



Telstra's applications for WLR and LCS exemptions

A REPORT PREPARED FOR THE COMPETITIVE CARRIERS COALITION

October 2007

NON-CONFIDENTIAL VERSION

Telstra’s applications for WLR and LCS exemptions

Executive summary	i
1 Introduction	1
1.1 CCC request.....	1
1.2 The Exemption process.....	1
1.3 Background to the Exemption Issues.....	1
1.4 Two key questions	3
1.5 This report	3
2 Enduring bottlenecks and principles of access regulation	5
2.1 Enduring bottlenecks	5
2.2 Enduring bottlenecks and deregulatory thresholds	6
2.3 Conclusions	9
3 Will competition be effective in retail markets if exemptions are granted?	10
3.1 Defining relevant retail and wholesale markets.....	10
3.2 Competition in the relevant retail markets.....	11
3.3 The Path to effective retail competition.....	12
3.4 The effect of the declaration on competition in retail markets.....	14
3.5 Conclusions	22
4 Will granting the exemptions promote efficient investment?	23
4.1 Efficient use and efficient investment	23
4.2 Investment in existing LCS and WLR infrastructure	23
4.3 Investment in new WLR and LCS infrastructure	26
4.4 Conclusions	27
Annex – Deregulatory rules adopted in other jurisdictions	29
UK (Ofcom)	29
Canada (CRTC)	30

Telstra's applications for WLR and LCS exemptions

Figure 1: Truncation of returns - risky investment	25
Figure 2: Truncation of returns - less risky investment.....	25

Executive summary

- 1 In July 2007, Telstra applied for individual exemptions from the standard access obligations relating to the supply of two services: the local carriage service (LCS) and wholesale line rental (WLR) in 371 exchange service areas (ESAs) in metropolitan Australia.
- 2 Frontier Economics has been asked by the Competitive Carriers' Coalition (CCC) to provide its views to the Australian Competition and Consumer Commission (the Commission) on Telstra's application for the exemptions.
- 3 The criteria for whether the exemptions should be granted relate to whether the exemptions will promote the long-term interests of end-users (LTIE). The LTIE is a somewhat imprecise objective, but is given more substance by specified sub-criteria relating to the promotion of competition, and efficient use of, and investment in, infrastructure by which the WLR and LCS and downstream services are supplied.
- 4 Two particular issues were identified by the Commission as being critical to the outcome of the exemption application:
 - whether competition in markets downstream of the wholesale WLR and LCS services would be effectively competitive in the absence of declaration; and
 - whether maintaining the declaration would discourage further investment at local exchanges, thus denying consumers the benefits of quasi-infrastructure competition.
- 5 Aside from these issues, there is also an overarching issue as to how these exemption applications fit within the Commission's expressed desire to regulate 'enduring bottlenecks' – on the basis that regulating these services, and these services only, is likely to be in the LTIE.
- 6 In our report, we address the issue of enduring bottlenecks first. We find this a useful criterion in theory, but one that is difficult to apply in practice. Entry-based rules are one way to implement such a criterion – on the basis that where there is entry, bottlenecks are unlikely to persist – but in the current environment, it is also necessary to take into account additional criteria to determine whether the entry-based rule proposed by Telstra would be in the LTIE.
- 7 We next consider the effectiveness of competition in downstream markets that use WLR and LCS as inputs, assuming that the exemption order was granted. We find that competition for supply of retail fixed voice services has developed on a national basis, but that competition at the wholesale or quasi-infrastructure-based level will potentially become more differentiated by exchange area. Regardless of the specific market definition adopted, and on the basis of a counterfactual in which Telstra either increases prices or refuses supply of WLR and LCS, our view is that granting the exemption will likely increase the difficulty of providing retail fixed voice services in the exemption areas. The barriers to effective competition are likely to include:

- difficulties in self-supplying WLR and LCS services, such as:
 - achieving minimum efficient scale at the exchange level using ULLS and traditional voice switching, or ULLS and VoIP;
 - quality and customer perception issues with VoIP as a complete PSTN replacement;
 - other non-price impediments to switching between wholesale products and the ULLS, including issues of migration processes and timely access to exchanges; and
- the lack of well-developed wholesale markets for WLR and LCS services in the exemption areas.

8 It is arguable that some of these barriers are of a transitory nature. While that is possible, we find that it would be premature to grant the exemption prior to clearer evidence that these barriers are being overcome.

9 Finally, we find there is little evidence to suggest that ongoing declaration of WLR and LCS services in the proposed exemption areas would be detrimental to investment. Pricing regulation of these services is relatively benign, being based on retail-minus principles, while upstream inputs (by which substitute services can be developed) are cost-based. This means there is little burden on Telstra from the regulation being in place, but also that the access seekers' move off these wholesale services will make it readily apparent when the declaration is irrelevant. In any event, we argue that in light of overarching investment issues relating to next generation access networks, it would be unwise to assume that granting the exemptions would increase investment.

1 Introduction

1.1 CCC REQUEST

10 Frontier Economics has been engaged by the Competitive Carriers' Coalition (CCC) to provide a report for the Australian Competition and Consumer Commission (the Commission) on the exemption applications recently filed by Telstra in relation to wholesale WLR and LCS services.

11 In particular, the CCC has asked Frontier to address the key questions in the ACCC's discussion paper, as well as any points that are pertinent to the exemption process.

1.2 THE EXEMPTION PROCESS

12 The Commission has received an application from Telstra for individual exemptions from the standard access obligations under section 152AT of the *Trade Practices Act 1974* (TPA). The exemptions relate to the supply of two services: the LCS and WLR in 371 exchange service areas (ESAs) in metropolitan Australia.

13 The process for review of the exemption applications is straightforward - the Commission must not make such a determination unless it believes that granting the exemption order will promote the long-term interests of end-users (LTIE) as defined in section 152AB of the TPA. In considering whether a 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:

- (a) the objective of promoting [competition](#) in markets for listed [services](#);
- (b) the objective of achieving any-to-any connectivity in relation to [carriage services](#) that involve communication between end-users;
- (c) the objective of encouraging the economically efficient use of, and the economically efficient investment in:
 - (i) the infrastructure by which listed [services](#) are supplied; and
 - (ii) any other infrastructure by which listed [services](#) are, or are likely to become, capable of being supplied.” (S152AB)

14 An exemption order may be unconditional or subject to such conditions or limitations as are specified in the order.

1.3 BACKGROUND TO THE EXEMPTION ISSUES

15 The exemption applications must be viewed within the context of a wide range of ongoing regulatory work at the Commission.

16 The LCS and WLR services were declared by the Commission in July 2006 as part of its Local services review. The LCS had previously been declared by the

- Commission in July 1999 as part of its inquiry into local telecommunications services.
- 17 In the Local services review, the Commission considered that declaration of both services would be likely to promote the LTIE by both promoting competition and encouraging the economically efficient use of and investment in infrastructure. In reaching this view, the Commission noted that, outside of CBD areas, there were no widespread effective substitutes for either service, with implications at both the wholesale and retail level.
- 18 In April 2007, the Commission released a second position paper in its ongoing Fixed services review. The primary purpose of the position paper was to outline a robust framework for the review of existing service declarations, including WLR and LCS as well as ULLS and LSS.
- 19 In the second position paper, the Commission considered that *ex ante* access regulation under Part XIC should focus on those elements of the fixed-line network that continue to represent ‘enduring bottlenecks’. The Commission considered that an enduring bottleneck would generally refer to a network element or facility that exhibits natural monopoly characteristics and is ‘essential’ to providing services to end-users in downstream markets in a way that promotes the LTIE.
- 20 Where an enduring bottleneck does not persist, the Commission stated that it will be inclined to progressively withdraw *ex ante* access regulation where it is confident that declaration is not required to promote the LTIE.
- 21 Particularly relevant to the exemption applications, the Commission’s stated approach was “based on the principle that, where it is economically efficient, facilities-based competition is more likely to promote the LTIE”. The Commission further noted that its proposed approach was:
- ... also based on the principle that, for services or network elements which are not enduring bottlenecks, competitors that do not wish to invest in their own infrastructure will, more than likely, have the opportunity to enter into commercially negotiated arrangements for access with third parties (or the incumbent) without the need for *ex ante* regulatory intervention. In this regard, the withdrawal of access regulation at certain network layers does not necessarily suggest that these forms of competition will cease, or that their price will necessarily be raised excessively by the access provider. Rather, it is recognition that *ex ante* regulation is no longer required to ensure that these services are competitively priced at or near their underlying costs.
- 22 In its second position paper, the Commission also flagged its intention to conduct a comprehensive review of fixed service declarations (including WLR and LCS) commencing in mid-2008.
- 23 Telstra has now pre-empted the Commission by applying for individual exemptions from all access obligations (SAOs) for the LCS and WLR declared services in 371 ESAs. Telstra has chosen the ESAs in the proposed exemption area based on the presence of competing infrastructure and, in particular, the presence of DSLAM-based infrastructure by Telstra’s competitors. Each ESA in

the proposed exemption area has at least one DSLAM deployed by a competitor of Telstra.

24 The Commission notes that “the second position paper...clearly provides relevant guidance for the ACCC’s consideration of Telstra’s exemption applications” (Discussion paper, p. 11).

1.4 TWO KEY QUESTIONS

25 The Commission has indicated in its discussion paper that, in assessing the exemption applications under the LTIE criteria, it will take particular account of responses to two questions:

- Without the declared LCS and WLR, will competition be effective in downstream retail markets?
- How will granting the exemptions affect the incentives for rollout of infrastructure, such as DSLAMs, by telecommunications companies?

1.5 THIS REPORT

26 In this report, we address the question of whether granting the exemptions would be in the long-term interests of end-users (LTIE).

27 In section 2, we consider the issue of enduring bottlenecks, and to what extent access to infrastructure used to provide WLR and LCS services is likely to be an enduring bottleneck.

28 In section 3, we focus on whether granting the exemption will be likely to promote competition in markets for retail telephony services.

29 In section 4, we discuss whether granting the exemption will be likely to lead to more roll-out of infrastructure, and more efficient investment in infrastructure.

2 Enduring bottlenecks and principles of access regulation

2.1 ENDURING BOTTLENECKS

30 In its recent work, the Commission has indicated that it wants to focus access regulation on enduring bottlenecks.

31 For example, in its most recent statement on the regulation of fixed-line services, it expresses the view that:

“*ex ante* regulation under Part XIC of the Act should focus on those elements of the fixed line network that continue to represent ‘enduring bottlenecks’.” (p. ii)

32 The reason for this view is that the Commission considers that facilities-based competition is more likely to promote the LTIE, where that facilities-based competition is efficient. By this it means that duplication of network elements should be encouraged where the competitive gains from duplication outweigh any loss of technical or allocative efficiency.

33 For services that are not enduring bottlenecks, the Commission’s view is that competitors that do not wish to invest in their own infrastructure will, more than likely, have the opportunity to enter into commercially negotiated arrangements for access with third parties (or the incumbent) without the need for *ex ante* regulatory intervention.

34 The Commission’s position here seems consistent with good regulatory practice. Having said that, the concept lacks practical meaning in many circumstances, as whether a bottleneck may be ‘enduring’ is subject to significant uncertainty and change.

35 There are two inter-related sources of change – the timeframe over which one views the bottleneck, and the rapidity of technological progress. While it is possible to have some concept of likely developments in fixed and other networks within the next 5 years, it becomes significantly more difficult to predict to what extent any telecommunications infrastructure could be declared an enduring bottleneck.

36 We have recently seen such a shifting of the prevailing paradigm. Few would have thought when the ULLS was first declared in 1999 that parts of the copper access network could become redundant within 6-7 years (as it indeed would have if Telstra had gone ahead with its Fibre-to-the-node plans).

37 Under an FTIN network, what part of the service would be the bottleneck is not clear. It may well be the connection between the premises and the node (rather than the local exchange). However, if it would be uneconomic or technically infeasible to provide services at the sub-loop level – as appears likely – then the enduring bottleneck may actually revert to a higher level service which is accessed at the local exchange (or other aggregation point), such as bitstream access and WLR / LCS equivalents.

38 The Commission states that the major bottleneck has been, and will likely continue to be, Telstra's CAN.¹ In stating that, it does not necessarily suggest that unbundled access to the CAN should be the only declared fixed service. The Commission notes in the discussion paper that:

“...in areas where there is evidence of quasi-facilities based competition, or the potential for sustainable and efficient quasi-facilities based competition, the main question for review is whether regulated re-sale based services are required to promote the LTIE.” (p. 17, quoting from the April 2007 FSR position paper)

39 That view is also shared by other regulators. For example, Ofcom shares the Commission's view that access regulation should be focused on 'enduring bottlenecks' but mandates access to a WLR product.²

40 It should also be noted that a focus on bottlenecks also implies that the Commission should consider regulating bottlenecks that are not currently declared. For example, it is apparent that where there is no ULL-based entry either present or reasonably likely to emerge (e.g. lower density exchanges in bands 3 and 4), then the enduring bottleneck is likely to be wholesale ADSL services and WLR / LCS services. This is not simply a matter of comparing the benefits from service-based competition with the cost of regulation. It is also important to note that the benefits that service-based competition can deliver are not limited to the particular geographic region. Often, services are provided (particularly to business customers) across regions on a 'whole-of-business' basis, so that bottleneck control in certain regions can be used to foreclose competitors that do not have the same ubiquity of coverage.

41 The conclusion we draw from this is that while the basic focus on enduring bottlenecks makes sense, it does not necessarily lead to easy answers as to what to regulate, or what not to regulate.

2.2 ENDURING BOTTLENECKS AND DEREGULATORY THRESHOLDS

42 One of the main issues in Telstra's application for exemptions is the use of a competitive-entry based rule as a proxy for where there is no longer an enduring bottleneck, and hence that competitive conditions are such that Part XIC access regulation is no longer required. In this section, we outline Telstra's proposed rule and comment on whether it is likely to be adequate as a deregulatory threshold.

2.2.1 Telstra's proposal

43 Telstra's view is that enduring bottlenecks no longer exist when there is a competitive entrant. That view is based on the notion that a bottleneck occurs

¹ ACCC, Fixed Services Review – A second position paper, April 2007, pp. 21-22.

² See Ofcom's Strategic Review Statement, http://www.ofcom.org.uk/consult/condocs/telecoms_p2/statement/

where only one firm controls an important input, and where there is duplication, this must demonstrate a lack of material barriers to entry.³

44 In that light, in its exemption application Telstra effectively proposes a rule that where there is one existing entrant with DSLAM infrastructure, there should be an exemption from having to provide WLR and LCS services. For completeness, we note that Telstra does not claim that a single entrant would provide sufficient competitive discipline on Telstra absent WLR / LCS regulation. Rather, it is used because Telstra considers that it demonstrates the “inevitability of constraint on Telstra’s retail pricing behaviour.”⁴

45 Telstra further claims in its supporting submission that 97% of ESAs in its proposed exemption area will have two or more DSLAMs present in its exchange, and 76% will have three or more.

46 We note that Telstra’s proposal does not relate to infrastructure that is used to provide WLR and LCS (or equivalent) services. DSLAMs in many instances have been put in place by entrants to provide ADSL services, not voice services, using LSS as an input.

2.2.2 Entry based rules

47 The Commission notes in its discussion paper that where it is confident an enduring bottleneck does not persist, it will be inclined to progressively withdraw ex ante access regulation, where it is confident that the declaration is not required to promote the LTIE.⁵ Although it does not propose a simple rule for deregulation, it further notes that the ‘replicability’ of fixed-line network elements may provide guidance towards practically assessing whether it is likely to be economically efficient for competitors to duplicate infrastructure.⁶

48 The Commission has, however, previously considered entry-based rules to determine whether a removal of access is appropriate. In relation to transmission capacity services it reviewed in 2004, it applied the following rule:

“The Commission has therefore applied the criterion that where there are at least three optical fibre providers, including Leighton/Nextgen as a potential provider (where its network is within 1km or less from the GPO of a regional centre for a given capital-regional route), this serves as evidence of sufficient competition/contestability to warrant removal of that route from declaration.”⁷

49 The issue of deregulatory rules of the kind which are being considered in these proceedings is also being discussed in other jurisdictions. Other regulators in these jurisdictions are noting that the application of policies designed to encourage facilities or quasi-facilities based entry are beginning to come to

³ See e.g. p. 23 of Telstra’s submission in support of the exemptions.

⁴ CRA statement, p. 41.

⁵ Discussion paper, p. 10.

⁶ Discussion paper,

⁷ ACCC, *Transmission Capacity Service: Review of the declaration for the domestic transmission capacity service*, Final Report, April 2004

fruition, leading to calls for different regulations in areas where such entry is occurring. Ofcom has been a proponent of such an approach, while the CRTC in Canada has also confronted similar issues. We summarise these approaches in the Annex to this report.

50 The previous Commission approach and approaches proposed in overseas jurisdictions raise two questions in the application of an entry based rule here:

- is the proposed entry-based rule sufficiently robust that one could be confident that granting the exemption would be in the LTIE; and
- would the application of such a rule overlook some important additional concerns?

2.2.3 Problems with entry-based rules

51 Clearly, at some level, a significant number of entrants presents unambiguous evidence that barriers to entry are relatively low and that the enduring bottleneck no longer exists. In the current circumstances, the question is whether one can be confident in the use of Telstra's rule (which merely requires one additional DSLAM-based entrant) or other simple entry-based rule, or whether additional criteria should also be considered.

52 Our view is that the rule proposed by Telstra and other DSLAM-based entry rules are not sufficient to be confident that granting the exemption would be in the LTIE. As is stands, the Telstra rule takes no account of:

- The type of entry (e.g. ULLS-based entry, as opposed to entry based on LSS);
- the percentage of lines taken away from Telstra (actual competitive pressure); or
- the availability of other wholesale suppliers.

53 *ULLS-based entry* Telstra's rule focuses on the presence of competitive infrastructure (i.e. DSLAMs), not whether the entrant has been able to provide a substitutable WLR or LCS service. In that regard, it glosses over potential commercial and technical problems associated with providing a voice service using ULLS. We comment on these issues in the following section of the report.

54 *Percentage of lines* The proposed rule takes no account of the notion that the success of entry should also be taken into account when determining whether competition is effective or not. While Telstra and the Commission have pointed out that entry of itself is important, because the low variable-cost, high fixed-cost structure of entrants lends itself to aggressive pricing, it should be recognised that fixed line services are subject to a great deal of inertia. The Commission noted this factor as a limitation in the Competitive Safeguards Report for 2005/06:

“Customer inertia, or status quo bias, also acts as a barrier to achieving sufficient scale to compete effectively. When combined with actual switching costs (such as contract lock-in) and information asymmetry about the range of available contracts, Telstra has considerable advantages as the incumbent default provider of local telecommunications. *Fn:* It is difficult to ameliorate status quo bias in the short-medium term, as it is consumers' greater knowledge of and confidence in

alternative providers and their service offerings that will mitigate consumers' tendency to stick with their original service provider.." (p. 18)

55 Telstra has presented information on churn statistics in its submissions (see Appendix B), and claims that these are indicative of highly competitive retail voice markets. However, it does not provide any statistics on the number of customers that have never churned, which is more relevant in this context because it determines the scope of the 'addressable market' for competitors.

56 *Availability of wholesale options* If Telstra's submissions on an entry-based rule were accepted, it could be quite possible in some exchanges (where there is no overlap with Optus's HFC network) that there will either be a quasi-monopoly in the provision of wholesale WLR and LCS services, or there may be no suppliers of these wholesale services if Telstra elects to withdraw supply, and the competitive entrant elects to not provide wholesale services. In that light, it is arguable that while there would be competitive constraint from the entrant, it could well limit the ability of other entrants to compete in that exchange area.

2.3 CONCLUSIONS

57 On its face, Telstra's proposed entry-based rule appears to overlook some important considerations in determining whether granting the exemptions is likely to be in the LTIE. We now turn to address these issues in more detail, particularly focusing on the detailed questions asked by the Commission:

- Without the declared LCS and WLR, will competition be effective in downstream retail markets?
- How will granting the exemptions affect the incentives for rollout of infrastructure, such as DSLAMs, by telecommunications companies?

3 Will competition be effective in retail markets if exemptions are granted?

58 In considering whether exemption would be in the LTIE, a key issue is whether competition in markets dependent on WLR and LCS inputs would be effective if the exemption was granted. Answering this question requires an understanding of the markets in which firms compete to provide retail services, including the progress of these markets in evolving from non-competitive structures to effectively competitive markets.

3.1 DEFINING RELEVANT RETAIL AND WHOLESALE MARKETS

59 We largely agree with the Commission's approach to defining retail and wholesale product markets for the affected services. That is, the relevant retail product markets are those for either a bundle of line rental and local calls, or a bundle of line rental, local calls and other types of fixed calls. Either way, the relevant wholesale product markets therefore include WLR and LCS services. The supply of broadband services is also clearly linked to the supply of fixed voice services, although whether this is considered to be a separate market is probably not critical to the analysis of WLR and LCS exemptions.

60 Clearly, determining the appropriate geographic market definition is not so straightforward. As we explain below, we consider that retail fixed voice markets are primarily characterised by competition at a national level. The wholesale- or self-supply of WLR and LCS does appear potentially subject to significantly greater heterogeneity in competitive conditions across Australia. The difficulty is in deciding whether it would currently be appropriate to identify geographically separate wholesale markets on an 'exchange by exchange' basis, commensurate with the existence and type of competitive entry in that exchange region (or ESA), or whether the differences are sufficiently minor to treat the wholesale market as effectively homogenous across Australia.

61 The Commission has already recognised that competition in CBD areas is fundamentally different, given the characteristics of purchasers (mainly businesses) and the existence of competitive infrastructure. Whether this can be extended to other regions where there has been some competitive entry (both based on Telstra's network and independent infrastructure) is less certain.

62 Part of the difficulty is that there is no single answer to drawing appropriate market boundaries. While exchange boundaries are an important determinant of competition within the fixed line market (because of ULL- and LSS-based entry), other infrastructure exists which is not bounded by Telstra's exchange boundaries (e.g. Optus's HFC network). There will undoubtedly be situations where one customer with access to Optus's HFC network will be connected to the same Telstra exchange as another customer who does not have access. The Commission also notes that there is potentially an interdependency between the product and geographic market definition. In particular, if one include mobiles in

Will competition be effective in retail markets if exemptions are granted?

the relevant retail market, then markets would tend to be national in geographic scope, with a wholesale self-supply dimension.⁸

63 We draw no concrete conclusions on the appropriate wholesale geographic market definition. We find that, as there are overarching issues with own-supply, or wholesale supply, of WLR and LCS independent of region or exchange area, the particular wholesale geographic market definition is not critical to whether this exemption application should be granted

64 One oversight in the Commission's analysis in the discussion paper is that there is no clear distinction made between the retail and wholesale markets. Our observation is that competition at one level seems to operate quite differently from competition at the other. In the following section, we explain why we consider that the relevant retail markets are best seen as national in scope, and, therefore, why the regulatory structure at the wholesale level needs to give some consideration to promoting competition in the national retail market.

3.2 COMPETITION IN THE RELEVANT RETAIL MARKETS

65 LCS and WLR services are used as an input into the retail supply of line rental and local calls. These types of calls are also commonly bundled with other call types, including fixed-to-mobile, international and national long distance calls (partly, this is so because resale of WLR and LCS as standalone services is infeasible due to their price terms of supply). The bundle of calls is also increasingly sold with broadband services, with access seekers either purchasing the LSS and installing their own DSLAM infrastructure at exchanges to provide the broadband service, or selling wholesale ADSL services acquired from Telstra.

66 The Commission's evidence with regard to the retail markets is presented assuming the relevant retail markets are national. We would agree with that characterisation, for reasons we explain below. However, the Commission does not comment to any significant degree on how firms seek to compete in this market.

67 Historically, competitors in the market in which line rental and local calls are supplied have generally sought to operate at a national level. One reason for wanting to provide services at a national level is reasonably obvious. Many costs associated with providing retail services are fixed. For example, developing billing systems and customer software, advertising and establishing a brand presence all have a large fixed component. Providing services to all consumers in Australia therefore offers retail service providers the maximum benefit – because it allows spreading of fixed costs over as wide a customer base as possible.

68 In order to provide services to all consumers, a carrier needs to either (self supply) wholesale LCS and WLR services (whether on a full- or quasi-facilities basis), or to reach a wholesale agreement with a supplier of a WLR and LCS service. Given that Telstra is the only provider with national reach and existing wholesale capabilities, it historically has made sense for carriers to seek wholesale

⁸ ACCC, discussion paper, p. 22.

agreements with Telstra, because that would minimise the degree to which carriers need to incur the costs of drawing up and revising wholesale agreements.

69 There is a further feature of the market that increasingly determines how carriers seek to compete in the retail market. This feature is that carriers cannot commercially provide retail line rental and local call services alone. That is because Telstra's wholesale pricing of these services means that it is not profitable to do so. Indeed, the Commission's accounting separation reports clearly set out the evidence in relation to retail-minus pricing of WLR and LCS, with the latest reports (June Qtr 2007) indicating that Telstra fails imputation tests on local call services (line rental and local calls combined) for both residential and business customers (the imputed margin is between -21% and -23%). Access seekers must cross-subsidise local services with other products in order to recover costs. Hence, in order to compete in the retail markets, at a minimum carriers also need some means of supplying fixed-to-mobile, national and international calls. Increasingly, we are also seeing these services bundled with broadband services.

70 A final important feature of competition in the retail market is that Telstra retains a very strong position, with around 69 per cent of lines retailed. In contrast, its competitors who are entering using ULLS have fragmented and very limited coverage. That implies that access seekers would still have very little bargaining power in negotiating WLR and LCS terms with Telstra on a national basis. Telstra's vertical integration and dominant position downstream means that threats to not use Telstra's wholesale services would have little force in the absence of regulation.

3.3 THE PATH TO EFFECTIVE RETAIL COMPETITION

71 Given the factors we point to above, how is competition emerging and likely to emerge further in the retail markets? Our view is that we are unlikely to see large scale bypass of Telstra's network in the foreseeable future. This is because the investments required to build in fixed-line telecommunications networks that serve end-users directly are large and sunk. But that is not the only barrier – with an incumbent in place that has already incurred the sunk costs, a further problem is that there is an asymmetry in cost structures. The incumbent's very low variable costs can be used as a threat to potential entrants to dissuade them from making the investments in the first place.⁹

72 Optus' well-documented experience, although under different circumstances to those postulated above, provides a sobering example of the difficulty of full facilities-based entry.

73 Having said that, it is not surprising that the Commission would have a preference for encouraging investment at 'deeper' levels of the fixed network, as this would simplify the regulatory process and potentially provide longer-lasting competitive benefits. So long as these investments are consistent with efficiency

⁹ This was pointed out by Dixit in "The Role of Investment in Entry-Deterrence", *The Economic Journal*, Vol. 90, No. 357 (Mar., 1980), pp. 95-106.

Will competition be effective in retail markets if exemptions are granted?

criteria (i.e. the benefits from lower prices, more differentiated products and lower regulatory costs outweigh the costs of duplication), then there is little dispute that such competition should be encouraged. But it is one thing to talk of that as an end-goal – another factor that needs to be taken account of is that competition is dynamic . Commercial reality dictates that growth is more likely to be organic, based on building retail scale (and perhaps consolidating) before sinking significant investments.

74 This concept, known as the ‘stepping stone’ hypothesis or ‘ladder of investment’, is a concept that seems to have drawn a lot of commentary, and no shortage of criticism, from incumbents and their consultants.¹⁰ But much of the literature that claims the regulatory approach has been a ‘failure’ places reliance on very short runs of data in often uncertain regulatory climates, or only considers whether there was evidence of increasing full-facilities entry rather than quasi-facilities based entry, which may be more efficient.¹¹

75 That is not to say that regulation can not have adverse effects, or that regulation is ‘easy’. Rather, we would stress that regulation must be carefully designed and regularly reviewed, with clear objectives and timelines.

76 A review of the Australian experience suggests that further investments are indeed being made at deeper levels, and that this process has been significantly aided by the declaration of wholesale WLR and LCS services, and the provision of wholesale ADSL services. While Telstra uses evidence that declines in WLR and LCS usage and relatively constant retail usage (see section 3.2 of the CRA report) indicate greater competition, one can also argue that this evidence is consistent with competitors moving up the ladder of investment. That is, competitors are such as Optus and Primus, which initially used large numbers of WLR services, are beginning to migrate these customers towards their own networks (and self-supplying WLR and LCS). Indeed, it is arguable that given an effective migration path from LSS to ULLS, one would see even greater evidence of the ladder working. The Commission’s encouragement of wholesale ADSL and declaration of LSS services has effectively allowed a number of firms (e.g. iiNet, TPG and Internode, among others) which commenced as small, resale-based ISPs to invest in competitive infrastructure and develop telephony capabilities. Development of effective migration processes would allow these firms to further progress towards ULLS.

77 We would also note that most regulators, while undertaking similar processes to those in Australia, have not withdrawn wholesale regulation on a widespread basis. For example, Ofcom retains a degree of service-based wholesale regulation (including WLR), notwithstanding comments in its Strategic Review (which are quoted by Telstra) which are similar in spirit to those put forward by the Commission.

¹⁰ For example, the discussion in Telstra’s submissions to the Fixed Services Review, and section 4 of its Exemption Application Submission.

¹¹ Hausman and Sidak has much of this flavour. See Hausman & Sidak, *Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence from Five Countries*, Massachusetts Institute of Technology Department of Economics Working Paper Series, Working Paper 04-40 Nov 1, 2004

78 A final point relates to the significance of HFC and fixed wireless networks for competing fixed voice services. In our view, these can only be expected to have a minor impact on the competitiveness of markets in which line rental and local calls are supplied. The reason that the major competing HFC network to Telstra is owned by Optus, which already has a substantial presence as a quasi-infrastructure based competitor. So it would not be possible to claim the presence of Optus's HFC network as an additional constraint if Optus already has a presence in the 371 local exchange areas where exemption has been requested. Fixed wireless networks do not generally offer a material constraint in exemption areas as that they are not primarily being designed for voice use, and are not currently able to offer 'voice equivalent' services.

3.4 THE EFFECT OF THE DECLARATION ON COMPETITION IN RETAIL MARKETS

79 In our view, the availability of the WLR and LCS services is likely to continue to promote competition in non-CBD areas, and, so long as regulation of the prices of ULLS and LSS services is not poorly designed, it should also promote efficient use of and investment in these services.

80 The WLR and LCS services supplied by Telstra provide carriers with a means to compete in the retail call markets and retail broadband markets. Declaration provides a means for carriers to provide voice services to a large percentage of the Australian population, and is also a means by which LSS acquirers can compete with Telstra in providing a bundle of voice and broadband services in areas where investments in alternative local infrastructure are economic.

81 In considering the likely effect of granting the exemption on competition, it will be necessary for the Commission to consider an appropriate counterfactual scenario. That is required so that one can compare the likely competitive outcomes should the exemption be rejected, with Telstra's likely course of action if the exemption is granted. In determining the appropriate counterfactual, we consider that it would be reasonable to assume that the regulation of WLR and LCS in the exemption areas binds Telstra to a degree. Otherwise, there would seem little urgency to undertake this exemption process in advance of the Commission's proposed fixed line reviews in 2008. There seem to be two plausible courses of action for Telstra to take if the exemption is granted:

- to increase the price of WLR and LCS services to access seekers; or
- to refuse ongoing supply of WLR and LCS services to access seekers.

82 We consider that under either scenario, there are likely to be deleterious effects on competition. The two factors to consider in whether the exemption would affect retail competition are whether:

- self-supply of LCS and WLR equivalents, or third-party wholesale supply of LCS and WLR equivalents from parties other than Telstra, offer a sufficient degree of substitutability that would prevent prices from rising above, or remaining above, competitive levels; and whether

Will competition be effective in retail markets if exemptions are granted?

- maintaining the declaration would discourage further investment at local levels, denying consumers the benefits of quasi-infrastructure or full-infrastructure competition.

83 We address these questions in the following two sections of the report.

3.4.1 Are there barriers to competition in the absence of declaration?

84 Telstra has claimed that there are no material barriers to entrants supplying voice services using ULLS services in the proposed exemption areas. If that is correct, its argument is either that access seekers currently supplying broadband services using LSS can readily expand to also provide WLR and LCS services, or that infrastructure can be readily put into an exchange to supply the WLR and LCS services.

85 To support its application, Telstra provides witness statements and documentation suggesting that at both a technical and commercial level, it would be feasible to self-supply these wholesale services.

86 Having reviewed Telstra's statements and received information from CCC members, we consider that Telstra has both substantially overstated the ability of access seekers to self-provide WLR and LCS equivalent services in the short-to-medium term using ULLS. That is not to suggest that there is *no* ability to substitute, as technically Telstra's submissions are accurate, and some substitution is occurring¹² – rather, we observe that there are barriers to rapid substitution that would limit the ability of current WLR and LCS acquirers to compete with Telstra in downstream markets in access to these services was no longer provided.

87 The key difficulties experienced in provide WLR and LCS equivalent services are as follows:

- In many instances, it is not commercially feasible to provide WLR and LCS equivalent services in all of the exemption areas due the economies of scale required;
- It is unclear whether providing VoIP services using ULLS will provide a complete replacement for PSTN services, given voice quality and user perception issues;
- There are non-price impediments to using ULLS to produce WLR and LCS or equivalents, which include:
 - significant problems with migration of voice services to ULLS;
 - access issues to many exchanges, which limits the ability of new entrants to deploy additional infrastructure;
 - technical barriers to migrating lines from WLR; and

¹² e.g. as the Commission notes, both Optus and Primus use ULLS services to provide a full Telstra PSTN replacement service.

Will competition be effective in retail markets if exemptions are granted?

- The lack of a well-developed wholesale market (i.e. resale) for WLR and LCS in the exemption areas.

88 We also note that, as a general point, Telstra's statements with regard to the ease of entry lack a certain degree of credibility – if it was so easy to supply voice services using ULLS, then it begs the question of why LSS continues to be taken at all? A response that firms can make a significant profit reselling WLR and LCS services is not credible, bearing in mind the results of the ACCC's quarterly accounting separation reports, which suggests losses from reselling local telephony services, and small profits from providing a bundle of local and other pre-selectable calls.¹³

1. Scale issues

89 Telstra's submission claims that there are no material barriers to ULLS-based entry to supply voice services. In support of its submission, it comments on the likely sunk costs associated with providing voice services, as well as an analysis of the minimum efficient scale for ULLS providers providing both broadband and voice services, and voice services alone. It also finds there are no technical barriers to ULLS-based operators providing telephone services of an equivalent quality to Telstra's services.

90 Telstra contends that sunk costs are not large, and can in any event be avoided by purchasing wholesale WLR and LCS services from existing network operators. It also claims that the minimum efficient scale for ULLS entry in band 2 is extremely low (in terms of required customers). Telstra produces similar results when comparing the costs of LSS-based entry (in that case, comparing broadband revenues with costs necessary to produce a broadband service).

91 We have reviewed Telstra's modelling, and, to the extent possible, the assumptions it makes (described in Annexure I and accompanying explanatory statement). Our finding is that, in certain respects, the modelling significantly overstates the viability of entry for relatively small numbers of customers at an exchange. The key reasons are that:

- the initial investment costs appear to have been significantly understated. **[c-i-c]**
- Certain costs associated with TEBA establishment appear to have been excluded from Telstra's cost stack. **[c-i-c]**
- Backhaul transmission costs also appear to significantly understate the true costs, with **[c-i-c]**

92 Applying these revised figures, our modelling work suggests that minimum efficient scale is achieved at around **[c-i-c]** customers per exchange.

93 The conclusion we draw from this is that the MES will indeed be an important entry barrier, particularly at smaller exchanges. That suggests that competitive

¹³ The ACCC's latest imputation reports (June 2007) estimate margins for a bundle of fixed voice services of around 8 per cent.

entry may be limited to a reasonably small number of competitors per exchange area, and that a comprehensive ULLS-based entry program (in response to a possible withdrawal of wholesale LCS and WLR supply by Telstra) is likely to prove substantially riskier than submitted by Telstra.

2. The quality and perceptions of VoIP services

94 Provision of voice services using ULLS may consist of either traditional voice switching technology or use of ‘POTS emulation’. The major type of emulation is through the use of VoIP technology, which Telstra considers can offer voice calls of an equivalent quality to PSTN calls. Telstra suggests that VoIP is increasingly being offered as a fully-featured substitute to traditional PSTN technology.

95 There can be little doubt that VoIP services are increasingly seen as an option by some consumers for certain types of calls, and for medium-large businesses (who tend to spend large amounts on voice services). However, significant barriers to its widespread take-up and acceptance remain at the residential and small business level. These barriers are much more important for WLR substitution than they are for ‘non-essential’ calls of the type that VoIP can more readily substitute for (e.g. international calls).

96 It is relevant to note that there is little evidence to date that VoIP has been used as a replacement for a PSTN service. While we could expect that as quality and perception issues continue to be addressed, such substitution may occur, it would seem premature to declare that the *possibility* of substitution in future is sufficient to give rise to a material constraint.

97 The current barriers to widespread uptake of VoIP services include:

- The need for specialised equipment at the customer’s end (e.g. handsets);
- The lack of location specific numbers, causing problems for emergency services and loss of existing phone number;
- reliability and quality of services perceptions (e.g. prioritising voice packets and latency); and
- the dependence of these services on maintaining electrical power.

98 We note there is a sense of industry optimism at the prospects of VoIP services as being a PSTN replacement, and a number of recent press articles on ‘Naked DSL’ offerings by (among others) iiNet, TPG and Internode.¹⁴ However, it is also worth bearing in mind that these services are at trial stage only, and have not yet been proven to be technically and commercially-viable substitutes for existing users, in particular those on LSS (which a significant proportion of existing broadband users take).

¹⁴ See, for example, “The bare facts about Naked DSL”, *The Age Newspaper*, 15 October 2007.

3. *Non-price impediments to ULLS access*

99 In our list of impediments above, we identify migration, exchange access and line problems as problems that can be broadly grouped together as examples of non-price impediments to ULLS access. To the extent these problems are within Telstra's control, these types of behaviours may be termed (following the regulatory literature) 'sabotage' behaviour¹⁵. Broadly speaking, the sabotage literature provides a more theoretical and robust analysis of the intuitive notion that where a vertically-integrated firm stands to lose a great deal from downstream competition, but faces regulated upstream prices, it will engage in non-price-discrimination to limit the success of access seekers. Telstra and CRA quote this literature in relation to ULLS as being supportive of the view that Telstra has limited incentive to engage in sabotage:

“...Third, such quality degradation may not be profitable for Telstra to undertake (because while it may reduce competitive supply in retail markets, it also reduces access seeker demand in wholesale markets). Moreover, the particular characteristics of telecommunications make it especially unlikely that sabotaging the quality of access seekers' services would raise Telstra's profits. [fn: Telecommunications firms typically compete through price and product differentiation. In such markets, harming the quality of rivals' retail services is likely to lower retail prices, possibly lowering the vertically integrated firm's retail profits. It may also lower wholesale demand, again lowering the vertically integrated firm's profits (Mandy and Sappington¹⁶)

100 These claims, however, seem very tenuous in relation to ULLS. Our view would be that Telstra forgoes very little by limiting access seekers' ability to substitute for a Telstra service.¹⁷ Elsewhere in the article, Mandy and Sappington note that:

“The existing literature offers two important insights regarding the incentives of a vertically integrated supplier to sabotage its downstream rivals. First, cost-increasing sabotage generally confers an advantage upon the affiliated downstream producer, and thereby increases its profit. Second, by reducing downstream output, sabotage can reduce demand for the upstream product, thereby reducing upstream profit. Consequently, the downstream benefits of cost-increasing sabotage must be weighed against the corresponding upstream costs to determine whether sabotage will be profitable.”

101 The cost-increasing sabotage of the kinds we describe below are usually profitable because they give Telstra a cost advantage in the downstream market, but Mandy and Sappington suggest that this incentive may be dulled if sabotage reduces access seekers' demand and profits in supplying the upstream input (ULLS). Applying that to the circumstances here, we see it is very likely that Telstra would want to engage in sabotage behaviour. Sabotage which increases the costs of its competitors will result in less lines being switched from Telstra,

¹⁵ See e.g. Mandy, “Killing the Goose that laid the golden egg: Only the data knows whether sabotage pays”, *J Regul Econ*; 17:2, 157-172, 2000 and Mandy & Sappington, “Incentives for Sabotage in vertically related industries”, *J Regul Econ* (2007) 31: 235-260

¹⁶ Ibid.

¹⁷ Ibid., p. 251

meaning it gets to keep revenues from the sale of either retail (line rental, local calls, other calls) or wholesale (WLR, LCS, PSTN OTA) services. In contrast, the loss in profit from selling less ULLS is likely to be minimal because the demand for lines is relatively fixed (as a line is needed to make calls). So, it seems more likely that there will be little upstream profit loss from sabotage and a very strong incentive to undertake it.¹⁸

a. Migration issues

102 From information provided by CCC members, we understand that a key problem in the ability of access seekers to move to ULLS is the lack of a bulk migration process between LSS and ULLS, and between wholesale ADSL and ULLS. Without a cost-effective migration path, access seekers that have already made investments in DSLAMs find that they are subject to service standards (e.g. migration times) that would create serious disruptions to customers' services. Hence, even once prices for ULLS have been determined by the ACCC that make investments more commercial, there are still limits on the ability of access seekers to effectively substitute WLR and LCS services.

103 Given (a) the history of LSS connection arbitrations, which took almost two years to resolve; and (b) Telstra's current position on the likelihood of developing a migration process – Telstra has indicated it is unwilling to invest in such systems development unless there is a guaranteed and significant demand across the industry – doubts must arise as to the likelihood of a rapid resolution of this problem.

104 The Commission appears to have reached a similar view:

“(Telstra acknowledges there are impediments to efficiently migrating existing services from the LSS to the ULLS, and *[c-i-c redaction]* these impediments cannot be immediately overcome. *[end c-i-c redaction]* [Telstra, Response to Chime, 14/5, Part 2, p.2] [Telstra e-mail to Chime, 10 May 2007 (Chime 18/5, Annexure A)]...The impediment to efficient migration of existing services from the LSS to ULLS exacerbates this. To switch between platforms, the LSS disconnection and ULLS connection cannot currently be completed in a single step. This necessitates loss of service to the end-user, and additional cost to the access provider.” (p. 26-28).¹⁹

b. Access to exchanges and deployment process

105 An issue with the use of ULLS services is that there is limited access available to many exchanges. Telstra provides a list of ‘TEBA capped’ exchanges to access seekers, which identifies the exchanges in which there is limited space available. This list (as at 1 September 2007) contains 79 exchanges, and, from a quick

¹⁸ This case could be contrasted with, say, incentives to undertake sabotage in relation to long-distance calls, in which lower prices offered downstream by competitors may increase demand for upstream PSTN origination (so that, *a priori*, we would expect less sabotage behaviour than for ULLS).

¹⁹ ACCC, Access Dispute Between Chime Communications Pty Ltd (Access Seeker) and Telstra Corporation Limited (Access Provider) Line Sharing Services (LSS) Publication of Final Determination and associated statement of reasons under Section 152CRA of the Trade Practices Act 1974.

comparison, this includes many of the same exchanges in which Telstra has applied for exemption.

106 Limited access to exchanges raises a fundamental concern where the claim is that entrants can readily provide equivalent services using ULLS. The only option for access seekers at capped exchanges is purchase of wholesale services. In cases where any existing entrants are using LSS to provide services, that may place Telstra in a quasi-monopoly position where there is an absolute barrier to entry. One would not expect the terms and conditions offered by Telstra in those circumstances to be consistent with the LTIE.

c. Problems with lines

107 A second problem with using ULLS to provide WLR and LCS equivalents is that the migration of access seekers from WLR services to a ULLS platform has revealed problems with:

- migration problems due to line length,
- sub-exchanges,
- RIM or pair gain systems, or
- poor cable quality.

108 One CCC member informed us that this was responsible for migration rejection rates of around [c-i-c]. It will not be possible for any supplier other than Telstra to serve these customers, even as voice-only customers.

4. Underdeveloped wholesale market(s)

109 A final point which may limit the ability of access seekers to constrain Telstra in the retail market is the lack of well-developed wholesale markets for WLR and LCS services. That affects how access seekers are able to build retail scale and offer services to end-users. While infrastructure-based competition is important, market structures characterised by extensively geographically-fragmented services are unlikely to be in the LTIE. The loss of scale opportunities, higher risk associated with infrastructure investment, and the need to strike multiple wholesale agreements (where entrants' coverage is sporadic) will likely reduce the ability of entrants to compete effectively with Telstra.

110 This point is also reinforced by consideration of the time needed to roll-out infrastructure. It is not possible for multiple competitors to access exchanges simultaneously, so that queuing processes are put in place by Telstra. In some cases, we have been informed that builds at exchanges can last for over a year, meaning that other entrants are denied access to that exchange over that period.

111 All of this is not to say that the wholesale markets will not develop, or that wholesale markets will be essential to produce effective competition in the longer term. In the longer term, competitive entrants may well respond to incentives to wholesale WLR and LCS services (e.g. if Telstra increased those prices), or the amount of infrastructure entry in each of the 371 exemption exchanges may be sufficient to remove concerns about the effectiveness of retail competition in

Will competition be effective in retail markets if exemptions are granted?

that geographic region. However, this is unlikely to be a priority for entrants in the short-to-medium term.

112 By way of counter-example, the Commission has removed certain transmission services (certain inter-capital and capital-regional routes) from the scope of the transmission capacity declaration. These services are characterised by multiple infrastructure-based entrants, and well developed wholesale markets (as some network owners were not vertically integrated, and resale was a common market feature):

“...the Commission understands that there are a number of agreements that allow for a degree of resale competition in intercapital markets. For example, AAPT is an active participant as a wholesale provider of optical fibre resale transmission capacity on the east-west routes, while the Commission understands that providers such as Comindico, Powertel and others purchase and resell optical fibre transmission capacity on the eastern seaboard routes.

The Commission considers that the evidence of effective infrastructure competition and extensive resale competition on these routes suggests that they should remain excluded from declaration.”²⁰

113 In relation to certain capital-regional markets, the Commission noted that:

“The Commission considers that the extent of competing infrastructure on the routes listed in the above table suggests that there is effective competition and/or sufficient contestability to ensure wholesale transmission services are available to access seekers at reasonable prices.”²¹

114 It is apparent that the conditions under which wholesale WLR and LCS are currently supplied are quite removed from these circumstances.

3.4.2 Is regulation discouraging alternative and superior forms of competition?

115 A second factor to consider is whether the declaration is discouraging competition at the deeper levels that the Commission wishes to encourage. It is axiomatic that regulation should not lead to dependence on ‘low’ access prices. An example of poorly designed regulation that might lead to regulatory dependence is a pricing structure for wholesale services that provides no incentive, or disincentives, to move up the ladder of investment.

116 The problem with this argument is that the current structure of wholesale WLR and LCS prices favours moving up the ladder. Indeed, Telstra claims that ULLS prices are set below cost²², and access seekers can only acquire WLR and LCS at higher prices than Telstra charges at retail for its most popular plans (meaning that, in order to match Telstra, access seekers must sell these services at a loss).

²⁰ ACCC, Transmission Capacity Declaration Inquiry, April 2004, p. 24.

²¹ Ibid., p. 27.

²² See e.g. Telstra’s SEC filing 6-K for period ending March 2007, p.4 available at <http://www.secinfo.com/dsvr4.u532.htm>

Will competition be effective in retail markets if exemptions are granted?

117 The Commission's accounting separation reports clearly set out the evidence in relation to retail-minus pricing of WLR and LCS, with the latest reports (June Qtr 2007) indicating that Telstra fails imputation tests on local call services (line rental and local calls combined) for both residential and business customers (the imputed margin is between -21% and -23%). Assuming access seekers have the same level of efficiency as Telstra, they must cross-subsidise local services with other products in order to recover their costs of supplying local telephony services.

3.5 CONCLUSIONS

118 We conclude that granting the exemption will not facilitate more competition; rather, it seems far more plausible that it will reduce it. There are significant barriers to providing voice services using ULLS (including barriers to bulk customer migration to ULLS from LSS), an underdeveloped wholesale market, and limited competition from other substitutes such as Optus's HFC network.

119 The result of granting the exemption is that there would be a serious risk that Telstra would increase the price of WLR and LCS services, or withdraw them from supply altogether. That would be likely to lessen the effectiveness of competition in the downstream markets for fixed telephony and broadband services. While it might be argued that access seekers would be protected, to some degree, by the provisions of Part XIB, it would seem perverse to find that granting the exemption would be in the LTIE, and then subsequently find that future conduct lessened competition (as the promotion of competition is one of the LTIE assessment criteria).

Will competition be effective in retail markets if exemptions are granted?

4 Will granting the exemptions promote efficient investment?

4.1 EFFICIENT USE AND EFFICIENT INVESTMENT

120 The Commission notes that there is a strong relationship or interdependency between the relevant factors when considering the promotion of competition and the relevant factors when considering the encouragement of economically efficient use of and investment in infrastructure.

121 In particular, the Commission suggests that competition is only likely to be promoted in downstream markets if upstream markets are not competitive, which would lead to inefficient use of and investment in infrastructure. Conversely, competitive upstream markets would mean that declaration will likely promote neither competition nor efficient use and investment in infrastructure.

122 Our analysis in the previous section of this report suggests that competition in the upstream market is still nascent, and that competition in downstream markets is therefore at risk if the exemption is granted. That provides a preliminary indication that efficient use and investment are unlikely to be enhanced by granting the exemption.

123 It is useful, as suggested by the Commission, to consider the effect of granting the exemptions on investment in three types of infrastructure:

- infrastructure by which the LCS and WLR services are currently supplied;
- alternative infrastructure by which LCS and WLR could be supplied; and
- alternative infrastructure by which other related services may be supplied.

4.2 INVESTMENT IN EXISTING LCS AND WLR INFRASTRUCTURE

124 We consider that the Commission is correct in noting that continued declaration is unlikely to reduce Telstra's investment in the CAN and related services by which LCS and WLR are supplied. There are two reasons:

- Pricing of WLR and LCS is likely in excess of Telstra's costs (particularly in the exemption areas, which are likely to be lower cost areas)²³; and
- Even if prices were 'cost based', this means TSLRIC+, a forward-looking cost concept involving replacement of sunk and long-lived assets. Telstra

²³ We note the ACCC's comments in its Local Services Review:

"As noted previously by the ACCC, appropriately defined TSLRIC+ costs of providing local calls and line rental are likely to have declined significantly in recent periods, and may now be below access prices set under the current pricing approach. While Telstra's estimates appear to place the TSLRIC+ costs at slightly above access prices, the ACCC considers that these estimates are not robust.

would be more than compensated for the actual costs it needs to incur to maintain its assets in productive shape.

125 In contrast, the position of Telstra is that declaration discourages investment in the production of WLR and LCS services and equivalents, because it:

- truncates returns;
- creates a potential for regulatory dependence;
- encourages arbitrage; and
- has asymmetric impacts.

126 While each of these arguments is plausible in theory, none of these arguments apply in the circumstances surrounding the supply of infrastructure used to provide the LCS and WLR services.

- Truncation of returns can be a significant problem if investments are in new and risky activities.²⁴ In simple terms, such projects have a large ‘downside’, which requires a consequently large ‘upside’ to make the risks taken worthwhile. It is this upside which is capped under TSLRIC regulation. Having said that, in the current circumstances, the investment in the CAN and switching is essentially capacity-maintaining, and allows continued production of already profitable and mature services (as well as emerging complementary services, such as broadband). It is difficult to see how the truncation of returns is likely to be a serious investment disincentive. This can be illustrated via the following diagrams, which illustrate the truncation problem for a riskier and less risky investment. In the first case, there may be some need to consider how the mean TSLRIC return can be augmented to ensure that efficient investment is encouraged. By contrast, in the second (and we would claim more relevant) case, the truncation problem is likely to be *de minimus* – particularly as access prices are not set using TSLRIC, but retail-minus.

²⁴ See the analysis in e.g. Gans and King, "Access Holidays and the Timing of Infrastructure Investment," *Economic Record*, Vol.80, No.248, March 2004, pp.89-100.

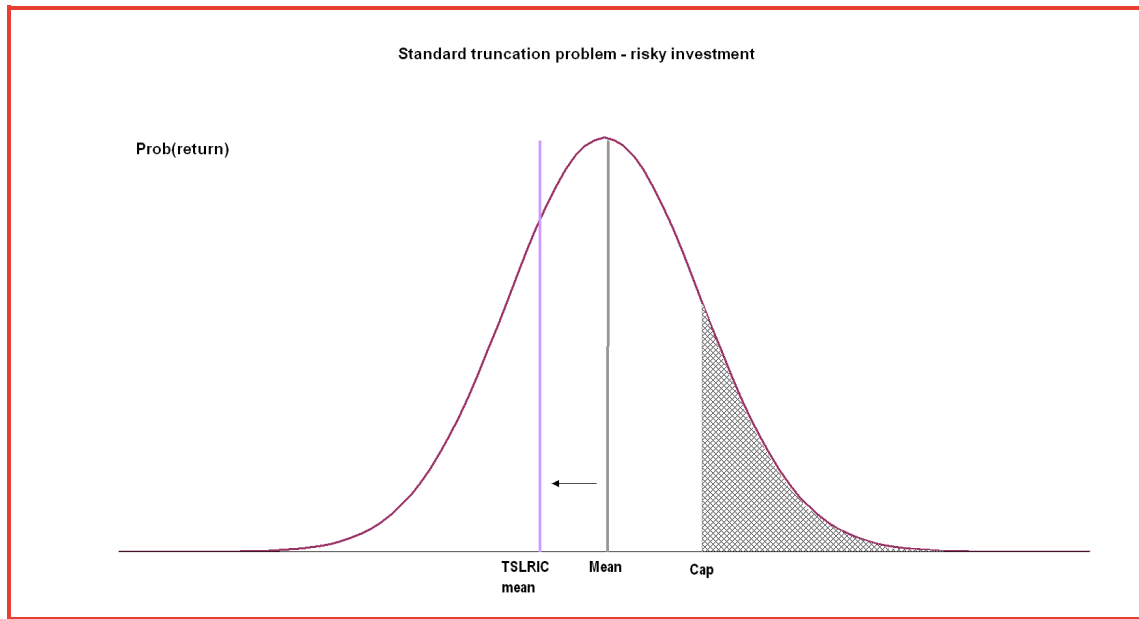


Figure 1: Truncation of returns - risky investment

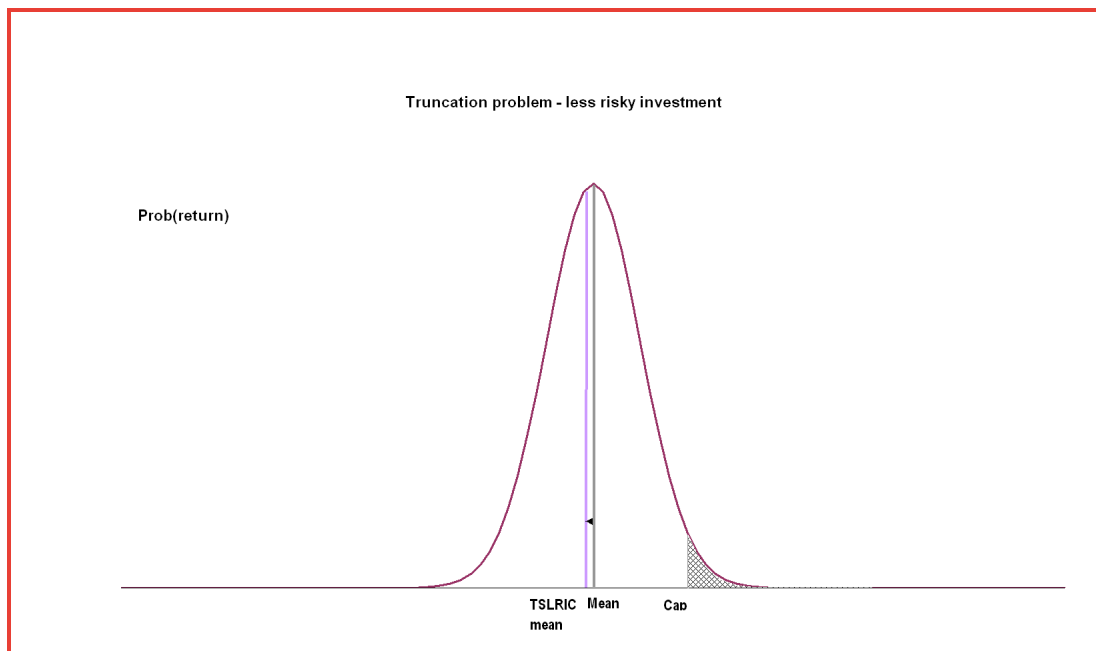


Figure 2: Truncation of returns - less risky investment

- Telstra’s argument in relation to regulatory dependence seems to relate entirely to some limited evidence that Optus has increased its use of WLR and LCS at the same time as the number of voice subscribers on its HFC network has declined. But Telstra has no substantive evidence to demonstrate its propositions, and also does not mention that Optus has indicated that it will no longer serve new retail customers with Telstra’s WLR and LCS

Will granting the exemptions promote efficient investment?

services outside of Optus' DSLAM-based network area, because of the poor profitability of serving these customers.²⁵

- Telstra's has not demonstrated that any arbitrage opportunities with negative consequences exist in relation to WLR and LCS services. Arbitrage generally is only bad for consumers if it undermines efficient (discriminatory) pricing practices or regulated prices based on average costs. Telstra / CRA allege that arbitrage of PSTN OA creates problems, based on the assumption that LCS services are priced in a cost-reflective manner and that arbitrage restricts Telstra's ability to recover LCS costs in high-cost areas. However, the retail-minus methodology applied to LCS services does not ensure cost-reflective pricing, and there is no evidence that LCS prices do reflect efficient cost. So even if substitution of PSTN OA services (which are priced to reflect costs, including contributions to common costs) was occurring, there can be no presumption that it would undermine LCS cost recovery and decrease consumer welfare.
- Telstra has sought to argue that the impact of under-pricing is likely to exceed that of overpricing, by claiming (in the CRA report) that under-pricing will reduce investment in both access networks and by access seekers. Again, in the circumstances where retail-minus prices are used to set WLR and LCS access prices, such arguments lack an evidentiary basis²⁶ and are therefore not credible.

4.3 INVESTMENT IN NEW WLR AND LCS INFRASTRUCTURE

127 The possible argument here is that ongoing declaration of WLR and LCS may act as a substitute for, and impediment to, efficient investment in alternative infrastructure by which WLR and LCS, or WLR and LCS equivalent services, are supplied.

128 Again, this seems highly implausible in the current circumstances surrounding current supply of WLR and LCS:

- It is already unprofitable to acquire LCS and WLR services to supply retail local services, and not particularly profitable to supply the full bundle of retail

²⁵ See e.g. <http://www.zdnet.com.au/news/communications/soa/Optus-to-turn-away-customers/0,130061791,339274632,00.htm>

²⁶ Note also the comments of the Australian Competition Tribunal in relation to the setting of WACC (which is a major determinant of cost-based prices):

“457. We accept that there exists as a matter of theory the potential for asymmetrical consequences should the WACC be set too low or too high. Which of these consequences will carry with it the greatest social damage is not a matter solely for theory, however, but for robust empirical examination, well-guided by theory, of the actual facts of any particular case. In the present matter, based on the material before us, we do not consider that it is possible to form a concluded view as to where, on balance, the greatest long run social damage would lie, when considering the impact of a WACC set too high compared with the impact of one set too low.” Telstra Corporation Ltd (No 3) [2007] ACompT 3 (17 May 2007)

fixed voice calls, as demonstrated in various ACCC reports on Telstra's accounting separation data;

- The relatively large gap between these wholesale prices for WLR and LCS and ULLS provides strong incentives to 'move up the ladder' and provide services using ULLS;
- Optus's recent moves to limit its services to areas where it has competitive infrastructure provides an indication of the significantly different profile of profitability of resale versus facilities-based customers; and
- Exemption from the SAOs will simply remove an option for access seekers, or (at best) make retail provision more difficult (assuming Telstra exploits its wholesale market power by raising prices or by refusing supply).

129 We see the outcome of granting the exemption as more likely to limit efficient investment, as it will increase barriers to entry at the retail level.

130 A final, but perhaps even more pertinent, point is that Telstra's submissions ignore some overarching issues for investment:

- Telstra's FTTN plans would effectively strand the investments of existing ULLS access seekers;
- A Federal Government taskforce has been set up to consider competing views on the appropriate regulatory structure for next generation networks (including Telstra's FTTN proposal); and
- Telstra has taken action in the High Court, alleging that Part XIC has been applied in a way that is unconstitutional.

131 Each of these will likely have a far more significant effect on the business-case for future investments in switching or other equipment required to provide voice services via LSS migration or ULLS entry.

4.4 CONCLUSIONS

132 We conclude that approving Telstra's exemption request would offer few benefits in terms of efficient investment, and would do little to promote meaningful competition or investment in infrastructure.

133 In light of the overarching investment issues, it would seem far more appropriate to re-consider the issue of certain access exemptions as part of the Commission's proposed 2008 review of fixed line declarations. By that time, there will at least be more clarity on FTTN issues and at least potentially on the success of Telstra's legal challenge to the Part XIC regime.

Annex – Deregulatory rules adopted in other jurisdictions

UK (OFCOM)

134 As we suggest in the main text of our report, the UK has given considerable thought to the use of deregulatory rules. In the context of the Telecommunications Strategic Review (TSR), Ofcom noted the following:²⁷

“F.30...Our discussion on this issue in Phase 1 elicited some thoughtful views. BT argued that the regulator should focus on giving contingent commitments – in other words, making clear that if certain pre-conditions are met at a certain point, the expectation would be that regulation could be withdrawn from that point onward. However, BT and others also noted the difficulty for the regulator in making strong or credible commitments, however contingent.

F.31 In practice, a formal forbearance policy along USA lines is something which Ofcom could introduce only if the EU framework was modified. However, there is scope for Ofcom to vary remedies which apply when SMP is found. Our intention under Option 3, as set out in Chapters 5 and 8, is to focus regulation on enduring economic bottlenecks and ease regulation downstream of these bottlenecks. We will forbear from applying additional layers of regulation where this is practicable. We recognise the strength of the argument advanced that for such forbearance to have an impact, it has to constitute a credible commitment. We will be exploring this issue of regulatory commitments further during Phase 3.

F.32 One important point to make in connection with forbearance is the need for a policy of this kind to be matched by a commitment on the part of the regulated company to conduct itself responsibly. For instance, if the regulator forbears from applying *ex ante* price controls, the regulated company should ensure that its behaviour does not immediately prompt calls for that forbearance to be reversed. We have termed such an approach a ‘deregulatory contract’ and it will be important to develop a shared understanding of this concept as we identify opportunities for forbearance.”

135 The undertakings provided by BT to Ofcom were essentially a form of deregulatory contract. Annex H to the TSR also provided a ‘roadmap’ to deregulation of certain wholesale services once fit-for-purpose WLR and CPS products were delivered by BT (see in particular figures 5 and 6).

136 More recently, Ofcom has considered applying deregulatory rules based on differing competitive conditions across geographic regions. In its recent review of wholesale broadband markets, it noted:²⁸

“1.17 Regulation of this market must adapt to these changes in order to continue to ensure effective competition in the retail market. In particular, we need to avoid a ‘one size fits all’ approach to regulation that treats all these areas the same.

²⁷ Ofcom, Telecommunications Strategic Review (Phase 2), Policy Annex F.

²⁸ Ofcom, *Review of the Wholesale Broadband Access Markets*, 2006/07

1.18 Accordingly, in our economic analysis we have found that there are sub-national, or local, geographic markets reflecting the different competitive conditions. The relevant wholesale geographic markets and their population coverage based on January 2007 forecasts that we have identified are:

- exchanges where Kingston is the only operator (“the Hull area”) which covers 0.7% of the UK population;
- exchanges where BT is the only operator (“Market 1”) which covers 24% population;
- exchanges where there are 2 or 3 operators (inc BT and ntl:Telewest) AND exchanges where there are 4 or more operators (inc BT and ntl:Telewest) but where the exchange serves less than 10,000 homes and businesses (“Market 2”) which covers 21% population; and
- exchanges where there are 4 or more operators (inc BT and ntl:Telewest) and where the exchange serves 10,000 or more homes and businesses (“Market 3”) which covers 54% population.”

137 Ofcom proposed continuation of existing regulations in the Hull area and for markets 1-2, while it has not yet made a decision as to how to regulate market 3. It has proposed drawing a boundary where there are three facilities-based entrants (including cable), and when there are four, on the basis that the incremental effect on competitive conditions of a fourth entrant would still be relatively significant, whereas a fifth would be less so.²⁹

CANADA (CRTC)

138 The Canadian regulator, the CRTC, has also considered appropriate rules in the context of “local forbearance” proceedings. While the proceedings were in relation to deregulation of retail services, the principles applied by the CRTC were similar in nature to the Commission’s considerations.

139 In rejecting forbearance petitions from some of the major Canadian incumbents, the CRTC put forward the following benchmarks:

In this decision, the CRTC has set out a clear roadmap for the deregulation of the local telephone services provided by the incumbent telephone companies...This roadmap defines the geographic markets in which the CRTC will forbear from regulating as the criteria for deregulation are met. Local telephone services include basic telephone service (i.e. local calling), VoIP services, and optional features (i.e. voicemail, caller ID)...Geographic regions are defined using Statistics Canada's Census Metropolitan Areas (in large urban areas) and Economic Regions (in other areas).

To qualify for deregulation, an incumbent telephone company must demonstrate that it has met the following criteria:

- * competitors have 25 per cent market share in the relevant geographic market; and

²⁹ Ofcom, *WBA Review*, p. 53.

* it has provided competitors with access to its network necessary to ensure fair and sustainable competition, including meeting competitor quality of service indicators for six months, having Competitor Services tariffs in place and allowing competitor access to its operational support systems where required.³⁰

140 The CRTC found that the proposal of TELUS, one of the incumbent carriers, for deregulation where a facilities-based competitor had acquired 5 per cent of lines was insufficient.

141 Its preferred test focused on the market share losses of the incumbent:

246. In the Commission's view, it is the loss of customers to competitors by an applicant ILEC which best demonstrates that an ILEC's market power may be diminished.³¹

142 Interestingly, the Canadian Government then intervened to overrule aspects of the CRTC decision, and substituted alternative criteria:

The government proposes to replace the CRTC's market-share test with one that emphasizes the presence of competitive infrastructure in a given geographical area.

The new test that we are putting forward is based on the presence of several competitors that have their own wireline or wireless networks and are offering competing telephone services. Under this test, the former regional monopolies will no longer need to get CRTC approval to set their prices for residential services in areas where there are at least three facilities-based telecommunications service providers owned by three non-affiliated companies.

This means that in regions where consumers have access to telephone services from a traditional telephone service, a cable company and at least one non-related wireless provider, deregulation will occur. For local business markets, we are proposing a similar test based on the presence of two competing wireline network operators.³²

³⁰ CRTC press release, <http://www.crtc.gc.ca/eng/NEWS/RELEASES/2006/i060406.htm>

³¹ CRTC Local Forbearance decision, <http://www.crtc.gc.ca/archive/ENG/Decisions/2006/dt2006-15.pdf>

³² Minister of Industry media release, 11 December 2006, <http://www.ic.gc.ca/cmb/welcomeic.nsf/503ccc39324f7372852564820068b211/85256a5d006b972085257241007482f7!OpenDocument>

The Frontier Economics Network

Frontier Economics Limited in Australia is a member of the Frontier Economics network, which consists of separate companies based in Australia (Melbourne, Sydney & Brisbane) and Europe (London, Cologne and Brussels). The companies are independently owned, and legal commitments entered into by any one company do not impose any obligations on other companies in the network. All views expressed in this document are the views of Frontier Economics Pty Ltd.

Disclaimer

None of Frontier Economics Pty Ltd (including the directors and employees) make any representation or warranty as to the accuracy or completeness of this report. Nor shall they have any liability (whether arising from negligence or otherwise) for any representations (express or implied) or information contained in, or for any omissions from, the report or any written or oral communications transmitted in the course of the project.

THE FRONTIER ECONOMICS NETWORK

MELBOURNE | SYDNEY | BRISBANE | LONDON | COLOGNE | BRUSSELS

Frontier Economics Pty Ltd, 395 Collins Street, Melbourne 3000

Tel. +61 (0)3 9620 4488 Fax. +61 (0)3 9620 4499 www.frontier-economics.com