] [c-i-c]. The annual fee for rental of a first rack in an exchange in 2010–11 was [c-i-c] [c-i-c]. The rental cost of subsequent racks in an exchange building was around [c-i-c] [c-i-c] of the cost for the first rack. Optus submitted that the total interconnect cable cost per DSLAM was [c-i-c] [c-i-c] in 2010–11.

Telstra referred to a report prepared for it by Mr Craig Lordan on the ongoing operating costs of a DSLAM.⁸⁸³ Lordan estimated that the total annual ongoing cost per DSLAM port in an exchange is between \$10.30 and \$35.75,⁸⁸⁴ which equates to an annual operating cost for a 300-port DSLAM of between \$3,090 and \$10,725.⁸⁸⁵

Macquarie Telecom submitted that total operating expenditure would be [c-i-c] [c-i-c] per exchange per annum.⁸⁸⁶ Macquarie submitted that [c-i-c] [c-i-c].

J.1.3 DSLAM expansion costs

Submissions to the September 2011 issues paper

Optus stated that expanding a DSLAM’s capacity by adding a single voice card would cost a total of [c-i-c] [c-i-c]. Installing each subsequent card during the same site visit would cost [c-i-c] [c-i-c].⁸⁸⁷

Telstra referred to Lordan’s report on DSLAM costs and submitted that the costs of expanding supply of carrier-grade voice services would depend on the method used to provide the services. Lordan estimated that it would cost an access seeker \$900 to expand a DSLAM by installing a 24-port voice card, assuming that the access seeker’s equipment has sufficient space to accommodate the new card.⁸⁸⁸ The provision of a carrier-grade VoIP service would require the purchase of analogue

⁸⁸¹ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

⁸⁸² Optus, *Submission by Optus in response to the ACCC’s issues paper*, October 2011, confidential p. 36 (public p. 34).

⁸⁸³ Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment H – DSLAM voice service delivery costs*, October 2011, p. 12.

⁸⁸⁴ Consisting of \$2.40 for supplier support, \$0.85 per technician, and [c-i-c] [c-i-c]. Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, p. 50 (40).

⁸⁸⁵ Lordan (on p. 11) notes that his estimates of DSLAM operating costs exclude the costs of backhaul, which may vary considerably depending on an access seeker’s choices regarding location and delivery model.

⁸⁸⁶ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

⁸⁸⁷ Optus, *Submission by Optus in response to the ACCC’s issues paper*, October 2011, confidential p. 37 (public p. 34).

⁸⁸⁸ Telstra, *Response to the ACCC’s inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment H – DSLAM voice service delivery costs*, October 2011, p. 16.

telephone adapter equipment by a customer: Lordan submitted that this cost was typically passed on to customers by providers of carrier-grade VoIP services.⁸⁸⁹

J.1.4 Other costs incurred in providing voice services

Submissions to the September 2011 issues paper

Telstra submitted that an access seeker already supplying DSL services would incur upfront costs of between \$32 and \$67 per service to add voice services.⁸⁹⁰ This range of costs was based on calculations by Lordan, based on assumptions about the number of customers served, the size of the access seeker's core network, and the billing system used by the access seeker.⁸⁹¹

Lordan submitted that if an access seeker already supplied retail carrier-grade voice services, it would not need to incur any additional network equipment costs to supply wholesale resale voice services.⁸⁹² However, the access seeker's retail voice billing system would require modification for each third-party wholesale customer, which Lordan estimated would cost around \$15,000 for each wholesale customer.⁸⁹³

In a report prepared for Telstra, Mr Alex Sundakov estimated the cost for an alternative wholesale provider to commence providing resale fixed line voice services. Sundakov used cost estimates from Lordan's report, where available, and estimates of other costs that may be incurred in providing resale fixed line voice services.⁸⁹⁴ Estimated costs comprised: [c-i-c] [c-i-c].⁸⁹⁵

Sundakov estimated costs for four different types of providers: an existing voice and data provider; an existing data operator; a new entrant, entering at both the wholesale and retail levels; and a new entrant, entering as a wholesale provider only. Existing providers were assumed not to incur additional costs associated with installing DSLAMs, billing systems, set-up of the business, accommodation and switching, since these costs were already incurred for their existing operations. New entrants were assumed to incur these costs when they commence supplying voice services. Some types of costs were assumed to be common to all providers, such as the costs of connecting new services, the cost of acquiring the ULLS, and costs associated with local call termination.

Macquarie Telecom submitted that the cost of providing a voice service—consisting of a SIP PSTN/voice network channel, backhaul and the cost of ULLS—would be [c-i-c] [c-i-c] per annum.⁸⁹⁶ The cost of providing backhaul for an additional data service would be [c-i-c] [c-i-c] per annum.

⁸⁸⁹ *ibid.*

⁸⁹⁰ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper*, October 2011, confidential p. 51 (public p. 40).

⁸⁹¹ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment H – DSLAM voice service delivery costs*, October 2011, p. 22.

⁸⁹² *ibid.*, p. 23.

⁸⁹³ *ibid.*, p. 24.

⁸⁹⁴ Telstra, *Response to the ACCC's inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services – Issues paper: Attachment G*, October 2011.

⁸⁹⁵ *ibid.*, pp. 64–66.

⁸⁹⁶ Macquarie Telecom, *PSTN voice replacement – business model*, November 2011.

The models submitted by Telstra (model prepared by Sundakov) and Macquarie Telecom are not directly comparable. The models make fundamentally different assumptions, both in terms of the business model pursued by the access seeker, and in terms of the cost inputs. While Sundakov’s model assumes that the access seeker continues to serve customers until [c-i-c] [c-i-c], Macquarie Telecom’s model only assesses the period until [c-i-c] [c-i-c].

The assumptions the two models make with regard to the number and location of customers served are also significantly different. Macquarie Telecom’s model assumes that a total of [c-i-c] [c-i-c] PSTN services are provided to customers in [c-i-c] [c-i-c] ESAs. By contrast, Sundakov’s model generally assumes a much greater level of demand for services from the access seeker: the low demand scenario assumes that [c-i-c] [c-i-c] customers are served, while the high demand scenario assumes that [c-i-c] [c-i-c] customers are served.

Importantly, Sundakov’s model assumes that DSLAMs are fully utilised in serving the access seeker’s customers, while Macquarie Telecom’s model assumes that DSLAMs are rolled out to all ESAs—even those containing a limited number of customers that require a voice service. For example, to serve 1,200 customers, Sundakov’s model assumes that four 300-port DSLAMs would be required, whereas Macquarie Telecom’s model assumes that the 1,200 customers are spread out across a number of ESAs. This necessarily means DSLAM installation costs and associated costs—such as leasing and maintenance—are incurred in more locations under Macquarie Telecom’s assumptions.

As noted earlier in this appendix, submitting parties have provided substantially different estimated costs of infrastructure. The differences are also reflected in the two models’ estimated costs. The ACCC also notes that a number of costs that appear to be relevant to the provision of services, and appear in Macquarie Telecom’s model, are not included in Sundakov’s model.

The ACCC has had regard to the results produced by both models. The ACCC considers that Sundakov’s model may provide a lower bound estimate of the threshold WLR price that would make investment in DSLAM infrastructure for the provision of voice services viable, while Macquarie Telecom’s model may provide an upper bound estimate.⁸⁹⁷ The ACCC notes that both models produce estimates of the threshold price that are above the current WLR price in exempt ESAs.

J.2 Barriers to infrastructure investment

This section summarises barriers to infrastructure investment identified by access seekers. Barriers identified include: pair gain systems and minimum efficient scale; capped exchanges, sub-exchanges and queuing; and other barriers, such as power restrictions and barriers to resale-based entry.

⁸⁹⁷ The ACCC has also identified what appear to be errors and/or inconsistencies in Sundakov’s model. For example, the maintenance costs for each type of provider outlined in Sundakov’s explanatory document do not seem to be consistent with the maintenance costs in the model. The explanatory document and model also appear to be inconsistent with regard to site lease costs. However, the effect of these inconsistencies on the model’s overall conclusions may not be material.

J.2.1 Pair gain systems and minimum efficient scale

Information received in previous exemption inquiries

Pair gain systems were identified as a barrier to ULLS-based provision of services by several access seekers during the ACCC's inquiry to make PSTN OA exemptions in 2008.⁸⁹⁸ While the Tribunal initially considered that a 'pair gain condition' should apply—that is, that the exemptions should not apply to a service in operation (SIO) in respect of which an end-user cannot be supplied by way of the ULLS⁸⁹⁹—the Tribunal did not include a pair gain condition in either of its final decisions (for LCS/WLR and PSTN OA) because it would be 'complex and costly' for Telstra to implement⁹⁰⁰ and because the 'benefit to be derived from the condition would be outweighed by those costs and difficulties [of implementing it]'.⁹⁰¹

Access seekers discussed pair gain systems in the context of the barrier they presented to reaching minimum efficient scale (MES): MES is the minimum number of customers than must be served to make entry viable. In its submission to the ACCC's October 2007 Discussion Paper on PSTN OA exemptions, Telstra submitted that the MES for ULLS-based entry is at most [c-i-c] [c-i-c] SIOs in an ESA and may be as low as [c-i-c] [c-i-c] SIOs.⁹⁰² Optus submitted that the MES was significantly higher, at around [c-i-c] [c-i-c] SIOs, and questioned the validity of some of the assumptions used by Telstra in its MES analysis.⁹⁰³

Submissions to the September 2011 issues paper

AAPT submitted that the number of large pair gain systems deployed by Telstra was increasing and this was significantly reducing the number of prospective customers which access seekers could gain in an ESA.⁹⁰⁴ AAPT submitted that, if the exemptions are to continue, the ACCC should impose conditions specifying that the exemptions do not apply where an end-user cannot be supplied by way of the ULLS as a result of pair gain systems (or other factors).⁹⁰⁵

Macquarie Telecom submitted that there were material barriers to entering the voice-only market, including achieving MES and commercial uncertainty as a result of the NBN.⁹⁰⁶

⁸⁹⁸ ACCC, *Telstra's PSTN originating access exemption application – CBD and metropolitan areas – Final decision and class exemptions*, October 2008, p. 173 (ACCC PSTN OA Decision). The PSTN OA final decision is available at:

<http://www.accc.gov.au/content/index.phtml?itemId=800826>.

⁸⁹⁹ Australian Competition Tribunal, *Application by Chime Communications Pty Ltd (No 2)* [2009] ACompT 2, at [156].

⁹⁰⁰ Australian Competition Tribunal, *Application by AAPT Limited (No 2)* [2009], at [9].

⁹⁰¹ Australian Competition Tribunal, *Application by Chime Communications Pty Ltd (No 3)* [2009] ACompT 4, at [24].

⁹⁰² Telstra, *Telstra response to questions from ACCC discussion paper of October 2007 in respect of the PSTN Originating Access Service*, December 2007, p. 27.

⁹⁰³ Optus, *Optus Submission to the Australian Competition and Consumer Commission on Telstra's PSTN OA Service Exemption Application*, December 2007, p. 9.

⁹⁰⁴ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 3.

⁹⁰⁵ *ibid.*, p. 13.

⁹⁰⁶ Macquarie Telecom, *Submission by Macquarie Telecom in response to the ACCC's issues paper*, October 2011, p. 12.

Optus submitted that the presence of pair gain systems caused Optus to rely on resale services purchased from Telstra in some areas.⁹⁰⁷ Optus also referred to its submission to the April 2011 discussion paper during the FAD inquiry, where it had submitted that the exemptions should not apply to lines affected by a pair gain system.⁹⁰⁸

J.2.2 Capped exchanges, sub-exchanges and queuing

Information received in previous exemption inquiries

Capped exchanges and queuing were identified as barriers to entry by several access seekers in the ACCC's previous exemption inquiries. In its 2008 final decision on LCS and WLR exemptions, the ACCC recognised that capped exchanges presented a significant barrier to entry: 'if an exchange is classed by Telstra as capped...then that exchange is currently effectively closed to new DSLAM entrants. In addition, access seekers with existing deployments...will be precluded from deploying further equipment in that exchange.'⁹⁰⁹

During the LCS and WLR exemption inquiry in 2007–08, both Chime and Adam Internet submitted that ESAs with 'unreasonable queues' should also be excluded from the list of exempt ESAs for the same reasons as ESAs with capped exchanges should be excluded.⁹¹⁰

Submissions to the September 2011 issues paper

AAPT submitted that Telstra's creation of sub-exchanges⁹¹¹ was resulting in major delays in accessing Telstra's Telstra Exchange Building Access (TEBA) space.⁹¹² AAPT stated that access seekers potentially have to queue, and invest, twice in order to serve customers serviced by a sub-exchange. AAPT submitted that Telstra should be required to inform access seekers about the building of, or intention to build, sub-exchanges, in order to avoid access seekers queuing at the wrong building.⁹¹³

AAPT also submitted that sub-exchanges were reducing the number of prospective customers that an access seeker could serve.⁹¹⁴ Access seekers are unable to reach customers when a sub-exchange is too small to accommodate access seekers'

⁹⁰⁷ Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 25 (public p. 25).

⁹⁰⁸ Optus, *Submission by Optus in response to the ACCC's discussion paper: Public inquiry to make final access determinations for the declared fixed line services*, June 2011, p. 40.

⁹⁰⁹ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemptions*, August 2008, p. 81 (ACCC LCS and WLR Decision). The LCS and WLR final decision is available at: <http://www.accc.gov.au/content/index.phtml/itemId/801246>.

⁹¹⁰ *ibid.*, pp. 65–66.

⁹¹¹ The creation of a sub-exchange involves Telstra re-allocating a geographic portion of an existing ESA's customers to a new sub-exchange. Customers re-allocated to the sub-exchange are no longer served by the main exchange in the ESA.

⁹¹² AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 3.

⁹¹³ *ibid.*

⁹¹⁴ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 3.

equipment.⁹¹⁵ AAPT submitted that the number of sub-exchanges was increasing, which was serving as an impediment to ULLS-based supply.

J.2.3 Other barriers to entry

Information received in previous exemption inquiries

During the LCS and WLR exemption inquiry in 2007–08, Optus submitted that additional barriers to entry included: uncertainty over ULLS access and pricing; non-price issues subject to access disputes; and Telstra augmentation of its network, which could impact on access seekers' use of the ULLS.⁹¹⁶

Submissions to the September 2011 issues paper

AAPT submitted that several supply factors—such as access to TEBA space, power, main distribution frame (MDF) cabling and access to backhaul—were important in determining whether it was viable to offer services using its own equipment. AAPT stated that it had deployed DSLAMs in outdoor cabinets and commercial buildings in order to supply services in the absence of some of these factors.⁹¹⁷ AAPT submitted that in some cases access seekers were required to carry out extensive power or TEBA space upgrades before they were able to deploy infrastructure.⁹¹⁸ AAPT stated that power restrictions imposed by Telstra have prevented it from expanding its infrastructure in ESAs where it already has a presence.⁹¹⁹

Macquarie Telecom submitted that investment in infrastructure was subject to risk arising from Telstra's market power.⁹²⁰ Macquarie Telecom submitted that Telstra could potentially harm competition after access seekers have invested by reducing its retail prices (price squeeze behaviour) or by interfering with the provision of ULL services.⁹²¹

Macquarie Telecom submitted that the absence of wholesale resale services would create significant market entry barriers because entrants would need to replicate network infrastructure.⁹²² Additionally, the absence of alternative wholesale suppliers (that is, other than Telstra) was a barrier to entry by reselling services as the lack of wholesale competition allows Telstra to charge different prices in exempt and non-exempt areas.⁹²³

Optus submitted that resale services are 'a critical stepping stone' for potential service providers. It considered, therefore, that maintaining the exemptions would discourage

⁹¹⁵ *ibid.*, p. 14.

⁹¹⁶ Optus, *Optus Submission to the Australian Competition and Consumer Commission on Telstra's PSTN OA Service Exemption Application*, December 2007, pp. 21–22.

⁹¹⁷ AAPT, *Submission by AAPT in response to ACCC issues paper titled inquiry into varying the exemption provisions in the final access determinations for the WLR, LCS and PSTN OA services*, October 2011, p. 22.

⁹¹⁸ *ibid.*, p. 28.

⁹¹⁹ *ibid.*

⁹²⁰ Macquarie Telecom, *Submission by Macquarie Telecom in response to the ACCC's issues paper*, October 2011, p. 8.

⁹²¹ *ibid.*

⁹²² *ibid.*, p. 5.

⁹²³ *ibid.* p. 17.

entry and reduce the intensity of retail competition, both before and after the NBN roll-out.⁹²⁴

J.3 Time taken to recover investments in infrastructure

This section summarises submissions received on the time taken to recover investments in infrastructure or ‘payback periods’. For each type of network infrastructure, access seekers’ submissions on the impact of the National Broadband Network (NBN) on payback periods are also provided

J.3.1 Payback periods for DSLAMs

Information received in previous exemption inquiries

During the LCS and WLR exemption inquiry in 2007–08, Optus commented on the ACCC’s view that an efficient access seeker could make a return on its DSLAM investment within two years.⁹²⁵ Optus submitted that an efficient access seeker may take two years to earn a return on an incremental DSLAM investment but it would take longer than two years for an efficient resale-based access seeker to make a return on the full cost of investments needed to self-supply voice services.⁹²⁶ Costs associated with backhaul, provisioning systems and network management systems would be incurred in addition to the DSLAM costs.⁹²⁷ Optus stated that its own consumer DSLAM roll-out payback period was [c-i-c] [c-i-c] years.⁹²⁸

Optus submitted that the considerable uncertainty about the timing of the (then fibre to the node) NBN roll-out meant that access seekers increased the risk that they would not earn a return on their infrastructure investments.⁹²⁹

Submissions to the September 2011 issues paper

The Competitive Carriers’ Coalition submitted that several factors—including the potential for exchanges to become capped and uncertainty over the transition to the NBN—were making it difficult to forecast payback periods and therefore deterring investment.⁹³⁰

Herbert Geer (on behalf of Adam Internet, iiNet and Internode) submitted that the NBN had ‘not yet totally extinguished every conceivable business case for continued investments in ULLS based infrastructure’, noting iiNet’s statement that it would continue rolling out regional DSLAMs where it could identify a positive business case.⁹³¹ However, Herbert Geer submitted that at some point in the future, investment

⁹²⁴ Optus, *Submission by Optus in response to the ACCC’s issues paper*, October 2011, p. 13.

⁹²⁵ ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications – Final decision and class exemptions*, August 2008, p. 74 (ACCC LCS and WLR Decision). The LCS and WLR final decision is available at:
<http://www.accc.gov.au/content/index.phtml/itemId/801246>.

⁹²⁶ Optus, *Optus Public Submission to the Australian Competition and Consumer Commission in response to Draft Decision on Telstra’s LCS and WLR Exemption Applications*, June 2008, p. 13.

⁹²⁷ *ibid.*

⁹²⁸ *ibid.*

⁹²⁹ *ibid.*

⁹³⁰ Competitive Carriers’ Coalition, *Submission by the CCC in response to the ACCC’s issues paper*, October 2011, pp. 2–3.

⁹³¹ Herbert Geer (on behalf of Adam Internet, iiNet and Internode), *Submission by the Herbert Geer in response to the ACCC’s issues paper*, October 2011, p. 3.

in ULLS-based infrastructure would no longer be viable because the NBN will make ULLS-based infrastructure obsolete.⁹³²

Macquarie Telecom submitted that it was unlikely that access seekers would be able to recover investment costs of DSLAMs/MSANs before the NBN was rolled out.⁹³³ It also stated that it may be inefficient to invest in these assets given that they would have no use in the NBN environment and therefore would be stranded before the end of their useful lives.⁹³⁴

Optus submitted that the NBN had influenced its recent investment decisions, noting that [c-i-c] [c-i-c].⁹³⁵ Optus submitted that the ACCC may have underestimated the time necessary to recover DSLAM investments as it had not considered the long lead times involved in DSLAM investment.⁹³⁶ Optus stated that the lead time for DSLAMs in ESAs where it already had a presence was in excess of [c-i-c] [c-i-c], due to factors such as planning, funding approval and construction. The lead time would be longer for DSLAM deployment in ESAs where Optus did not already have a presence.⁹³⁷

In its supplementary submission on 24 October 2011, Optus submitted that access seekers would not invest in any of the ESAs included in NBN Co's 12 month construction schedule as there would be insufficient time to recover the DSLAM investment costs.⁹³⁸ Optus also submitted that access seekers were unlikely to invest in other ESAs in the post-January 2012 period because of uncertainty about NBN Co's construction plan for the following 12 months.⁹³⁹

⁹³² *ibid.*

⁹³³ Macquarie Telecom, *Submission by Macquarie Telecom in response to the ACCC's issues paper*, October 2011, p. 14.

⁹³⁴ *ibid.*, p. 3.

⁹³⁵ Optus, *Submission by Optus in response to the ACCC's issues paper*, October 2011, confidential p. 6 (public p. 6).

⁹³⁶ *ibid.*, confidential p. 7 (public p. 6).

⁹³⁷ *ibid.*, confidential p. 7 (public p. 6).

⁹³⁸ Optus, *Supplementary submission by Optus in response to the ACCC's issues paper*, October 2011, p. 1.

⁹³⁹ *ibid.*

Appendix K: Declaration of the LCS, WLR and PSTN OA services

This appendix summarises the service descriptions for the local carriage service (LCS), wholesale line rental (WLR) and public switched telephone network originating access (PSTN OA) services. The complete service descriptions are available on the ACCC's website. It summarises the ACCC's reasons for declaring, and subsequently granting exemptions for, these services.

K.1 LCS and WLR

K.1.1 Definition of LCS and WLR services

Local carriage service

The LCS provides end-to-end voice-grade carriage of telephone calls between two points within a standard zone.⁹⁴⁰ The declaration for the LCS excludes local carriage services that originate from exchanges located within a Central Business District Area⁹⁴¹ of Sydney, Melbourne, Brisbane, Adelaide or Perth and terminate within the standard zone that encompasses the originating exchange.⁹⁴² The Central Business District Areas of Sydney, Melbourne, Brisbane, Adelaide and Perth are equivalent to the Band 1 exchange service areas (ESAs).

The LCS is a resale service. It is used by access seekers to supply end-users with local telephone calls without having to invest in their own infrastructure for delivering the end-to-end call service to end-users. The access provider supplies the call service between the caller and the called party on behalf of the access seeker.⁹⁴³ However, access seekers may choose to provide additional elements or services in conjunction with the LCS, such as long distance calls and line rental.⁹⁴⁴ Generally, access seekers purchase the LCS in combination with the WLR service.⁹⁴⁵

Access to the LCS facilitates competition in downstream retail markets for fixed line voice services. Such competition may result in lower retail prices, improved customer service, and other benefits to end-users. Access to the LCS also enables service providers to supply local telephone calls as part of a bundle of local and long distance

⁹⁴⁰ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final Report*, July 2011, p. 169, available at: <http://www.accc.gov.au/content/index.phtml/itemId/990530>.

⁹⁴¹ Central Business District (CBD) Area means the exchange service areas that are classified as CBD for the purposes of the ordering and provisioning procedures set out in the Telstra Ordering and Provisioning Manual as in force on the date of effect of the renewed declaration.

⁹⁴² ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR – Final decision*, July 2009, p. 134, available at: <http://www.accc.gov.au/content/index.phtml/itemId/719844>.

⁹⁴³ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemption*, August 2008, p. 13, available at: <http://www.accc.gov.au/content/index.phtml/itemId/840467>.

⁹⁴⁴ *ibid.*

⁹⁴⁵ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final report*, July 2011, p. 169.

telephony services to end-users who prefer to purchase both telephony services from a single provider.⁹⁴⁶

Wholesale line rental

The WLR service allows access seekers to resell Telstra's basic line rental service which provides end-users with access to the traditional voice network,⁹⁴⁷ a telephone number and the ability to make and receive 3.1 kilohertz bandwidth voice calls (subject to any conditions that might apply to particular types of calls). The declaration for the WLR service excludes wholesale line rental telephone services supplied within the Central Business District Areas of Sydney, Melbourne, Brisbane, Adelaide and Perth.⁹⁴⁸

As with the LCS, the WLR service is a resale service. It is used by access seekers to supply end-users with access to the traditional voice network without having to invest in their own infrastructure. Access seekers may seek to provide other elements or services in conjunction with the line rental service, such as local and long distance telephone calls and broadband services.⁹⁴⁹

K.1.2 Declaration of LCS and WLR services

The LCS was first declared by the ACCC in August 1999, following a public inquiry into whether to declare, under Part XIC of the *Trade Practices Act 1974*, particular wholesale local telecommunication services.⁹⁵⁰

The WLR service was first declared by the ACCC, as part of the Local Services Review, for a period of three years commencing on 1 August 2006. At the time of declaration, the ACCC noted that '[w]hile not currently declared, the line rental service is at present provided and priced through the supply of the LCS, and thus is effectively declared on a de facto basis'.⁹⁵¹ The ACCC considered that explicit declaration would promote competition in downstream retail markets by providing access seekers with certainty over the supply and pricing of the WLR service.

The declarations of the LCS and WLR services addressed a market failure resulting from the natural monopoly characteristics of bottleneck telecommunication facilities.

⁹⁴⁶ ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999, p. 104, available at: <http://www.accc.gov.au/content/index.phtml/itemId/772069>.

⁹⁴⁷ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final report*, July 2011, p. 168.

⁹⁴⁸ ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR – Final decision*, July 2009, p. 135.

⁹⁴⁹ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemption*, August 2008, p. 13.

⁹⁵⁰ ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999, p. 1.

⁹⁵¹ ACCC, *Local services review*, July 2006, p. 47, available at: <http://www.accc.gov.au/content/index.phtml?itemId=756967>.

The ACCC found that the wholesale supply of both the LCS and WLR services was not effectively competitive.⁹⁵² Moreover, the LCS and WLR services were essential inputs for the supply of fixed-voice services in downstream retail markets, for which no effective substitute was available outside of the major CBD areas.⁹⁵³

Without declaration, access seekers may have been unable to obtain access to WLR and LCS services on reasonable terms and conditions, which could impede competition in downstream retail markets.⁹⁵⁴ The ACCC considered that declaration of the LCS and WLR services would reduce the vulnerability of retail service providers to suppliers of the LCS and WLR services and facilitate competition in downstream markets for local telephony services.⁹⁵⁵

The LCS and WLR declarations were also expected to encourage economically efficient infrastructure usage and investment, by allowing access seekers to obtain market information, establish a customer base and generate a steady cash flow prior to infrastructure deployment. This would reduce the risks associated with making sunk infrastructure investments and reduce the barriers to market entry.⁹⁵⁶ Consistent with the 'ladder of investment' theory, the declarations were expected to encourage the use of resale services as a 'stepping stone' to facilities-based competition.⁹⁵⁷ Increased facilities-based competition was expected to result in lower prices and greater choice for end-users.⁹⁵⁸

In July 2002, the ACCC granted Telstra an individual exemption from the standard access obligations (SAOs) in relation to the LCS in the Central Business Districts (CBDs) of Sydney, Melbourne, Brisbane, Adelaide, and Perth. The ACCC also granted a class exemption for all other carriers and carriage service providers.⁹⁵⁹ The ACCC considered there was sufficient alternative local access infrastructure and declared services (local PSTN OA and ULLS) for originating local calls in these areas to provide an effective constraint on Telstra's prices. As a result of the CBD

⁹⁵² ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999, pp. 2, 103–111; ACCC, *Local services review*, July 2006, pp. 7–8.

⁹⁵³ ACCC, *Local services review*, July 2006, p. 7.

⁹⁵⁴ *ibid.*, p. 40.

⁹⁵⁵ ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999, p. 103; ACCC, *Local services review*, July 2006, p. 8.

⁹⁵⁶ ACCC, *Local services review*, July 2006, p. 50.

⁹⁵⁷ ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999, pp. 2, 103–111; M Cave, 'Encouraging infrastructure competition via the ladder of investment', *Telecommunications Policy*, vol. 30, 2006, pp. 223–237.

⁹⁵⁸ ACCC, *Local services review discussion paper*, April 2005, p. 6, available at: <http://www.accc.gov.au/content/index.phtml/itemId/679537>.

⁹⁵⁹ ACCC, *Future scope of the local carriage service – Final decision*, July 2002, p. 2, available at: <http://www.accc.gov.au/content/index.phtml/itemId/772159>.

exemption for LCS, the existing de facto declaration of WLR was also effectively removed.⁹⁶⁰

K.1.3 Reasons for LCS and WLR exemptions

In August 2008, in response to an application by Telstra for LCS and WLR exemptions, the ACCC decided to grant individual and class exemptions in 248 of the 387 metropolitan ESAs for which Telstra had originally sought exemption.⁹⁶¹ These were ESAs which, as of 30 June 2008, had 14,000 or more addressable SIOs or four or more ULLS-based competitors (including Telstra); these were the threshold conditions.⁹⁶²

The ACCC's decision to grant these exemptions was consistent with its general approach that access regulation should focus on the elements of a fixed line network that represent 'enduring bottlenecks'. An enduring bottleneck generally refers to a network element or facility that exhibits natural monopoly characteristics and is essential for providing services in downstream markets.⁹⁶³ Monopoly control of enduring bottlenecks is a market failure that is commonly addressed through access regulation.

The ACCC determined that the LCS and WLR services no longer represented enduring bottlenecks in those ESAs that met one of the threshold conditions. This was because competitive service providers could access Telstra's copper access network through the declared ULLS and deploy their own digital subscriber line access multiplexer (DSLAM) or multi-service access node (MSAN) equipment to provide fixed line voice and broadband services in downstream markets, rather than relying on regulated access to the LCS and WLR services.⁹⁶⁴

Also underpinning the ACCC's decision to grant the exemptions was the view that facilities-based competition would better promote the LTIE than would resale-based competition.⁹⁶⁵ The ACCC considered that ULLS-based provision of voice services would be in the LTIE as service providers could 'dynamically innovate' and compete on greater dimensions of their retail services.

The ACCC recognised that, while regulated access to resale services such as the LCS and WLR can facilitate investment in equipment such as DSLAMs and thereby promote ULLS-based competition, ongoing regulation has the potential to hinder the transition to this method of supply.⁹⁶⁶

⁹⁶⁰ ACCC, *Local services review – Draft decision on whether or not the ACCC should extend, vary or revoke its existing declaration of the local carriage service*, March 2006, p. 44, available at: <http://www.accc.gov.au/content/index.phtml/itemId/679568>.

⁹⁶¹ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemption*, August 2008, p. 156.

⁹⁶² *ibid.*, p. 7.

⁹⁶³ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemption*, August 2008, p. 15.

⁹⁶⁴ *ibid.*

⁹⁶⁵ ACCC, *Telstra's local carriage service and wholesale line rental exemption applications – Final decision and class exemption*, August 2008, p. 6.

⁹⁶⁶ *ibid.*

The ACCC concluded that granting the exemption orders would promote competition and encourage the efficient use of, and investment in, infrastructure and thus promote the LTIE.⁹⁶⁷

The Australian Competition Tribunal considered similar factors in reviewing its original decision to set aside the ACCC's exemption orders. This followed the full Federal Court's decision in March 2009 to set aside the Tribunal's original decision and remit the matter back to the Tribunal for further hearing.

Following its reconsideration of whether individual exemption orders would be in the LTIE, the Tribunal decided to make exemption orders, subject to several conditions and limitations. These conditions and limitations were designed to ensure that there were enough competitive providers supplying services via the ULLS to impose a competitive constraint on Telstra's supply of services, including the LCS and WLR services, upon the removal of regulated access.⁹⁶⁸

K.2 PSTN Originating Access

K.2.1 Definition of PSTN OTA services

The PSTN OA service is the carriage of telephone calls from the calling party to a point of interconnection (POI) within an access seeker's network. The PSTN TA service is the carriage of telephone calls from a POI within an access seeker's network to the party receiving the call. Access seekers may use PSTN OA and PSTN TA services (together PSTN OTA) to provide the following retail services:

- local calls⁹⁶⁹
- national long-distance calls
- international calls
- mobile network to fixed network calls, and
- fixed network to mobile network calls.

The PSTN OA service is a wholesale input used in supplying fixed line voice services. To provide an end-to-end service, access seekers need to acquire other inputs (such as switching) and services (such as transmission and terminating access) in addition to PSTN OA.

Three broad categories of access seekers may use PSTN OA: (i) over-ride operators; (ii) pre-selection providers; and (iii) voice resellers. Pre-selection providers and over-ride operators use PSTN OA as an input into the supply of national long distance, international and fixed-to-mobile services to customers. The customer's telephone line is connected with one provider but mobile, national and international calls are

⁹⁶⁷ *ibid.*, p. 27.

⁹⁶⁸ Australian Competition Tribunal, *Application by Chime Communications Pty Ltd (No 2)* [2009] ACompT 2, at [157].

⁹⁶⁹ PSTN OA can be used by an access seeker to provide a local call when the receiving party is in the same standard zone as the caller. PSTN OA is used by the access seeker to carry a call from the calling party to the POI on its network. The access seeker's switching equipment directs the call to the receiving party. If the receiving party is not on the access seeker's network, it will need to use PSTN TA to carry the call to the receiving party. Alternatively, an access seeker can purchase the LCS from Telstra to provide local calls. An access seeker does not require any network equipment of its own when it uses the LCS to provide local calls.

provided by another provider—the over-ride operator or pre-selection provider—that uses the PSTN OA to connect the customer to its network.⁹⁷⁰ Voice resellers use the PSTN OA service, along with the LCS and WLR services, to provide customers with a full suite of voice services including long distance, fixed-to-mobile and local call services.

In contrast to the LCS and WLR, the PSTN OTA services are access services rather than resale services. When a call originates on a network other than the service provider's network, PSTN OA must be purchased to allow the service provider to carry the call. If the call terminates on a network other than the service provider's network, PSTN TA must be purchased to terminate the call on that network.

Access to PSTN OA and TA can enable competition to develop between service providers that operate long distance transmission networks but do not have their own customer access networks. In this case, the service provider could purchase PSTN OTA services and either use its own transmission network between the relevant exchanges or purchase a transmission service from another provider.

In declaring PSTN OTA in 1999, the ACCC noted that competition for the provision of transmission services had developed since 1997. It considered that declaring the PSTN OTA services would assist future entry and competition in the provision of transmission services.⁹⁷¹ The ACCC noted that:

[d]ue to the limited roll out of alternative customer access infrastructure to date, in order to supply end-to-end long distance services, it is currently necessary for service providers to acquire originating services from their competitors. In addition, they will need to acquire terminating services to achieve any-to-any connectivity.⁹⁷²

Two-sided markets

As Cave, Stumpf and Valletti have observed, 'there is no market for call origination without call termination, and vice versa. This is because of the perfect complementarity between origination and termination'.⁹⁷³ The authors note that end-users do not specifically demand originating or terminating access; instead, they demand the 'exchange of communications' with other end-users. In this context, a network operator can be viewed as providing a 'platform' that enables communication between two end-users, rather than simply providing originating or terminating access.

Originating and terminating access form a two-sided market, or two-sided platform. A two-sided market is defined as follows:

a market is two-sided if the platform can affect the volume of transactions by charging more to one side of the market and reducing the price paid by the other side by an equal amount; in

⁹⁷⁰ Mobile, national and international calls are automatically directed through a pre-selection provider. By contrast, a customer must dial an access code to make these calls through an over-ride operator. Pre-selection providers and over-ride operators do not generally provide local calls or basic access but may offer ADSL or other products to end-users.

⁹⁷¹ ACCC, *Deeming of telecommunications services*, June 1997, p. 34.

⁹⁷² *ibid.*, p. 64.

⁹⁷³ M Cave, U Stumpf and T Valletti, *A review of certain markets included in the Commission's recommendation on relevant markets subject to ex ante regulation*, July 2006, p. 22, available at: http://ec.europa.eu/information_society/policy/ecomm/library/ext_studies/index_en.htm.

other words, the price structure matters, and platforms must design it so as to bring both sides on board.⁹⁷⁴

The operator of a two-sided platform may price discriminate—that is, charge the two sides of the market different prices. In Australia, the calling party typically pays both the originating and terminating costs for fixed line calls and there is no charge to receive a call.

The implications of two-sided markets are important for the terms and conditions of access to PSTN OTA.⁹⁷⁵

A network operator is likely to have market power because it controls access to the end-users on its network. In the absence of regulation, a network operator would set its own prices for originating and terminating access. In setting these charges, a network operator could set higher prices for (that is, price discriminate against) calls that originate or terminate on another network. For calls originating on another network, the terminating access charge could be set higher than the terminating access charge for calls that originate on its own network. For calls terminating on another network, the originating charge could be set higher than for calls that remain on-net.⁹⁷⁶ Such price discrimination would represent a market failure that hinders any-to-any connectivity and discourages end-users from switching to service providers other than the dominant service provider (generally the incumbent).

The market failure is greater for terminating access. While end-users can choose the network on which they make calls, they have no choice over the terminating network (apart from not calling the other party). Because terminating access is required to connect a caller with the receiving party, regulation of terminating access is important in promoting any-to-any connectivity and the LTIE. Any-to-any connectivity requires that an end-user ‘is able to communicate...with other end-user who is supplied with the same or similar service whether or not the end-users are connected to the same telecommunications network’.⁹⁷⁷

In the absence of regulated terminating access, a network operator could potentially deny access to the customers on its network in order to force callers on other networks to join its network. The detrimental effect on competition may be larger in the presence of a dominant network—that is, a network with a large customer base—as denial of access to the customers on its network would limit other (non-dominant) networks’ ability to attract customers, thus reinforcing the dominant network’s position in the market.

Thus, in the absence of regulated terminating access, a calling party could be denied access to, or forced to pay a high price in to order to access a receiving party who was on another network.

For these reasons, some expert commentators have stated that two-sided markets should be subject to more, rather than less, regulation:

⁹⁷⁴ J Rochet and J Tirole, ‘Two-sided markets: a progress report’, *RAND Journal of Economics*, vol. 37 (3), 2006, pp. 664–665.

⁹⁷⁵ In contrast, retail services provided using WLR and the LCS are bought and consumed by the same end-user, so the markets for these services are not two-sided.

⁹⁷⁶ M Cave, U Stumpf and T Valletti, 2006, p. 24.

⁹⁷⁷ Subsection 152AB(8) of the CCA.

In two-sided markets, ... privately chosen prices... will differ from socially optimal prices. An appropriate intervention [by a regulator] can increase consumer and social welfare. Therefore there is an argument to say that 2SPs [two-sided platforms] are to be subject to more rather than less regulatory oversight.⁹⁷⁸

K.2.2 Declaration of PSTN OTA services

The domestic PSTN OTA services were deemed to be declared services in June 1997.⁹⁷⁹ The ACCC concluded that deeming these services would promote competition, discourage inefficient infrastructure development and improve any-to-any connectivity.

The local PSTN OTA services were declared in July 1999.⁹⁸⁰ The ACCC concluded that this would improve competition in the long distance telephony services market and also lead to lower prices for end-users.⁹⁸¹

The main difference between domestic PSTN OTA and local PSTN OTA relates to the POI. The domestic PSTN OTA's interconnection is associated with a gateway exchange; the local PSTN OTA's interconnection is associated with the local switch closest to the end-user. The ACCC combined the service descriptions of domestic and local PSTN OTA into a single service description in the July 2006 declaration inquiry for the Unconditioned Local Loop Service, PSTN OTA and Conditioned Local Loop Service.

The ACCC considered that the PSTN OTA services should be declared because Telstra's customer access network (CAN) is a bottleneck facility.⁹⁸² A bottleneck facility associated with a natural monopoly may result in a market failure without regulated third party access. In the absence of regulated access, there may be reduced competition—potentially leading to losses in efficiency and innovation—or inefficient and unnecessary duplication of costly facilities.⁹⁸³

The ACCC considered that there were significant economies of scale and scope associated with operating the CAN, such that it may not be feasible to duplicate it. It concluded that declaration of the PSTN OTA services would be 'likely to provide significant benefits to end-users through the promotion of competition in related markets for carriage services'.⁹⁸⁴ In addition, the ACCC considered that declaring the PSTN OTA services would encourage efficient use of existing local infrastructure and discourage inefficient investment in additional infrastructure.

The PSTN OTA services were again declared in July 2006⁹⁸⁵ and July 2009.⁹⁸⁶ The following sections describe the ACCC's reasons for declaring the PSTN OA and PSTN TA services in July 2009.

⁹⁷⁸ M Cave, U Stumpf and T Valletti, 2006, p. 28.

⁹⁷⁹ ACCC, *Deeming of Telecommunication Services*, 30 June 1997, p. 30.

⁹⁸⁰ ACCC, *Declaration of local telecommunications services – A report on the declaration of an unconditioned local loop service, local PSTN originating and terminating services, and a local carriage service under Part XIC of the Trade Practices Act 1974*, July 1999.

⁹⁸¹ *ibid.*, p. 102.

⁹⁸² ACCC, *Deeming of telecommunications services*, June 1997, p. 18.

⁹⁸³ *ibid.*, p. 1.

⁹⁸⁴ ACCC, *Deeming of telecommunications services*, June 1997, p. 18.

⁹⁸⁵ ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final determination*, July 2006.

⁹⁸⁶ ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR – Final decision*, July 2009.

PSTN Originating Access

In its decision to continue declaration of PSTN OA in 2009, the ACCC considered that '[t]he PSTN OA service is an essential input in the provision of resale fixed voice services by access seekers.'⁹⁸⁷ In reaching its decision, the ACCC considered that continued declaration of PSTN OA would enable access seekers to use their own billing and customer service equipment, along with existing network infrastructure, to provide local and long distance voice services at the wholesale and/or retail levels of the fixed line voice market. Because fixed line voice is an essential component of bundled fixed line voice and broadband services, the ACCC considered that continued declaration of PSTN OA would promote competition and therefore the LTIE in this market.

The ACCC noted that the unconditioned local loop service (ULLS) gave access seekers an alternative method of providing fixed voice services that did not require PSTN OA. However, the ACCC recognised that the viability of the ULLS as an alternative to PSTN OA depended on there being low barriers to ULLS entry. The ACCC considered that barriers to entry would be surmountable in some ESAs—those covered by the exemption orders—but that 'genuine barriers to ULLS entry', such as exchange capping, existed in other ESAs.⁹⁸⁸ Therefore, the ACCC considered that the ULLS was not a viable alternative to PSTN OA across all of Australia and that continued declaration of PSTN OA would be in the LTIE.

PSTN Terminating Access

In its decision to continue declaration of PSTN TA in 2009, the ACCC noted that termination of calls is an important input into the provision of voice services. Terminating access is required in order to allow interconnection between competing networks. It is required to ensure that end-users on other networks—both fixed line and mobile—can reach end-users on Telstra's PSTN. This is important in ensuring that the LTIE objective of any-to-any connectivity is achieved.

A provider of call termination has direct control over access to end-users on its network; therefore, termination is an essential bottleneck facility.⁹⁸⁹ In previous decisions, the ACCC recognised that regulating PSTN TA is necessary because of 'the ability of the access provider to engage in vertical market power abuses, such as foreclosure and price squeezes, by exploiting its control of essential bottleneck facilities to the advantage of its own retail operation'.⁹⁹⁰ The ACCC noted that this problem is exacerbated because the competing networks are of different sizes—the coverage of Telstra's and Optus' HFC networks are 'significantly less' than Telstra's

⁹⁸⁷ *ibid.*, p. 83.

⁹⁸⁸ *ibid.*, p. 85.

⁹⁸⁹ The Organisation for Economic Co-operation and Development (OECD) notes that the problem of 'terminating network monopolies' arises when five different conditions apply. (1) When there is no competition for termination to a particular subscriber; (2) When the calling party pays the entire cost of the call; (3) When users care primarily about the price of the calls they originate and not the calls made to them; (4) It is not possible or desirable to impose reciprocity; and (5) When retail end-user charges for a call from A to B do not depend directly on the level of the termination charges of the terminating network B. OECD, *Access Pricing in Telecommunications*, 2004, p. 102.

⁹⁹⁰ ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final determination*, July 2006, p. 42.

CAN⁹⁹¹—and have asymmetric traffic flows. As a result, there is a disparity in negotiating power between the competing networks over the charge for terminating access.

The ACCC concluded that:

... continued PSTN TA regulation would promote competition in the provision of voice services. This is due to the asymmetry between the size and reach of networks still evident on a national scale. The ACCC notes that even where competitive infrastructure is available, the competing network will still need to interconnect with other networks to terminate services.⁹⁹²

K.2.3 Reasons for the PSTN OA exemptions

Fixed line voice services can be provided without using the declared PSTN OA service if competing infrastructure is present. Competing infrastructure may include alternative access networks, such as Telstra's or Optus' HFC networks; or equipment such as DSLAMs, switching equipment and transmission capacity, used in conjunction with the ULLS.

2006 and 2009 PSTN OA declaration inquiries

In its submission to the ACCC's July 2006 fixed line services review position paper, Telstra submitted that ongoing regulation of PSTN OA was no longer necessary in all areas of Australia.⁹⁹³ In particular, Telstra submitted that there was effective competition in relation to PSTN OA in CBD and metropolitan areas via alternative technologies. Telstra stated that:

... continued regulation of PSTN OA in CBD and metropolitan areas where effective competition and the capability to supply IP based services already exists will distort efficient investment decisions (particularly in relation to the latest technologies) and efficient build/buy choices in these areas, which is clearly not in the LTIE. Where competitive access options exist for end users, only the PSTN Terminating Access service (PSTN TA) is required in order to ensure the competing service can be provided end-to-end.⁹⁹⁴

In the 2006 PSTN OA declaration inquiry, the ACCC recognised that fixed line voice services could be provided using competing infrastructure. It noted that 'competitors are increasingly investing in alternative infrastructure for the provision of traditional and next generation services', but it is necessary to ensure that 'these developing strategies are not frustrated by premature removal of the PSTN OTA declaration in those areas where effective and sustainable competition is yet to emerge'.⁹⁹⁵ However, the ACCC recognised that '[a]n access provider could lodge an application under the ordinary exemption provisions of the TPA (s152AT)...[which would] provide a mechanism for targeted and timely withdrawals from regulation in sub-regions of the national market that are found to be effectively competitive.'⁹⁹⁶

⁹⁹¹ *ibid.*, p. 91. The November 2008 Discussion Paper on declaration stated that Telstra's retail market share for voice services was approximately 80 per cent. ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR – Discussion paper*, November 2008, p. 76.

⁹⁹² *ibid.*, p. 95.

⁹⁹³ Telstra, *Response to the ACCC position paper on a strategic review of the regulation of fixed network services*, July 2006, p. 9.

⁹⁹⁴ *ibid.*, p. 9.

⁹⁹⁵ ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS – Final determination*, July 2006, p. 49.

⁹⁹⁶ *ibid.*, p. 52.

In the 2009 PSTN OA declaration inquiry, the ACCC decided to continue declaration of PSTN OA. The ACCC recognised that the exemption orders in relation to PSTN OA had taken effect in certain ESAs (subject to conditions and limitations), but concluded that:

there are not currently sufficient competitive constraints on Telstra to ensure that the PSTN OA service or an effective substitute would be provided on a national basis on reasonable terms and conditions to access seekers absent declaration.⁹⁹⁷

2007 exemption orders

Telstra's submission

On 8 October 2007, Telstra submitted an application for exemptions from the SAOs in 17 CBD ESAs and in 387 metropolitan ESAs across Australia. Telstra submitted that regulated access to PSTN OA in these areas was not necessary because:

- Competing infrastructure was present in each of the 404 ESAs in Telstra's application. Each ESA had at least one DSLAM-based competitor and alternative networks (HFC, fixed wireless and mobile) were also available in many ESAs.
- The market for the provision of PSTN OA is workably competitive. Market shares of competitors had changed over time and new products had become available. In addition, Telstra submitted that end-users could substitute to other services such as VoIP and mobile, and that barriers to entry for potential competitors were not material.
- The exemptions would not reduce competition at the downstream level of the market for fixed voice services. Barriers to self-supply using the ULLS were not material. The potential exit of operators using PSTN OA to provide 'pre-selection' and 'call over-ride' services would have little impact on downstream competition because these providers did not have a large presence.
- Regulation of PSTN OA is costly. The ACCC summarised Telstra's application as follows:
 1. Regulated access prices tend to truncate the reward of a successful investment without reducing losses from unsuccessful investments, thereby reducing incentives to invest.
 2. Regulation would 'provide a crutch to passive competitors unwilling or unable to invest in infrastructure and to commit to the rigours of a competitive market.'
 3. Regulation creates arbitrage possibilities for access seekers where access prices are set by regulators as opposed to the prices that would occur in an efficient and competitive market. Such arbitrage possibilities would distort the market.
 4. The likelihood of regulatory error is asymmetrical – that is, regulated prices will tend to be lower than the efficient level, rather than higher than the efficient level.⁹⁹⁸

Given the above factors, Telstra submitted that granting exemptions would promote the LTIE by promoting competition and encouraging the efficient use of, and investment in, infrastructure.

⁹⁹⁷ ACCC, *Fixed services review declaration inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR – Final decision*, July 2009, p. 86.

⁹⁹⁸ ACCC, *Telstra's PSTN originating access exemption application: CBD and metropolitan areas – Final decision and class exemption*, October 2008, pp. 25–26.

ACCC's decision

In its decision to grant PSTN OA exemptions in October 2008, the ACCC considered that granting exemptions, subject to conditions and limitations, would be likely to promote competition and encourage the efficient use of, and investment in, infrastructure in the exempt ESAs.⁹⁹⁹ The ACCC considered that removing regulated access to PSTN OA would encourage access seekers to compete using their existing infrastructure and the ULLS, as well as encouraging investment in new infrastructure. This was expected to result in improved price and product outcomes for consumers in the retail voice and bundled broadband and voice markets.

The ACCC granted the exemptions subject to conditions and limitations.¹⁰⁰⁰ The Tribunal's subsequent decision to make exemption orders also imposed conditions and limitations.¹⁰⁰¹ The conditions and limitations were imposed to ensure that regulation of PSTN OA only ceased in ESAs where any barriers to entry were expected to be surmountable.

The ACCC considered that granting exemptions from the SAOs in these ESAs (the Attachment A ESAs) would encourage access seekers to invest in their own infrastructure and compete using the ULLS (which continued to be available at the regulated price). In addition, the ACCC noted that actual and potential wholesalers of a suite of fixed line voice services (PSTN OA, WLR and LCS) were present in these ESAs. Based on the presence of alternative suppliers, and the feasibility of self-supply, the ACCC concluded that there would be a competitive constraint on PSTN OA suppliers and that regulated access to PSTN OA in these ESAs was no longer necessary.

⁹⁹⁹ ACCC, *Telstra's PSTN originating access exemption application: CBD and metropolitan areas – Final decision and class exemption*, October 2008.

¹⁰⁰⁰ The exemption orders do not take effect in ESAs where the conditions and limitations are not met.

¹⁰⁰¹ Both the ACCC and the Tribunal imposed conditions relating to the number of SIOs in the ESA, the number of ULLS-based competitors present in the ESA and relating to exchange capping. The Tribunal imposed additional conditions and limitations.. See: Australian Competition Tribunal, *Application by AAPT Limited (No 2)* [2009] ACompT 6.