

Optus Submission to

Australian Competition and Consumer Commission

on

**ACCESS DEFICIT FOR PSTN ORIGINATING TERMINATING
ACCESS (OTA)**

February 2003

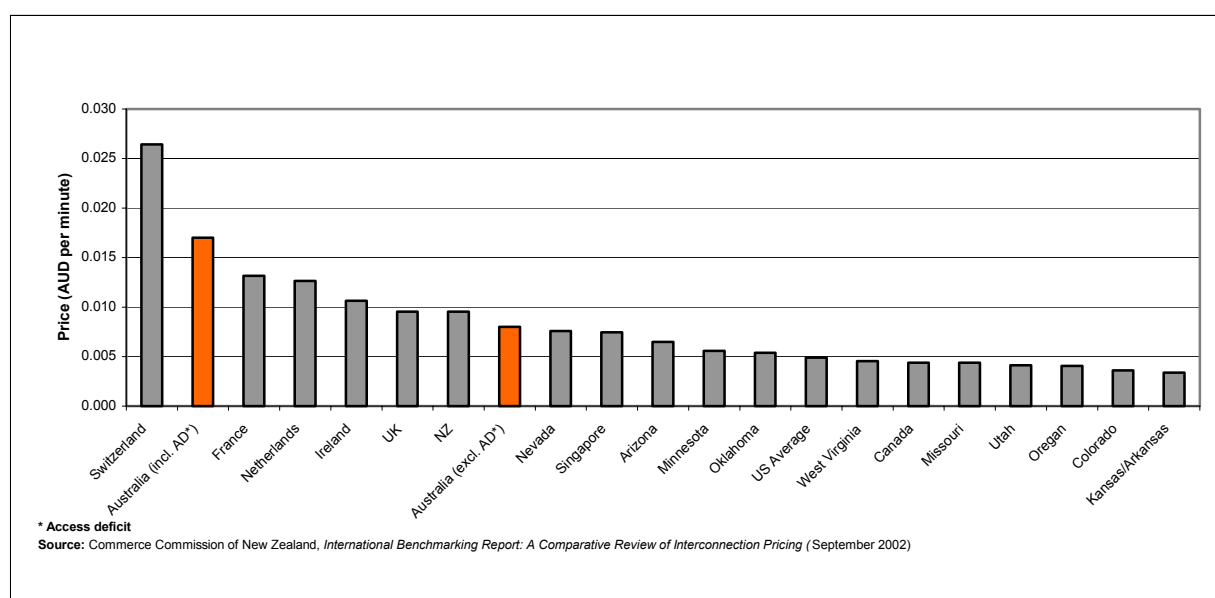
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1. Executive summary

- 1.1 Optus welcomes the opportunity provided by the ACCC to re-examine the appropriateness of Telstra's claimed access deficit. The access deficit contribution on PSTN originating and terminating access (PSTN OTA) charges remains a significant cost impost on competing carriers. This results in a significant transfer of value from these largely unprofitable carriers to the dominant and highly profitable incumbent.
- 1.2 Optus has consistently maintained the position that the AD does not actually exist, particularly if a less narrow and more appropriate view is taken of the revenues and profit streams associated with the customer access network.
- 1.3 As the ACCC prepares to set benchmark prices for PSTN OTA and considers Telstra's access undertakings, it is appropriate that its approach to the access deficit is reviewed. In this submission Optus shows that the levying of an access deficit contribution on PSTN OTA distorts competition, provides Telstra with a competitive advantage in emerging telecommunications markets, and allows Telstra to over-recover the cost of the customer access network.
- 1.4 A comparison of Telstra's PSTN OTA rates with rates applied around the world shows that the inclusion of an access deficit contribution means that Telstra's rates are amongst the highest in the world (see figure 1).

Figure 1 Average PSTN OTA rates per minute



- 1.5 The access deficit is an entirely notional concept - it is a common cost that cannot economically be attributed to any one service. It is the result of the narrowest view of revenue attributable to the customer access network.
- 1.6 Fundamentally, the access deficit is believed to arise because of Telstra's obligation to supply basic access services at a uniform price. The cost to Telstra of this obligation should define the access deficit. The cost is appropriately defined by considering the cost to Telstra of no longer having this obligation. If Telstra were to no longer have this obligation it would:
- (a) Avoid the cost of maintaining and expanding the customer access network.
 - (b) Forego revenues it receives from line rentals as well as any net revenue streams it receives from the customer access network.
- 1.7 Clearly, the present definition of the access deficit is overly narrow. This more conceptually correct definition (or framework) would resolve any funding issues Telstra might face and address its legitimate business interests. It would also avoid the distorting effects of an access deficit contribution.
- 1.8 An access deficit contribution on PSTN OTA distorts the market prices for long distance, international and all other services that rely on PSTN OTA. The welfare consequences of these distortions are significant.
- 1.9 Optus believes that the access deficit contribution as presently defined, does not address the perceived problems associated with the retail price controls. Specifically, an access deficit contribution:
- Discourages entry into the long distance and international call markets. There is limited risk that Telstra would not be able to meet competition in these potentially competitive markets.
 - Results in over-investment in the PSTN. Telstra's incentive to invest is based on its total returns from the network, not specifically those related to basic telephony.
 - Distorts the build/buy decisions of access seekers. It seeks to discourage under-investment but results in cream skimming incentives.
- 1.10 Optus believes the access deficit contribution, as presently defined, has the effect of maintaining Telstra's monopoly rents in long distance and international calls. The design of the access deficit operates to deter entry into these potentially very competitive markets. This is entirely inconsistent with Section 152AH criteria for reasonableness as it includes the "consequential costs" to the incumbent (the monopoly rents lost) as a result of increased competition.
- 1.11 Our modelling shows that after allocating the access deficit contribution in full, Telstra retains a monopoly margin on its local call services. There is therefore no loss on local calls nor is there any requirement for a local call access deficit on PSTN OTA
- 1.12 The access deficit contribution is primarily designed to address a potential funding issue if Telstra faced significant loss of market share in its down

stream markets. Net revenues from these services should contribute to the access deficit before PSTN OTA. This is the most economically efficient outcome as it:

- Reduces the distorting effect of the monopoly profits earned by Telstra on local calls (and other monopoly services).
 - Avoids the need to levy an access deficit on PSTN OTA and therefore reduces the distortions associated with that charge.
- 1.13 Optus conservatively estimates that from the 10.8 billion local calls Telstra supplied at both a wholesale and retail level in the year ended 30 June 2002, Telstra reaped monopoly profits of around \$718 million.
- 1.14 In the event that an ADC is levied, Telstra's retail price structures may provide the basis for a reasonable allocation between flag-fall and call minutes. This is because we would expect Telstra's retail prices to converge to Ramsey efficient prices under the current price cap arrangements. As these "signals" in the access price are converted into retail prices this would minimise distortions in the downstream markets.
- 1.15 Optus therefore believes that the time has come to recognise that the access deficit is too narrowly defined. It needs to be broadened to consider the net revenues from the range of service that utilise the customer access network.
- 1.16 Optus believes that the recognition of other revenue sources related to the customer access network obliges the ACCC to reconsider the levying of an access deficit contribution on PSTN OTA charges.

2. Optus' historic position on the ADC

- 2.1 The issue of the access deficit contribution (ADC) is an area of particular contention and has been the subject of considerable debate. Over the past five years Optus has made a number of submissions to the ACCC which have centred around two key conclusions:
- The ADC is a notional concept and taking a broader view of the relevant PSTN costs and revenues shows that it does not exist.
 - If the ACCC accepts that there is an ADC, contrary to Optus' view, then it should not be recovered through access charges.
- 2.2 This chapter provides a brief synopsis of Optus' historic position in the context of the ACCC's current review and the two questions, "does the AD exist?" and "if so, then how should it be calculated and recovered?"

On whether the AD exists

- 2.3 Optus' long held position is that the price caps do not constitute a net cost to Telstra. Based on empirical studies undertaken in 1998 by Access Economics, Optus stated that:

It is difficult to see how the ADC argument can be sustained,

particularly given that Telstra earns more revenue over its fixed lines than other incumbents world-wide, as benchmarking by Access Economics shows.¹

- 2.4 To support this position Optus has previously referred the ACCC to benchmarking studies undertaken by the Productivity Commission which are consistent with this view and show that Telstra's local call prices are amongst the highest in the world.²
- 2.5 Optus has consistently argued that the AD is not a deficit on the PSTN, nor is it a deficit that arises from the provision of any calling services - rather it arises from a narrowly focused analysis that shows that in retail basic access there is a shortfall in basic access revenues in the retail market to cover the full cost of the customer access network (CAN). Optus has consistently argued that the AD is only reported as a notional deficit because of a number of incorrect approaches taken to its calculation.
- 2.6 For example, Optus has maintained that retail basic access is the delivery platform for all of Telstra's fixed telephony services (for example, local calls, value added services (VAS)³, long distance, international and fixed to mobile) in the retail market. The CAN is also the delivery mechanism for a range of other services including ISDN, narrowband Internet, leased line services and xDSL services. Accordingly, it is appropriate that any AD on basic access should be viewed against the net revenues of all of those retail services in aggregate.
- 2.7 An examination of Telstra's local call prices and revenues alone show that there is significant embedded monopoly profit in the local call capped price of 22 cents. The application of the retail minus avoidable cost pricing methodology (which is based on the efficient component pricing rule) allows Telstra to retain those monopoly profits even when Telstra's local call services are resold by competitors. Optus believes that at a minimum the monopoly profit from local calls should be netted off against the AD.
- 2.8 In 1999, in response to the ACCC's assessment of Telstra's undertakings, Optus stated its position that:

...it is economically wrong to levy an ADC when Telstra's monopoly profits in the local calls market recover any loss and these monopoly profits are preserved in perpetuity, as the ACCC has adopted avoidable cost, or ECPR access pricing regulation. To do so is to double count the costs of the local loop, and penalise consumers in the form of unnecessarily high long distance prices.

It is also important to note that Telstra's monopoly profits from local calls exceed the access deficit independent of local call duration

¹ Optus, *Response to the ACCC on Assessment of Telstra's Undertaking for Domestic PSTN Originating and Terminating Access Draft Report*, January 1999, p.36

² Optus, *Response to the ACCC Discussion Paper on Telstra's Undertaking for Domestic PSTN Originating and Terminating Access*, December 1999, p.42

³ VAS includes call waiting, message services and caller identification.

*assumptions when traffic sensitive and non-traffic sensitive components of the networks are characterised appropriately.*⁴

- 2.9 In addition to the monopoly profits earned on local calls and VAS, Telstra's PSTN is highly profitable and the revenue base is increasing in size. The profit on PSTN services as a whole would fund the entire AD through cross-subsidisation, even ignoring that proportion of the PSTN revenue that arises from interconnection. For Telstra to collect a subsidy whilst earning super-profits on its PSTN is not consistent with the business interests of access seekers and it is not in the long-term interests of end-users (LTIE).
- 2.10 Further, Optus has also consistently argued that Telstra's line-related costs have been overstated. Optus has repeatedly argued that line-related costs should include only those costs directly attributable to the CAN. Under the TSLRIC+ approach, all direct and indirect costs, not necessarily directly related to the CAN, are included as line-related costs. No attempt has been made to attribute or de-average common and joint costs due to the difficulties associated with doing so. However, Optus' position remains that at least the use of some equi-proportionate allocation would be superior to the current approach toward line-related costs. In summary, Optus believes that line-related costs, represented by TSLRIC+ are being significantly overstated in the calculation of the AD whilst the attributable line-related revenues are being under-stated.
- 2.11 Whilst Optus has consistently disputed the existence of an AD, we have recognised the possibility that the ACCC may take a different view. Accordingly, if an ADC is deemed to exist, then the issue of how it is recovered must be addressed. Optus' consistent position on the issue is that recovering the AD through a contribution from PSTN OTA is the least-best option as it is the most distortionary. Rather, the ideal funding options in Optus' view have been that it be funded by:
- The end-users of basic access, by removing price caps and allowing full rebalancing.
 - Telstra's monopoly profits, for example by netting off the profits from local calls and VAS and any other service that can only be provided by the owner of the access line serving that customer. For example, ISDN and xDSL.
- 2.12 Optus has also argued that any allocation of the ADC should be recovered by application of Ramsey pricing principles from those services for which demand is the least elastic (or responsive to changes in price). If the AD is to be levied as an ADC on PSTN services then Optus has argued that this should be based more on call minutes rather than flag-fall. This is because of a belief that call minutes are less elastic. There is considerable theoretical and empirical evidence to support Optus' position, including Telstra's own retail pricing which prices calls based on an 20:80 ratio of flag-fall to call minutes.

⁴ Optus, *Response Submission to the ACCC on Assessment of Telstra's Undertaking for Domestic PSTN Originating and Terminating Access Draft Report*, January 1999, p.3-4

3. Summary of the current debate

- 3.1 In light of new facts and a better understanding of the development of competition in telecommunication markets, the ACCC is revisiting the concept of the AD.
- 3.2 This review is timely because of the requirement for the ACCC to publish indicative prices for PSTN OTA services by June 2003.⁵ In addition, the ACCC is shortly to consider the reasonableness of the price undertaking for PSTN OTA lodged by Telstra on 9 January 2003.
- 3.3 The AD is a material element of current access prices and it is essential the ACCC review its approach to the AD as it considers the appropriate level for future PSTN OTA rates. PSTN OTA remains a significant input cost for access seekers.

The ACCC's position on the existence of an AD

- 3.4 The ACCC's original decision on the AD was made in 1999 with the overriding theme that it was a notional concept that related to a specific area of Telstra's operations. The ACCC has always maintained that it is a notional concept and that there is a possibility that it might not exist if examined on an aggregate level. The ACCC's definition of the AD in 1999 indicated the its open-minded approach to the AD.

*An access deficit is defined as the difference between the costs of the lines connecting customers to Telstra's network and non-call revenue **such as** line rental and connection revenue. An access deficit **may** arise where Telstra is constrained by retail price controls from raising line rentals to costs.⁶ (emphasis added)*

- 3.5 Whilst the ACCC in its *Assessment of Telstra's Undertaking for Domestic PSTN Originating and Terminating Access Final Decision* (June 1999) established the position of recognising the notion of an AD and allowing Telstra to add an ADC to the conveyance charge for PSTN OTA, this position was never presented as a definitive view.
- 3.6 In June 2001, the ACCC's Submission to the Productivity Commission's inquiry put forward the view that the AD may not exist at all when taking a holistic view of Telstra's overall profitability:

Whilst not conceding that Telstra is forced to sell below cost in any instance, the ACCC believes it is important also to consider the overall financial position of Telstra and, in particular, the profitability of the PSTN. It is clear that the totality of retail and wholesale revenues from

⁵ Under section 152 AQB of the Trade Practices Act 1974 (the Act), the ACCC is required to take all reasonable steps to publish model terms and conditions (which would include indicative price and non-price terms) for core telecommunications services. Core telecommunications services include PSTN OTA, local call resale and unbundled local loop services.

⁶ ACCC, *Interconnection Charges and Telstra's Access Deficit Discussion Paper*, September 1999, p.2

PSTN is well in excess of attributable costs, making a substantial contribution to indirect costs (unrelated to the PSTN) and profits.⁷

Based on data for 1999-00, mainly from Telstra's 1999-00 Annual Report and the ACCC's n/e/r/a model the PSTN is 'highly profitable' and that even though there is a deficit on line rentals (basic access) the rest of the PSTN more than makes up for this.⁸

- 3.7 Optus understands that the AD was established on the basis of a number of assumptions that were in turn based on imperfect information. The ACCC did not have access to:
- Transparent data on the profitability of the PSTN. RAF accounts that would provide this information were only filed in 2002.
 - Telstra's internal product pricing and profitability data.
 - Information on Telstra's overall ability to recover its line-related costs.
 - Relevant information on the size of the line-related costs.
- 3.8 Given the conditions of imperfect information the ACCC took the decision to accept the AD notion, albeit with reservations. The approach taken by the ACCC focused on the asymmetric risk of investment decisions and whether the shortfall in basic access revenues would distort investment decisions by Telstra. The ACCC was also concerned whether a decision to dismiss the AD would lead to inefficient entry in downstream services that use PSTN OTA as an input (for example, long distance) due to potential cream skimming practices by competitors.⁹
- 3.9 The availability of new information has prompted and required the ACCC to re-examine the original premises upon which its approach was based. This new information includes observations and evidence that:
- Telstra's PSTN based services (such as local calls, VAS and long distance) remain increasingly profitable.
 - There is no internal ADC being charged by Telstra to itself.
 - Telstra's market position (overall profitability) has not deteriorated.
- 3.10 Optus understands that in the past two years the ACCC has been able to obtain more reliable and accurate information on the costs and revenues associated with Telstra's PSTN. The ACCC has now come to the conclusion that a re-

⁷ ACCC, *Response to the Productivity Commission Draft Report Telecommunications Competition Regulation*, June 2001, p.23

⁸ ACCC, *Response to the Productivity Commission Draft Report Telecommunications Competition Regulation*, June 2001, p.29

⁹ It should be noted here that we are discussing *entry* into downstream markets rather than the incentive to *bypass* the PSTN. In terms of bypass Optus does not believe that a cream skimming incentive exists in the absence of an ADC. In fact, the levying of an ADC may introduce a cream skimming incentive because for high value customers the ADC contribution on PSTN OTA charges may outweigh the additional cost of taking an unbundled local loop service. This is discussed in more detail below.

assessment is justified and the potential benefits that may arise from this review will outweigh the regulatory costs.

The ACCC's position on the recovery of the AD

- 3.11 The ACCC has always considered a number of approaches for the recovery of the AD, bearing in mind that the most economically efficient manner in which to recover the access deficit is to have different call types contribute to the AD based on their relative responsiveness. However, the ACCC faced a lack of proven evidence on the elasticities of demand for call minutes and call flag-fall. Accordingly, the ACCC used a compromise approach (as it has subsequently acknowledged) by allocating the ADC on 50:50 basis – 50% on flag-fall (or call ends) and 50% on call minutes.
- 3.12 The ACCC's examination of Telstra's retail pricing for the PSTN based calls indicates that Telstra's pricing is based on a call flag-fall to minute ratio of 20:80. This supports the position that it is appropriate to allocate more than 50% of the ADC to call minutes. This is consistent with Optus' ongoing view on the allocation issue.

Inconsistency in Telstra's arguments

- 3.13 Contrary to the consistency in both Optus' and the ACCC's positions, Telstra has demonstrated a remarkable degree of inconsistency in its arguments. In fact, Telstra has continually expanded its own definition of the AD with the aim to levy the charge on an ever-increasing number of services. Whilst Telstra originally argued for a narrow view of the revenues and costs associated with the PSTN, its arguments have slowly broadened the scope of the AD to incorporate local calls and ULLS. It is clear that Telstra now supports the proposition that the PSTN should be viewed at an aggregate whole-of-service level.
- 3.14 The fact that the AD is based on a theoretical construct, not necessarily requiring the support of empirical evidence, has allowed Telstra the flexibility to artificially inflate the size of the AD subsidy that it receives. Over the past three years, Telstra's arguments have expanded this AD construct to apply to a much wider range of services. Optus believes Telstra's approach is a fairly obvious attempt to artificially inflate prices in those areas of its business being threatened by increased competition.
- 3.15 For example, in addition to the PSTN OTA charges Telstra has argued that it is forced to incur a loss on local calls due to the 22 cents price cap. Based on this, Telstra claims that local calls are therefore not contributing their "fair share" of the ADC. As such, Telstra believes that there should be a local call deficit surcharge on PSTN OTA in addition to the standard ADC that is allocated. This claim has rightly and consistently been rejected by the ACCC on the grounds that it would lead to a double recovery of the AD. Such a view is confirmed by numerical analysis in sections 5 and 6 below.
- 3.16 Telstra has also attempted to claim the AD as a loss associated with ULLS. Telstra has recently argued that the ULLS is a CAN related cost that does not contribute its "fair share" of the AD. Telstra's argument is that as the use of

ULLS increases as an alternative to PSTN based voice services, there is an under-recovery in the AD. As such, it argues that there should be an access deficit component included in ULL access prices.

- 3.17 However, this argument conveniently ignores the reality that ULLS line prices are already set to fully recover costs. As such, there is no so-called loss to be recovered. It follows that if all services and current lines were provisioned as ULLS there would be no AD because all CAN based costs would be fully recovered via the wholesale ULLS prices charged to access seekers. Any ADC imputed in ULLS prices would represent a double recovery of the AD. The ACCC has rightly rejected Telstra's claim for an ADC in ULLS charges.

...the ULLS involves the lease of lines that recover their costs so that conversion of PSTN line to an ULLS line would ensure that such a line was no longer provide at a loss.¹⁰

- 3.18 Whilst examining Telstra's arguments to support a selective expansion of the AD concept to include a host of other services, it is conspicuous that Telstra has ignored any retail services that over-recover the PSTN costs. Consistent application of Telstra's own logic would suggest that the potential over-recovery of the AD for these services should also be netted off against the AD.
- 3.19 Telstra instead argues that these revenue sources are being eroded through increased call hold times in local calls and increasing competition in markets that Telstra uses for cross-subsidisation of the shortfall. Empirical evidence does not show the level of margin decline that would be required to remove Telstra's capacity to cross-subsidise. The ACCC has noted Telstra's comments that its profits are "sensational", which is hardly consistent with a detrimental erosion in its profitability. Furthermore, it is unlikely that increased competition will remove such monopoly profits prior to Telstra's current program of rebalancing of line rentals being completed. That is, while competition may remove these profits in the long run they are highly unlikely to do so over the next 2 to 3 years.

The question becomes can all services using the CAN meet the remainder of the access deficit. Looking at any call type (such as local calls) in isolation and attempting to assess the extent to which it can make a contribution to the residential access deficit will not answer the question of whether Telstra can recover the residential access deficit across all call types. Currently some call types may contribute more and other call types less. The issue of costs recovery comes down to whether the residential access deficit can be recovered from contributions across all call types.¹¹

- 3.20 Optus also notes that Telstra's arguments about increased call hold times driving local calls is no longer relevant. With the growth of data and broadband services, Internet traffic is being handled in more efficient ways,

¹⁰ ACCC, *Pricing of unconditioned local loop services (ULLS) and review of Telstra's proposed ULLS charges Draft Discussion Paper*, August 2000, p. 22.

¹¹ ACCC, *Submission to Commission Decision Access Deficit Pricing Principles, Staff Paper No: SP99/150*, May 1999

whilst earning additional revenue streams over Telstra's core networks. For example, we understand that Telstra has implemented charges to remove data traffic at an earlier stage in its switching network. Telstra further benefits from the new broadband revenue streams.

Telstra's arguments on the recovery of the AD

- 3.21 As highlighted by the ACCC, Telstra's statements with respect to the recovery of the AD have shown further inconsistencies when compared to Telstra's own profit maximising actions. In its retail pricing Telstra splits its charging 20:80 between flagfall and call minutes, yet it argues for a respective 100:0 split for access pricing:

...it is Telstra's view that the recovery of the access deficit on a per call basis rather than a per minute basis will minimise economic efficiency losses. This is because the demand for calls is likely to be less elastic than the demand for call minutes.¹²

- 3.22 Given the lack of sound theoretical or empirical support for this argument, and its inconsistency with Telstra's own pricing policies, it seems that Telstra's aim is not economic efficiency, but to shift the majority of the already inflated ADC burden on to access seekers.

4. An access deficit contribution is inconsistent with Part XIC

- 4.1 The ACCC has previously determined that all new entrants should pay Telstra a surcharge on the access price they pay for PSTN OTA. This surcharge is commonly known as the access deficit charge (ADC).
- 4.2 The Government's retail price controls restrict Telstra's ability to increase line rentals for basic access services.¹³ The stated purpose of the surcharge was to compensate Telstra for its inability to recover its efficient line costs through line rentals for basic access services, and also to correct for distortionary investment incentives arising for access seekers and for Telstra.
- 4.3 Under its current review, the ACCC must consider the reasonableness of continuing to levy the ADC on PSTN OTA services. Without limitation reasonableness turns on:
- Whether the terms and conditions promote the long-term interests of end-users (LTIE).
 - The legitimate business interests of the carrier or carriage service provider concerned, and the carrier's or carriage service provider's investment in facilities used to supply the declared service concerned.

¹² As quoted in ACCC, *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access services*, July 2000, p.26

¹³ Retail price controls set by Government instrument in 2002 mean that Telstra cannot increase line rentals by more than CPI + 4% annually for next three years.

- The interests of persons who have rights to use the declared services concerned.
 - The direct costs of providing access to the declared service concerned.
 - The operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility.
 - The economically efficient operation of a carriage service, a telecommunications network or a facility.¹⁴
- 4.4 For the reasons outlined in this submission, Optus believes that the levying of the ADC on PSTN OTA is unnecessary and inconsistent with the Act's criteria for reasonableness.

Decision framework

- 4.5 Whilst Part XIC provides a clear definition of reasonableness, the criteria it sets may be mutually exclusive. For example, it is arguable that the business interests of the carrier concerned (which may be maximising profit) may not be aligned with the interest of end-users.
- 4.6 Indeed, the levying of an ADC, however defined, on access prices for PSTN OTA may arguably create a direct conflict between the interests of end-users and the commercial interests of Telstra.
- 4.7 As discussed in detail below, levying an ADC on PSTN OTA results in significant allocative inefficiency as it creates distortions in the markets that rely on PSTN OTA services as an input. Such inefficiencies are not in the interests of end-users as they inflate the prices paid for long distance, international and other valuable services that rely on PSTN OTA. They are also not in the interests of carriers accessing the PSTN as it distorts their allocation of resources and creates productive and dynamic inefficiencies for investment in downstream technologies. Similarly, they are also inconsistent with the economically efficient operation of the PSTN.
- 4.8 Conversely, if the AD is not funded by some means, a shortfall may arise in Telstra's accounts. This would increase the incentive for access seekers to *enter* the downstream market for PSTN based services (such as long distance) and reduce their incentive to *bypass* the PSTN¹⁵. This is not consistent with Telstra's commercial interests, the long-term interests of end-users, or the economically efficient operation of the PSTN. Notwithstanding this, we note that there is a significant question mark over whether Telstra does in fact have a funding shortfall. This issue is discussed in later sections of this submission.
- 4.9 As discussed in paragraph 4.55 and below, Optus does not believe that the recovery of the AD has any impact on Telstra's incentives to invest in the PSTN. Rather, the only economic efficiency objective served by levying an

¹⁴ Sub-section 152AH

¹⁵ Bypassing the PSTN could involve either a) acquiring an unconditioned local loop service from Telstra and installing xDSL facilities; or b) duplicating the CAN via some technology (perhaps HFC aerial cable).

ADC is to correct any inefficient incentives for *entrants* to bypass the PSTN.¹⁶ Whether Telstra recoups these funds does not affect its incentives to invest. This is also discussed in more detail later.

- 4.10 Basic access retail price controls were designed to promote consumer use of telecommunications services while, as described above, the ADC is a measure designed to enable Telstra to recover any funding shortfall resulting from the price controls and to correct for any arising productive inefficiencies.
- 4.11 Whilst the ADC can be used as a tool to address a potential funding issue, it will unavoidably give rise to inefficiencies by confusing price signals for PSTN based services. PSTN based services include long distance, international, and fixed to mobile telephony, dial up Internet, fixed to satellite, directory assistance and other value added services (VAS).
- 4.12 The quandary for the ACCC is that there may be a trade-off between inefficiencies in levying an ADC. It arises because the access price for PSTN OTA is being asked to perform too many functions in the (second best) correction of government policy to control retail prices including:
 - (a) Signal the correct price for PSTN OTA services.
 - (b) Provide the correct entry and bypass signals for new entrants in the provision of PSTN based service (for example, long distance).
 - (c) Provide the correct entry and bypass signals for new entrants in the provision of downstream services to the PSTN.
 - (d) Provide a source of revenue and funding for Telstra.
- 4.13 The following sections discuss the relative effects of levying an ADC on PSTN OTA in the context that they impact on end-users and reduce consumer welfare, and the extent to which they harm the legitimate business interests of access seekers and Telstra.

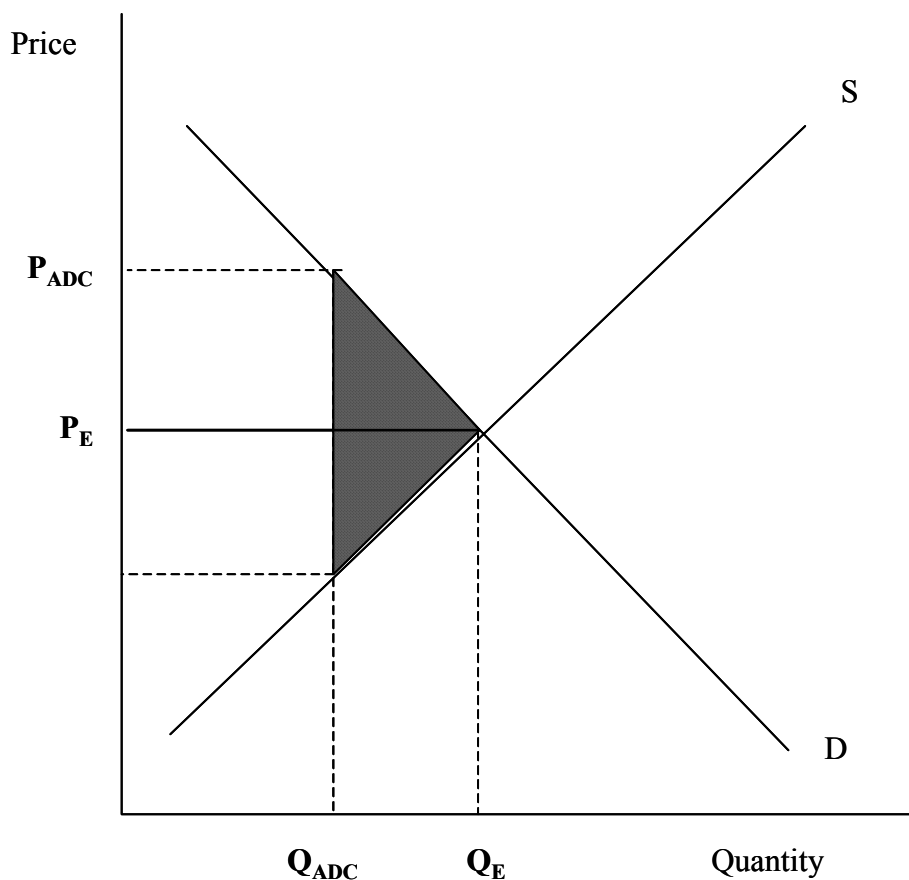
Impact of an ADC on end-users

- 4.14 An ADC on PSTN OTA services gives rise to allocative inefficiencies. To describe the nature of these allocative inefficiencies, the ADC alters the relative prices of PSTN based services (being those that rely on PSTN OTA as an input) and other services including the price of basic access. That is, a tax or surcharge (the ADC) on the access price drives higher prices for the retail services that rely on PSTN OTA.
- 4.15 The ADC therefore translates into inefficient consumer choices for these services. Specifically, we could expect over-consumption of basic access arising from artificially low line rental prices, and under-consumption of PSTN based services resulting from the tax or surcharge (the ADC) levied on interconnection prices.

¹⁶ Though as discussed below, it may create an equally costly distortionary incentive for access seekers to bypass the PSTN.

- 4.16 Such allocative distortions give rise to deadweight loss. This is shown in the following partial equilibrium diagram that illustrates the deadweight loss in the market for PSTN based services.
- 4.17 The shaded area below can be described as deadweight loss associated with the ADC. It arises because the ADC increases retail prices, shown in the diagram as the increase from the efficient price, P_E to P_{ADC} . Increased consumer prices translate into a loss of consumer surplus, which is defined as the difference in price that consumers were willing to pay for the service and the actual price paid.
- 4.18 Similarly, producer surplus is lost because a wedge is placed between the price consumers' pay and the price that sellers receive, thereby eroding the potential gains from trade. Quantity is reduced from the efficient level, Q_E , to Q_{ADC} . Overall, deadweight loss can be described as a loss of consumer and/or producer surplus from which nobody gains, and is therefore inefficient.

Figure 2 Deadweight losses in the market for PSTN based services from an ADC on PSTN OTA



- 4.19 The welfare cost associated with the ADC through the loss of consumer and producer surplus is potentially very significant. Optus and others have previously estimated the welfare consequence of the retail price controls. In the various submissions and reports of the ACCC's review of the retail price control arrangements, the annual welfare costs associated with these distortions were reported as follows.¹⁷
- Telstra estimated \$25 million.
 - Optus estimated \$45 million.
 - ACCC estimated \$232 million.
- 4.20 The significance of the ACCC estimate is that it recognises that prices in markets such as long distance, fixed to mobile, and international may be above the TSLRIC cost of those services and that prices may not be Ramsey efficient.
- 4.21 To this figure should be added the reduction in facilities based investment and entry, less competition and innovation, and other dynamic efficiency losses associated with interconnection prices that are too high from society's perspective.
- 4.22 The ACCC also recognise in its report that the elasticity of demand for long distance, international and fixed to mobile is significant. Conservative estimates put the range of own-price elasticity between -0.3 and -0.9 for these services.¹⁸ This increases the size of the welfare cost associated with these allocative inefficiencies.
- 4.23 If as we believe, the AD does not in fact exist, (see following sections) Telstra is already reaping supernormal profits in the markets for PSTN based services. This, again, harms consumers because monopoly pricing is synonymous with deadweight loss.

Uneven impact of ADC across consumers

- 4.24 The ADC has an uneven impact across consumers. Consumers who purchase relatively large quantities of PSTN based services will bear a larger proportion of the burden of the ADC. On the other hand, consumers with lower consumption levels of PSTN based services will bear a smaller proportion of the ADC.
- 4.25 Given that all consumers pay the same averaged line rental, the ADC does not appear to be particularly robust from an equity perspective. Call quantities do not necessarily reflect ability to pay. For example, high-income holiday homeowners and employees whose mobile phone bills are paid for by employers benefit from the current form of cross-subsidisation. In this respect, the cross-subsidy is in direct conflict with the intention of the line rental price controls.

¹⁷ ACCC, *Review of price control arrangements*, February 2001.

¹⁸ Albon, R.P., "The Welfare Costs of Australian Telecommunications Pricing", *Economic Record*, 64, June 1988, pp.102-12.

4.26 This uneven impact (or averaging of the ADC in the PSTN OTA charge) also gives rise to uneconomic incentives for access seekers to bypass the PSTN (see below).

Impact of an ADC on access seekers

4.27 The ADC removes two perceived problems:

- The problem of *too much entry* in the market for PSTN based services (for example, long distance); and
- The problem of *too little incentive to bypass* the PSTN when it is economically efficient to do so.

4.28 The problem of *too much entry* appears to be based on the belief that if an ADC were not collected from PSTN OTA, then new entrants would be at a competitive advantage to Telstra. They would be able to undercut Telstra and take market share. However, this assumes firstly that Telstra internally charges itself an ADC on PSTN OTA and secondly that it would continue reflect any ADC in its retail prices. It also assumes that Telstra could not reduce its price by the hypothetical ADC and continue to earn margin. In reality, none of these assumptions is true and the lack of an ADC would encourage more entry but not *too much entry*.¹⁹

4.29 In other words, it is also commonly argued that an ADC is required to maintain competitive neutrality in markets downstream to the PSTN. The argument generally goes something like this - the incumbent must recover any AD in higher than cost prices for downstream services, say, long distance. Consequently, if long distance competitors can purchase PSTN OTA at cost and provide long distance at cost then they will be able to undercut the incumbent. It is argued that this will even be true if the new entrant has higher long distance costs than the incumbent – just so long as the new entrants' long distance costs are not higher by more than the ADC the incumbent must charge itself.

4.30 However, this argument is of dubious merit as it relies on the implicit assumption that the incumbent must charge itself an ADC. In truth, a rational incumbent will not attempt to recover an ADC from long distance if it expects this will attract new entry and result in a reduction in profitability. Rather a rational incumbent will treat the AD as a sunk cost and price long distance at profit maximising levels. In a competitive long distance market this will be at 'cost' but in less than competitive market it may be above cost. This is just another way of saying that the ADC is a notional cost and not a real cost. Only an irrational incumbent would treat the ADC as real cost and fail to lower prices in the face of profit reducing new entry.

4.31 There are also strong arguments in support of the view that market entry is desirable from an end-user perspective and should therefore be promoted where possible.

¹⁹ Entry that erodes Telstra's monopoly profits is entirely consistent with the objectives of Part XIC.

- 4.32 The second problem of *too little bypass* is based on the belief that the ADC attempts to remove the problem of diminished incentives to bypass. Without a contribution for the access deficit coming from new entrants they have too little incentive to either roll out a competing CAN or take an unconditioned local loop service (ULLS) from Telstra and install say xDSL facilities to bypass the remaining parts of the PSTN.
- 4.33 The ADC is aimed at reducing a potential bias against too little entry in the provision of PSTN services. In the presence of an AD and absence of an ADC there may be a bias against new entry into the PSTN (either in the form of purchasing ULL from the incumbent or replicating the CAN) as entrants who do so will have to fund the AD associated with that line. This will tend to be a higher cost strategy than simply purchasing LCS and PSTN OTA from the incumbent if there is no ADC embedded in those access prices. (Of course, precisely the opposite problem exists if there is no AD but an ADC is incorrectly levied in LCS and PSTN OTA access prices. In that situation, there will be a bias towards over investment in the PSTN services – even if a new entrant is less efficient than the incumbent in providing those services.)
- 4.34 The levying of ADC on PSTN OTA therefore gives rise to other distortions on access seekers.
- 4.35 Specifically, an ADC on PSTN OTA also gives rise to potential “cream skimming” problems. Incentives are created for access seekers to bypass the PSTN (invest in PSTN/ULLS) to service higher value customers. This arises because customers that use a large number of long distance services (or other PSTN based services) will cause access seekers to pay a higher ADC on PSTN OTA. Some customers may be paying an ADC on PSTN OTA in excess of the AD from their own line. In such circumstances, carriers will be better off bypassing Telstra’s network for these customers and profiting from the margin over and above the line rental deficit, as opposed to having to pay this margin to Telstra through the ADC on PSTN OTA.²⁰
- 4.36 Therefore, Optus believes that the problem of too much entry in downstream markets is not supported by the facts. Optus also believes that distorted investment signals for access seekers arise regardless of whether an ADC is levied or not.

The ADC reduces the strength of competition in the market

- 4.37 The Australian telecommunications market is characterised by the existence of an extremely dominant and profitable incumbent, and a very difficult market for new entrants where the majority of carriers are struggling to return positive profits.
- 4.38 The existence of competition is of vital importance to the well being of consumers. Indeed, it is well established that new entry in the long distance market in recent years has driven price reductions from which consumers are

²⁰ This arise because of the average nature of the ADC on PSTN OTA and the fact that the AD is being levied as an input tax rather than an output tax – with the consequent distortions. Clearly, this customer level analysis can be extended to an exchange level analysis where the investment would take place.

benefiting enormously. However, the ADC erodes margins in the markets downstream to the PSTN. This threatens the already tenuous position of some players in those markets.

- 4.39 While, on the one hand the ADC may discourage inefficient entry into the market, this needs to be balanced against the benefits derived by consumers from market entry, and considered in the context that carriers take time to become established in the market. In particular, it would be extremely counterproductive from an end user perspective if existing players were driven out of the market due to, in part, unfeasibly high access prices driven by the AD.

Anti-competitive incentives created by the ADC

- 4.40 The ADC is structured in a manner that gives Telstra the option of not passing the cost, or part of the cost, of the AD onto its retail prices for PSTN based services (assuming the AD does exist). This raises the potential for Telstra to behave anti-competitively to the detriment of end-users.
- 4.41 The ACCC's discussion paper to which this submission is responding discusses the question of whether Telstra charges itself an ADC in the context of exploring the competitive neutrality implications of the ADC in downstream competitive markets. The ACCC states (p. 22):

“...it appears from Telstra's annual reporting over recent years that it does not charge its downstream operations an ADC. Indeed, it appears that Telstra does not charge its retail arms an explicit charge for PSTN origination and termination”.

- 4.42 If it is the case that Telstra does not charge itself an ADC on the same basis that access seekers are charged, Telstra can reap cost advantages in markets for retail services which use OTA as an input (for example, long distance and international calls). This gives Telstra the capacity to charge lower retail prices than competitors can feasibly charge, thereby strengthening its dominant position in the market by gaining market share. This type of price squeeze would have negative flow-on effects to end-users through their inability to derive the full benefits of competition.
- 4.43 Optus considers that there is strong evidence to support the view that the AD is simply a mechanism to protect Telstra from the full rigours of competition across most call services.²¹

Impact of an ADC on Telstra

- 4.44 It is argued that not charging an ADC, or more accurately, not funding the AD from some means, would result in distortions in Telstra's investment incentives in the PSTN.
- 4.45 In fact this is not necessarily the case. Armstrong (2002) show that productive efficiency only requires that the access seeker be levied the charge in some

²¹ By not imputing an ADC in its own retail product prices Telstra must be confident that these are so profitable anyway that the costs will be recovered.

form to address the potential for too much entry (as opposed to bypass).²² He shows that “from an economic efficiency point of view it makes little difference whether the proceeds from this tax [equal to the AD] are paid direct to [the incumbent]”.

- 4.46 The benefit from providing AD funding to the incumbent is that it could have historically been used to fund loss-making areas and to prevent funding problems if entry takes place.²³ However, Armstrong (2002) shows that “from an efficiency point of view this is irrelevant”. This argument is intuitive because the real problem of the AD is that the entry/bypass decisions of access seekers are distorted and these distortions can be problematic from a dynamic efficiency perspective. Telstra’s funding problem is secondary as it has far less potential to create inefficiencies.
- 4.47 In contrast, the Productivity Commission argue that the optimal solution depends on whether the incumbent is earning monopoly profits in downstream PSTN based services, and if so, “there is an efficiency gain from using these rents to reduce the contributions to fixed costs [the AD] made by access charges”.²⁴
- 4.48 All other things being equal (or more specifically if there were no other revenues associated with the PSTN apart from line rentals and PSTN OTA prices), Telstra would indeed face a funding issue if it were to lose significant amounts of market share. However, this is not the reality.
- 4.49 As is clearly demonstrated later in this submission, Telstra is earning significant monopoly rents from its pricing of local calls and value added services. The supernormal profit from these monopoly services alone are probably sufficient to fund any AD that may be argued exists.
- 4.50 In addition, there appears to be significant quasi-monopoly rents being earned by Telstra in other markets for PSTN based services (including long distance and international services).²⁵ As is discussed below, the structure of these markets may be described as one in which the incumbent is offering a service that is differentiated from the same services being offered by a group of new entrants who do not have market power (termed a “competitive fringe”). Armstrong (2002) advocates this type of market model for analysing long distance and international call markets. It demonstrates that the incumbent can earn monopoly rents whilst entrants are price takers.
- 4.51 Interestingly, this model shows that the greater the product differentiation in the final market for PSTN based services, the lower the AD should be. This is because the market would not be characterised by a one-to-one displacement of demand for the incumbent and entrant services.

²² Armstrong (2002) “The Theory of Access Pricing and Interconnection”, in *Handbook of Telecommunications Economics*, volume 1, North-Holland.

²³ It also might reduce the incentive for the incumbent to deter entry but this is unlikely.

²⁴ Productivity Commission, *Telecommunications Competition Regulation*, Inquiry Report, September 2001 (p. 396).

²⁵ Arguably it appears to be earning significant rents in emerging and contestable markets. However, more disclosure of Telstra’s accounts would be required to test the veracity of this conclusion.

Efficient component pricing rule (ECPR)

- 4.52 The incumbent's favoured approach for determining access prices is through use of the efficient component-pricing rule (ECPR).²⁶ This rule states that access prices should be based upon two separate components: the first being the direct cost of providing access (the conveyancing cost of PSTN OTA services in this case, encompassing the access deficit); and the second being the opportunity cost to Telstra in terms of lost supernormal profit when a competitor carries a call.
- 4.53 The ECPR indemnifies the incumbent against the loss of current, future and expected future monopoly profits associated with ownership and control of the access input.
- 4.54 By maintaining high prices for PSTN OTA, Telstra can maintain high retail prices for long-distance calling because other carriers (carrying a higher cost base) will be less price competitive. Thereby, competitors equally as efficient Telstra could, at best, match Telstra's retail prices and gain no market share or exert any competitive discipline on the incumbent.
- 4.55 Telstra has in the past indicated the ECPR price for interconnection is appropriate and that such an interconnection price is "consistent with the interests of access seekers." Quoting Telstra:

*"In order to determine whether the interconnect charges proposed in Telstra's Undertaking are consistent with the interests of access seekers Telstra has calculated the access prices that would arise from the efficient component pricing rule. **This calculation involves deducting from Telstra's STD and IDD retail yields the avoidable costs of these calls were they to be carried by an access seeker via PSTN originating and terminating access.** The avoidable costs include retail costs and trunk switching and transmission costs for STD and IDD calls and settlement payments for IDD calls. (our emphasis added)"²⁷*

- 4.56 Optus believes that the recovery of the AD from PSTN OTA services is a form of ECPR.²⁸
- 4.57 The ADC has been imposed on the basis that if competitors offered long distance services, and only paid access cost for the conveyancing component of the PSTN, then competition would drive long distance prices down toward average cost and Telstra would no longer make sufficient profits from calls to fund its losses on access (i.e. the access deficit).
- 4.58 As long as the PSTN OTA price paid to Telstra includes an ADC, this contribution has the effect of maintaining Telstra's monopoly rents in PSTN based markets (including long distance and international calls) by deterring entry into these potentially very competitive markets. This is inconsistent with

²⁶ The ECPR equals the incremental cost of providing an input plus the opportunity cost of providing the input. The opportunity cost comprises the loss of net revenue from supplying the input to the access seeker rather than in the final product market.

²⁷ Telstra Undertaking for PSTN Originating and Terminating Access Supporting Submission.

²⁸ Armstrong (2002)

Section 152AH criteria for reasonableness as it includes the “consequential costs” to the incumbent (the monopoly rents lost) as a result of increased competition.

- 4.59 The explanatory memorandum to the *Trade Practices Amendment (Telecommunications) Act 1997*:

... ”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.²⁹

Telstra’s incentive to invest

- 4.60 It has been argued that if an AD exists then failure to levy an ADC will provide Telstra with insufficient incentive to undertake efficient investment in the CAN. The logic of this argument is that the AD is a measure of the commercial loss Telstra is making across the entire CAN. When the time comes for Telstra to replace or expand the CAN it will not do so if an AD exists on that investment. Consequently, Telstra must receive an ADC if it is to have an incentive to replace or expand the CAN.
- 4.61 However, this logic is fundamentally flawed as Telstra’s forward looking investment decisions in the CAN will be based on the marginal costs and revenues of: a) maintaining the existing CAN; or b) expanding the existing CAN. The existence of an AD as currently measured by the ACCC is a very poor an indicator of whether forward-looking marginal investment costs exceed marginal revenues from those investments. The AD as currently measured gives what might be argued as a fair and reasonable funding requirement for Telstra’s sunk CAN. It is not a measure of incentives for forward-looking investment.
- 4.62 The first and most obvious reason the AD as currently measured does not reflect investment incentives is that Telstra’s existing CAN is largely a sunk asset which Telstra must maintain but which Telstra will never have to replace simultaneously in its entirety. In order for Telstra to have an incentive to invest in maintaining the existing CAN it is only necessary that the cost of maintenance be less than the lost revenue to Telstra of not maintaining the CAN. The loss of revenue to Telstra as a result of a customer losing access to the CAN due to insufficient maintenance investment is equal to the present value of future foregone line rental from that customer plus any net revenue foregone from downstream sales associated with that customer. In other words, even if there were no net revenue from downstream services, the present value of future maintenance would have to exceed the present value of future line rental in order for Telstra to have an incentive not to invest.
- 4.63 In other words, the incentive for investment in maintaining the existing CAN depends on the present value of future maintenance costs. The AD as currently measured by the ACCC does not use this concept of cost but rather uses TSLRIC+. TSLRIC+ will tend to overestimate the measure of cost

²⁹ *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum p.44*

required for analysing investment decisions because it measures the cost of replacing the CAN in its entirety rather than the present value of the cost of simply maintaining the CAN. Clearly the cost of replacing the CAN will always exceed the present value of the cost of maintaining it. Furthermore, TSLRIC+ adds a mark-up for the recovery of organisational costs that are irrelevant for an analysis of the profitability of marginal investment decisions.

- 4.64 The second reason that the ACCC's current measure of the AD fails to provide useful information on the incentive to invest is that it ignores downstream revenue from the CAN. If Telstra lost an existing or potential customer on the CAN it would not only lose line rental revenue but also all net revenue from all other downstream services it would have provided had that customer been connected to the CAN. This includes net revenue from other monopoly services associated with the CAN (eg, VAS and local call net revenues) and any net revenue from (potentially) competitive downstream services (eg, long distance).
- 4.65 Optus believes that the existence or otherwise of an AD is irrelevant to Telstra's incentives to invest. Telstra's incentives for investment can and should be analysed completely separately from an analysis of whether an access deficit (of the type currently measured by the ACCC) exists. Optus further believes that such an analysis will show Telstra has ample incentives to invest in the CAN and the PSTN more widely. We note that if an ADC is charged on PSTN OTA, Telstra has inefficient incentives to upgrade and over-capitalise its CAN since it recovers greater than economic cost from this infrastructure. This is clearly demonstrated by the ACCC analysis in its discussion paper where it shows that Telstra has invested on average more than \$4 billion per annum in the PSTN. Telstra's incentive to invest is necessarily driven by all revenue streams from the CAN (a holistic approach) not just PSTN OTA or line rentals on standard telephony services. It would account for revenues on narrowband Internet, ISDN and xDSL wholesale and retail services.
- 4.66 The correct definition of the AD should be more aligned with an avoidable cost concept. That is, what costs would Telstra avoid by no longer being subject to the retail price control on basic access and its obligation to supply at those prices. Clearly, the cost element of the AD calculation should therefore not be the TSLRIC+ cost of the entire CAN, but only the cost that would be avoided by Telstra if the price control and obligation. These would be the long run incremental cost of replacing and investing in expansion of the network.
- 4.67 In fact, Telstra may currently have an inefficient incentive to over invest in the CAN given the level of other net revenues it receives from other CAN based services it can sell to customers.
- 4.68 It must also be remembered that the AD is necessarily transitory (as Telstra is allowed to rebalance to full cost recovery levels). The implication of this is that when considering the impact of the AD on Telstra's investment incentives, the value of the deficit needs to be discounted over the entire expected lifespan of the CAN. Optus believes that the investment decisions of Telstra in the absence of the ADC on PSTN OTA would deviate very little from those if the ADC were in place. Indeed, if the value of the AD were

spread over the lifetime of the CAN, the value of the deficit on an annual basis would be minimal. In other words, Telstra's investment incentives will depend on the present value of future line rental revenue not on current line rental revenue (which is being rebalanced).

- 4.69 Optus is of the belief that the investment decisions of Telstra in the absence of the ADC on PSTN OTA would deviate very little from those if the ADC were in place. Indeed, if the value of the AD were spread over the lifetime of the CAN, the value of the deficit on an annual basis would be minimal.

Telstra's rebalancing behaviour

- 4.70 If there were an access deficit, then we would expect to see Telstra using all degrees of freedom to rebalance its tariffs and raise its line rental to reflect cost. However, this has not been the case.
- 4.71 A softening of the retail price controls imposed on Telstra in 1999/00 provided scope for Telstra to rebalance its prices. Under the new controls, rebalancing should theoretically have involved Telstra increasing the price of basic access and concurrently reducing local call prices, subject to the condition that overall revenue weighted price movements of line rentals and local calls did not exceed CPI – 0%.
- 4.72 Since 1999/00, Telstra has substantially rebalanced its prices. However, curiously it has not taken the full opportunity to rebalance tariffs. For example in 1999/00, Telstra “carried over” the opportunity to raise prices in this sub-cap by 4%.³⁰ Again in 2000/01, whilst Telstra did raise basic access prices by 16.5%, it still did not use the full capacity of the retail price control arrangements to recover its access deficit.³¹
- 4.73 Optus believes that this pricing behaviour is inconsistent with the behaviour we would expect if a pressing access deficit existed.
- 4.74 Whilst we understand that the ACCC would “account” the ADC for competitors based on the assumptions of full rebalancing, it is unclear as to why Telstra would not seek to rebalance as quickly as possible. Seemingly, failure to rebalance would place Telstra in a competitive disadvantage in the long distance market and all markets that have PSTN OTA as an input.
- 4.75 Optus believes the explanation for Telstra's behaviour is that it does not in fact have an AD. We believe that Telstra is not fully rebalancing because it does not incur losses on access and to the extent that it can convince the ACCC to levy a surcharge on PSTN OTA prices, it will be at a competitive advantage to Optus and other carriers in the long distance market. This is consistent with Telstra's arguments to slow the pace of rebalancing.³²

³⁰ ACCC telecommunications reports, *Telstra's compliance with price control arrangements*, 2000-01.

³¹ In 1998/99, Telstra did not rebalance to the full extent though there were strict constraints that limited the revenue-weighted basket of its main services (which included line rentals) at CPI-7.5%.

³² This position is outlined in *Telstra's submission to the ACCC review of retail price controls*.

Balancing the interests of end-users, access seekers and Telstra

- 4.76 If the ACCC agrees that the AD does not exist, it should remove the ADC. This removal would enhance economic efficiency and remove the deadweight losses associated with the current pricing access arrangements.
- 4.77 The ACCC's decision is necessarily a balance of the relative merits of enhancing the interests of end-users, access seekers, and Telstra. Optus believes that the only regulatory tool available to the ACCC to deal with the perceived AD (being access price regulation of PSTN OTA) is incapable of providing fully efficient solutions. As demonstrated above, there are trade-offs between distortions and the interest predominantly of Telstra (though these interests may not be legitimate) and the mutually exclusive nature of these means that both cannot be pursued concurrently.
- 4.78 Optus believes that a decision to not levy an ADC is appropriate on balance, because of the following reasons:
- An ADC on PSTN OTA results in significant price distortions in downstream markets. The welfare consequences have been estimated to be around \$232 million.
 - Telstra's incentive to invest in the PSTN is unaffected by the AD. This is because it only exists on a very narrow definition of revenues attributable to the CAN and because Telstra's investment incentives are at the margin.
 - The problem of too much entry in downstream markets is premised on Telstra internally charging an ADC, which is not the case. It is a common (notional) cost recouped on its full range of CAN based services.
 - Small distortions in access seekers' incentive to bypass the PSTN (the build/buy decision) are inevitable regardless of whether an ADC is levied on PSTN OTA or not. These are likely to be small in the context of access seekers' decisions given they too will seek revenues beyond basic access and telephony services.

Other funding options

- 4.79 Whilst a determination has been made in the past that the AD is to be recovered through a surcharge on PSTN OTA, it is insightful to consider the range of options available (and even those unavailable) to the government (but not necessarily to the ACCC) to deal with the perceived AD. Optus believes this is useful because, in our view, recovering the AD through an ADC on PSTN OTA is the most distortionary option from the range of possible regulatory tools for dealing with the adverse impacts of basic access price controls.
- 4.80 Within this context, Optus considers that the preferable funding options for the access deficit are as follows (in order of preference):
- (a) Removing price caps and allowing full rebalancing. This would remove the distortions that arise firstly through the inefficient pricing

leading to inefficient consumer choices, and secondly through the inflated access prices inefficiently influencing entry decisions.

- (b) Netting Telstra's monopoly profits from services that use the CAN off, against the total AD. This option needs to address the inherent difficulties associated with forming views of the financial position of a particular service that shares a common cost base with other services. This option is described in more detail in Chapter 6 of this submission.
- (b) Netting Telstra's quasi-monopoly profits from services that use the CAN off, against the total access deficit. This option again needs to address the inherent difficulties associated with forming views of the financial position of a particular service that shares a common cost base with other.

5. The existence of a local call deficit

- 5.1 Telstra earns significant net revenues in aggregate and its PSTN is highly profitable. This is unlikely to change in the near future and certainly not before rebalancing is complete. In fact the PSTN revenue base is increasing, therefore raising Telstra's ability to increase its aggregate profits. As such, it is unclear as to why consumers should pay monopoly prices for telephony services, fund a narrowly defined ADC, then face a potential 265% increase in the ADC caused by Telstra's supposed local call deficit claim.³³
- 5.2 Optus supports the view of the ACCC that a local call access deficit does not exist because Telstra can recover the costs of the CAN from other calls that use the CAN. Some call types may contribute more and others less. The critical issue is whether the AD is being recovered in aggregate from contributions across all call types.
- 5.3 Empirical evidence in respect of the observed or revealed pricing behaviour and profit outcomes shows that the monopoly profits Telstra earns from the services that directly use the CAN (local calls and VAS for example) fully recover the ADC for each of the past three years.

A shortfall in revenue in basic access is not a cost of supply for local calls

- 5.4 It is not appropriate to classify the ADC as a direct cost arising from the supply of local calls. Not only does it not meet a simple definition of the cost that is incurred in supplying a local call, but it would also lead to a double recovery of the AD.
- 5.5 Economic theory defines a "cost" simply as the value of that which must be sacrificed to acquire or achieve something. Applying this definition shows quite clearly that the ADC is not a cost of supplying a local call; there is no further sacrifice to Telstra of supplying the local calls.

³³ An increase of 265% is based on an increase in the PSTN OTA charge for 2000-01, from 0.69 cents per minute to 2.52 cents per minute, on claims by Telstra that a local call access deficit existed. See ACCC's *Response to the Productivity Commission Draft Report "Telecommunications Competition Regulation"*, June 2001, p.34.

- 5.6 Furthermore, using Faulhaber's³⁴ logic discussed in Chapter 6 of this submission, it is inappropriate to view the costs of a particular service in isolation when that service shares a common cost base with other services.
- 5.7 To the extent that cross-price elasticities exist between the services that use the CAN it is impossible to define a loss in terms of a single service. To illustrate, the demand for VAS is, in part, a function of the demand for local calls, which is in turn a function of local call prices. The more local calls that are made, the higher the base of calls that could potentially utilise VAS. These cross elasticities mean the price of one service will impact on the revenue base (and therefore potential to contribute to the common cost base) for a related service sharing common costs.

The local call price cap does not lead to a loss on local calls

- 5.8 Telstra argues that applying a TSLRIC++ costing approach to local calls shows that it is making a significant loss on local calls due to the retail price cap and the fact that the LCS access price is based on retail minus avoidable cost methodology.
- 5.9 Optus has undertaken a high level costing analysis below which shows that based on available public data the TSLRIC+ of a local call results in a large local call surplus that more than covers the assigned local call ADC burden.³⁵ In fact, even applying TSLRIC++, which is not supported by Optus, there is still a monopoly surplus on a local call.
- 5.10 Based on public data, the indicative cost of providing a local call to the end-user on a TSLRIC++ basis would be calculated as follows:
- (a) The efficient conveyance cost flag-fall rate for PSTN OTA interconnection is 0.13 cents per call and the per minute rate is 0.69 cents per minute as presented in the ACCC's indicative rates for 2001/02.³⁶
 - (b) At this point of the analysis these efficient conveyance cost rates do not include the related ADC components for PSTN OTA.³⁷
 - (c) Based on a call hold time of approximately 6.3 minutes the actual network TSLRIC+³⁸ of a local call is then 9.03 cents;

³⁴ Faulhaber, G., 1975, 'Cross Subsidization: Pricing in Public Enterprises', American Economic Review, 65, pp. 966-77.

³⁵ Note that Optus believe that the underlying costs used in this analysis are over-stated and do not represent the true cost of a local call. They are publicly available data that is being used in the case to demonstrate the weakness in Telstra's arguments.

³⁶ These rates are based on the flag-fall and per minute rates underlying the effective rate of 1.3 cents per minute referenced in the ACCC's discussion paper (for a 3.69 minute call hold time). This is likely to overstate the network costs of the local call because it assumes two full PSTN OTA services, whereas this may not be the precise call path for all local calls. Call set up and hold costs are likely to be different for local calls and PSTN origination and termination.

³⁷ It is appropriate to exclude the ADC at this point of the analysis because it is not allocated to local calls on a PSTN OTA basis.

³⁸ Consistent with ACCC views, the network costs in this calculation are based on TSLRIC+, ie. they include the efficient conveyance costs and some allocation of common or indirect costs of the network.

- (d) Retail costs are estimated at 2.49 cents per call, as indicated in the ACCC's indicative local call prices.³⁹ This represents approximately 28% of TSLRIC+ network costs;
- (e) Telstra's capped call price is 20 cents (GST exclusive)⁴⁰, therefore there is a monopoly margin on the local call of $[20 - 11.52] = 8.48$ cents (representing a 74% mark-up);
- (f) This monopoly margin is then used to cover the ADC of that local call. This is calculated as a total call cost of 5.26 cents for a call of 6.3 minutes.⁴¹
- 5.11 Even after allocating the ADC in full (ie. TSLRIC++) Telstra retains a monopoly margin on the local call of 3.22 cents. There is therefore no loss on local calls nor is there any requirement for a local deficit ADC on the PSTN OTA.
- 5.12 This final monopoly margin of 8.48 cents (or 3.22 cents after application of the ADC) calculated above is likely to be much larger based on the following:
- The estimate of network costs includes some apportionment of indirect common costs of the network. As explained in the ACCC's discussion paper these indirect costs are separate to the PSTN, that is, they would be incurred regardless of whether local calls are supplied. A true TSLRIC would apply the direct-cost-only rule and the cost of the local call would be much lower.
 - Local calls may travel only between local switches that is, they by-pass the Transit Switches (TS). These will cost less to supply as they use less of the PSTN network. The true attributable cost for these calls is difficult to estimate without detailed cost data for Telstra's networks.
 - Based on the ACCC's preliminary work regarding the relationship between length of a call and its cost and fixed cost, a reduction in the allocated flag-fall rate (which is currently 0.13 cents per call) and an increase in the allocated per minute rate (currently 0.69 cents per minute) would lead to network costs somewhat less than the 9.03 calculated in this analysis.
 - Telstra, as the vertically integrated incumbent, does not necessarily internally charge itself the full PSTN OTA rate of 9.03 cents per call, nor does it necessarily charge itself the ADC of 5.26 cents. There is no evidence in Telstra's accounting systems to show an internal transfer price for this wholesale cost, let alone the ADC to be applied to this. It is therefore likely that a portion, if not all, of the local call price will remain as a monopoly margin to Telstra.

It is not appropriate to use TSLRIC++ when calculating the network costs for local calls in this analysis.

³⁹ ACCC, *Local Carriage Service pricing principles and indicative prices: Final Report (Revised)*, April 2002

⁴⁰ This is the standard capped price, however under its *Homeline* offers Telstra may choose to forgo its monopoly profit and discount this price.

⁴¹ The ADC component of the 1.3 cents per minute PSTN OTA rate is broken into 1.36 cents flag-fall and 0.20 cents per minute.

The case for a local call surcharge

- 5.13 As shown above, application of Telstra's preferred TSLRIC+ approach clearly shows monopoly margins to Telstra under any scenario in supplying local calls. Therefore there is no justification or requirement for a local call deficit surcharge to be added to PSTN OTA charges.
- 5.14 As the above analysis shows, there is no under-recovery of that local call share of the ADC as presently applied in the by the ACCC. To the contrary, Telstra appears to earn a local call surplus of at least 2.97 cents per call even after netting off the ADC of 5.26 cents.
- 5.15 Given that Telstra earns a local call surplus in addition to the considerable margins that it earns on other fixed telephony services then the equivalent logic would imply that these surpluses be netted off against the PSTN OTA ADC revenue received by Telstra.
- 5.16 This would not involve any economic cost. It would be economically efficient and in the interest of end-users as it:
- Reduces the distorting effect of the monopoly profits earned by Telstra on local calls (and other monopoly services); and
 - Avoids the need to levy an ADC on PSTN OTA and therefore reduces the distortions associated with that charge.
- 5.17 In terms of competitive neutrality, the ADC on PSTN OTA puts access seekers at a competitive disadvantage. This could only be exacerbated by the suggestion of an additional local deficit surcharge. Failure to offset the local call monopoly against the AD would result in a substantial over-recovery of the access deficit by Telstra, and raise access seekers' costs anti-competitively.

Telstra's local call pricing behaviour

- 5.18 To support the argument that this monopoly profit is being understated in this analysis and is likely to be significantly greater, it is useful to examine the retail prices actually being charged by Telstra in the local telephony market.
- 5.19 Telstra offers considerable discounts on the standard 22 cents per call (GST inclusive) in the market. For example the local call charge is as low as 18.5 cents (GST inclusive) under *Homeline Plus*.⁴² Hence, it is difficult to accept a claim from Telstra that the pricing of local call services are constrained by retail price controls below costs when market evidence demonstrates that Telstra voluntarily prices local call services significantly below these retail price controls. The ACCC in its assessment of Telstra's original PSTN Undertaking found that Telstra prices local call services at least \$90 million below the maximum price permissible under the prevailing retail price controls.⁴³

⁴² This ignored neighbourhood calls that are as low as 15 cents per call.

⁴³ See Access Economics, *Review of Price Controls on Telstra*, August 1998, p.29

- 5.20 It is difficult to see why Telstra would choose to voluntarily worsen its profitability in a non-competitive market.⁴⁴ This provides further empirical evidence of the falsity of Telstra's claims of an overall loss on local calls and the supposed need to administer a local call deficit surcharge.

6. An access deficit does not exist

- 6.1 Optus believes that the true "access deficit" is *not* equal to access costs less line rental revenue, but is really equal to "the costs that Telstra would avoid by no longer being subject to the retail price control and obligation to supply all customers basic access at a uniform price *less* the revenue that it would forego from no longer having this obligation including line rental revenue and all net revenues it earns off the customer access network".
- 6.2 In practice Telstra is gaining a return far in excess of the cost of the access network through other sources (eg. monopoly CAN services such as local calls, VAS and downstream services that utilise the CAN). This contribution to the recovery of access network costs should also be included in the calculation of the AD. Conceivably when this is done, we may find the AD is zero or negative (ie. a surplus).
- 6.3 The net revenues from other access services should also be netted out. As competition intensifies these net revenues may be dissipated and hence no such netting out would occur. However, in many of these markets, Telstra has market power. Its pricing does not appear likely to be constrained by competition in the near term and certainly not before rebalancing is complete.

Effect of a narrowly defined AD

- 6.4 Fundamentally, the access deficit is believed to arise because of Telstra's obligation to supply basic access services at a uniform price. The cost to Telstra of this obligation should define the access deficit. The cost is appropriately defined by considering the cost to Telstra of no longer having this obligation. If Telstra were to no longer have this obligation it would:
- (a) Avoid the cost of maintaining and expanding the customer access network.
 - (b) Forego revenues it receives from line rentals as well as any net revenue streams it receives from the customer access network.
- 6.5 Clearly, the present definition of the access deficit is overly narrow. This more conceptually correct definition (or framework) would resolve any funding issues Telstra might face and address its legitimate business interests.
- 6.6 Under such a definition, the net revenue contributions to fixed loop costs from monopoly services must be taken into account, in determining whether or not there is an access deficit.
- 6.7 For example, ISDN traffic passes through the network in the same way as PSTN traffic and uses the same core network components — thus contributing

⁴⁴ Telstra has over 85% of the local call market and 95% of the basic access market.

to traffic volumes and reducing unit costs. Any rents or excess profits should arguably be included because allocating the AD to these rents will have no impact on efficiency, whereas allocating the AD to PSTN OTA does (as was discussed at length above).

- 6.8 If this were not the case, the incumbent would be recovering the access deficit narrowly defined (monthly rental revenues minus total cost) first from per minute payment by competitors on PSTN OTA and then from profits made on monopolistic services. It would thus be raising its rivals' costs anti-competitively, as well as earning excess profits.⁴⁵
- 6.9 More specifically, if the incumbent recovers any shortfall in the difference between access costs and monthly rental from the net revenues from services supplied monopolistically (such as local calls, ISDN, VAS), to the extent that it recovers this shortfall again through levying access deficit contributions on its long-distance competitors via per minute charges the following economically undesirable outcomes occur:
- The incumbent would earn excess profits through over-recovery of its access deficit, and prices for final services contain monopoly rents. This damages consumer welfare.
 - The incumbent levies input charges on competitors that it does not have to recoup through its own downstream long-distance operation. The charge is thus not competitively neutral and unnecessarily raises rivals' costs in an anti-competitive manner.
 - The incumbent over-invests in the PSTN because it has an incentive to increase PSTN OTA access services and because it is earning monopoly rents in downstream services.
- 6.10 Indeed, Faulhaber⁴⁶ argues that the AD would arise only as a result of a shortfall between the attributable revenue and attributable cost over the range of services sharing the common cost base. Using this logic, to determine whether there really was an access deficit, we would need to examine the profitability, or otherwise, of the basket of services that use the CAN.
- 6.11 This is because, as described by Faulhaber, so long as there are cross elasticities between the services, the existence of one service will impact on the profitability of the other services that use the common cost base, and therefore their ability to contribute to the costs.

Sensitivities in calculating the AD

- 6.12 In weighing up the pros and cons of levying an ADC on PSTN OTA it is worthwhile considering the regulatory risks involved.
- 6.13 The calculation of the access deficit is highly sensitive to the assumptions inherent in the cost model used by the ACCC (and Telstra) to calculate its size.

⁴⁵ The previous determinations of the ACCC provides for a very narrow definition of the AD.

⁴⁶ Faulhaber, G., 1975, 'Cross Subsidization: Pricing in Public Enterprises', American Economic Review, 65, pp. 966-77.

Additionally, it involves a substantial degree of allocation of common costs. This is inherently a difficult and is a task predisposed to error and inefficiency.

- 6.14 Consequently, the profitability of the CAN component of the service is very difficult to ascertain with certainty. For any cost category there may be a number of cost drivers and it can be difficult to isolate the dominant cost driver. Further, allocation models tend to suffer from an over-allocation of costs to specific activities simply because those activities have been separately isolated.
- 6.15 The n/e/r/a modelling of the CAN includes an indication of the sensitivities of the cost of the network to the various assumptions. For example, trench costs represent over 50% of the distribution network and assumptions on trench sharing and decisions on optimal versus current trench sharing arrangements have the potential to vastly change the cost of the CAN and hence the AD. Each extra party that shares a trench reduces costs by $1/(1+n)$,⁴⁷ where n is the number of entities presently sharing the trench.
- 6.16 Similarly, the assumed weighted average cost of capital (WACC) also greatly affects the total CAN cost. Each 10% change in the WACC changes network costs by around 5%.
- 6.17 The risk of regulatory error in levying an ADC and causing potentially unnecessary welfare costs must be considered in the ACCC decision processes. Optus naturally agrees with the Affidavit of Dr Daniel Kelly when he notes, “where judgments must be made, it would be better to err on the side of encouraging entry and the competition it will facilitate”.⁴⁸

Defining which services should contribute to the AD

- 6.18 In practise, Telstra supplies multiple services over the fixed network access. For the purposes of economic analysis, these services can be conceptually separated into two service groups:
- Monopoly services: these include connection charges, line rental, local calls, ISDN, fixed line call termination, voice mail, call waiting, call forwarding and other value added services attached to the access line. These services are owned and controlled by the provider of the access line. The provider of the access line receives monopoly revenue streams from all these local services.
 - Potentially competitive services: long-distance calls, international calls, fixed to mobile calls, and mobile to fixed calls.⁴⁹

⁴⁷ Other key sensitivities including pairs per SIO, asset lives (significantly affects depreciation), levelisation of returns and choice of network technology.

⁴⁸ Quote from the Affidavit of Dr Daniel Kelly at points 8 to 11. Provided to the ACCC in 2001.

⁴⁹ The structure of these markets are described by Armstrong (2002) as one in which the incumbent is offering a service that is differentiated from the same services being offered by a group of new entrants who do not have market power (termed a “competitive fringe”). Armstrong (2002) advocates this type of market model for analysing long distance and international call markets. It demonstrates that the incumbent can earn monopoly rents whilst entrants are price takers.

- 6.19 Optus submits that Telstra is earning a substantial return on the access network through the monopoly services that use the CAN. In light of this, Optus believes that the rents arising from the provision of these services should be included in the calculation of the access deficit.
- 6.20 This view is supported by the Productivity Commission analysis that showed that Telstra's profits on PSTN based services are substantial. Even with the PC's conservative regulatory stance it was compelled to conclude that the ACCC analysis "suggest that sizeable downward errors in TSLRIC pricing would be required for these [Telstra's] apparent pure profits to vanish".⁵⁰
- 6.21 In the following sections of the submission, Optus estimates the monopoly profits associated with local calls and value added services, to demonstrate that Telstra is reaping substantial rents through the provision of non-competitive services. While we have presented estimates for two services, it is important to note that Telstra is also likely to be extracting net revenues through provision of the other monopoly and even potentially competitive (or quasi-monopoly) services that use the CAN.⁵¹

Calculation of Telstra's monopoly profits from local calls

- 6.22 As the monopoly owner of the ubiquitous local loop, Telstra controls over 95% of the basic access market. Telstra charges local carriage services (on a resale basis) at prices far in excess of the cost of providing LCS.
- 6.23 At the wholesale level, the access price paid to Telstra for a local carriage service is 12.55 cents (GST exclusive).⁵² Optus estimates that the actual TSLRIC+⁵³ of a local call is 9.03 cents. We therefore estimate that Telstra makes a monopoly profit of 3.52 cents at the wholesale level, representing a mark-up of 39%.
- 6.24 The ADC on PSTN OTA is not relevant in this case because it is already recovered from external PSTN OT interconnection revenue. Any other approach would involve double counting of the AD.
- 6.25 For the 2001/02 financial year, Telstra reported local call wholesale revenue of \$255 million. Therefore, based on the 39% mark-up (equivalent to a 28% operating margin) calculated above, we estimate Telstra's monopoly profit for that year to be in the order of \$72 million for wholesale of local calls.⁵⁴

⁵⁰ Productivity Commission, *Telecommunications Competition Regulation*, Report No. 16, September 2001. Whilst we agree that pricing access below cost would not be permitted under Part XIC, preventing a double counting of common cost is certainly consistent with the access pricing principles.

⁵¹ Without further information it is difficult to estimate the potential rents derived by Telstra from these services. We note however, that ISDN services are supplied monopolistically by Telstra.

⁵² ACCC, *Local Carriage Service pricing principles and indicative prices: Final Report (Revised)*, April 2002, p.32. This is based on a local call services only and does not account for neighbourhood calls. Note also that Telstra has submitted an undertaking for LCS at 14.9 cents per call. This would necessarily increase the size of the rents identified below.

⁵³ Consistent with ACCC views, the network costs in this calculation are based on TSLRIC+, That is, they include the efficient conveyance costs, as estimated based on the n/e/r/a model, and some allocation of common or indirect costs of the network. It is not appropriate to use TSLRIC++ when calculating the network costs for local calls in this analysis.

⁵⁴ This supports the argument that even if Telstra's LCS retail prices were in fact constrained below costs due to the retail price controls, the loss is already funded in entirety by the PSTN OT ADC

- 6.26 At the retail level, Telstra has a market share of approximately 83% in the local call market. Telstra's dominant market power in this service allows it to charge retail prices in excess of the cost of providing the service. Whilst the local call cap is 20 cent, the underlying TSLRIC+ cost of a LCS (including retail cost) is estimated by Optus to be 11.5 cents.⁵⁵
- 6.27 Again, for the 2001/02 financial year Telstra reported local call retail revenue of \$1.5 billion therefore based on the 74% mark-up (equivalent to a 42% operating margin) calculated above, we estimate Telstra's monopoly profit for that year to be in the order of \$646 million for retail local calls.
- 6.28 Optus therefore conservatively estimates Telstra's monopoly profit on local calls at \$718 million. This represents more than half of the entire AD for all calls.

Calculation of Telstra's monopoly profits of value added services

- 6.29 Telstra is a monopoly supplier of VAS attached to access lines. Telstra's year-end results for 30 June 2002 reveal that VAS revenues totalled \$167 million.
- 6.30 Very high margins accrue to Telstra through VAS. The following table indicates the retail prices that apply to these services.

Table 1 Retail price of value added services

Service	Retail Price
Calling Number Display	\$6 per month
MessageBank	\$6 per month
Call Waiting	\$3.30 per month

- 6.31 Whilst Optus cannot be certain of the actual monopoly element contained in these prices, the minimal network elements used by this service suggest that it is reasonable to posit that they are very high. Consequently, Optus considers 75% to be a very conservative estimate of the extent of the monopoly margin. Using this figure, we estimate that Telstra's monopoly profits from the sale of VAS services on the year ended June 2002 were \$125 million.
- 6.32 These figures are clearly non-trivial. The *true* access deficit is equal to the avoidable costs of provision of the CAN, less the net revenues from supply of monopoly and quasi monopoly services over the CAN. Even after discounting the net revenues of this limited range of monopoly services (local calls and VAS) it is clear that the *true* access deficit is substantially lower than the previously estimated level.

contribution. Hence, if Telstra entirely ceased providing services at the retail level, competitors would in aggregate compensate Telstra for the costs of LCS services through both wholesale PCS prices and increased PSTN OT ADC tax contributions.

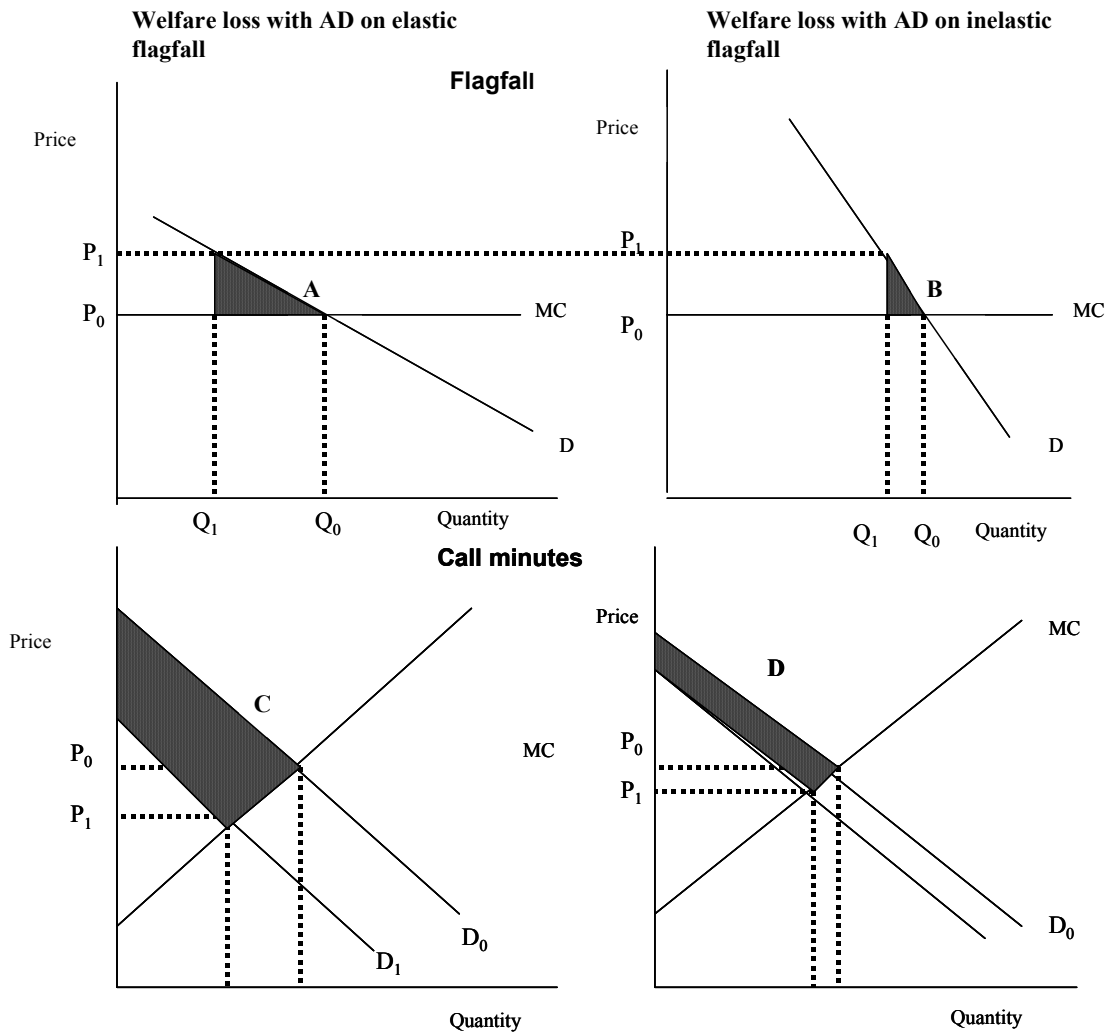
⁵⁵ We note that we are using the underlying PSTN OTA (provided by the ACCC in its assessment of Telstra's second PSTN OTA undertaking) cost to estimate call cost. These are likely to overestimate the true call set-up and duration costs of a local call.

7. Allocation of the ADC to PSTN OTA and local calls

- 7.1 The views presented in this section do not in any way preclude our overall position that the AD does not exist and therefore does not require funding. .
- 7.2 This section is to be considered in the context that:
- A reallocation of the AD comprises the least-best option.
 - If the ACCC decides to retain the AD and reallocate through PSTN OTA, it should be reallocated in the manner described in this section.

Allocation of the ADC should minimise distortions

- 7.3 Setting the appropriate allocation for the AD between call and call minutes is important because the ADC is distortionary and gives rise to significant deadweight loss.
- 7.4 Deadweight loss is welfare diminishing in that it comprises an absolute loss of producer and consumer surplus. Therefore, regulatory decisions regarding the allocation of the access deficit should aim to minimise distortions. It has been shown that welfare losses can be minimised when levies are recovered in a manner consistent with Ramsey Pricing.
- 7.5 An intuitive understanding of the Ramsey approach can come from the observation that some consumers are willing to maintain their purchases of a product when its price rises, while other consumers reduce their purchases. For those that maintain their purchases despite the price rise, the demand for that product by those consumers is said to be inelastic. Conversely, those consumers that reduce their purchases in the face of a price rise have an elastic demand. Clearly the distorting effect of a price increase on consumer choices, including price increases that are the result of the imposition of an access deficit, will be lower the less elastic is the demand for the good.
- 7.6 For the purposes of setting the least distortionary allocation for the AD, the task will be to identify the allocation that minimises customer demand responses to price increases. In this case, distortions will be minimised when a higher proportion of the ADC is placed on the more inelastic of call ends or call minutes.
- 7.7 Identifying the appropriate allocation is complicated by the interdependent and complementary nature of call ends and call minutes: when the cost of call minutes increase, we could expect not only the demand for call minutes to fall, but also the demand for calls. Similarly, if the price of calls (flag-fall) were to fall, we could expect the demand for both the number of calls and call minutes to increase in response to the price cut.
- 7.8 The following graphs illustrate the concept of Ramsey pricing as well as interdependence.



- 7.9 The diagrams on the left hand side illustrate the level of welfare loss that would arise from placing the ADC on a flag-fall facing an elastic demand curve, while the diagrams on the right hand side illustrate the welfare loss arising from placing the ADC on an inelastic flag-fall.
- 7.10 Under an elastic flag-fall demand curve, the imposition of the ADC raises the price from P_0 to P_1 , as illustrated in the top left diagram. Because the ADC distorts demand decisions, welfare is lost to the extent shown by the shaded triangle labelled A . This triangle is the deadweight loss.
- 7.11 The top right diagram shows a more inelastic demand curve. As illustrated, the imposition of the AD on flag-fall on inelastic demand results in a smaller level of deadweight loss (as labelled B in the diagram).
- 7.12 The two bottom diagrams show the demand and supply conditions for call minutes *as a function of* the demand and supply of flag-fall. The demand curves D_0 shows the level of demand that would prevail in the absence of the imposition of the AD on flag-fall. The demand curves D_1 show the shift in demand resulting from the ADC on flag-fall; the curves have shifted downwards because a price rise of flag-fall reduces the demand for flag-fall, which consequently reduces the demand for call minutes.

- 7.13 As shown in the diagrams, the larger the impact of the ADC on flag-fall (that is, the more elastic the flag-fall demand curve), the greater the movement of the demand curve for call minutes.
- 7.14 The shaded areas labelled *C* and *D* illustrate the welfare loss arising from the change in the demand for call minutes (which, in turn, arise from an increase in the price of flag-fall).
- 7.15 An overall measure of welfare loss under each scenario, that is, elastic and inelastic flag-fall, can be measured by summing the welfare losses for both flag-fall and call minutes. In the case of elastic flag-fall demand, the overall welfare loss of applying the ADC to flag-fall is given by $A+C$. The welfare loss arising from applying the ADC to inelastic flag-fall is $B+D$. As the diagrams show, the level of welfare loss from the ADC increases in proportion to the elasticity of demand.
- 7.16 On the whole, therefore, in seeking to identify the allocation that minimises the distortions associated with the ADC, the welfare losses arising from the interdependent nature of call ends and call minutes must be minimised. In order to minimise welfare losses, a Ramsey approach should be taken which would apply the ADC to the more inelastic of calls or call minutes.

No reliable elasticity data on Australian long distance calls

- 7.17 In order to determine the Ramsey efficient prices using quantitative methods, the super-elasticities of calls and call minutes need to be known, that is, the separate elasticity of calls and call minutes, *as well as* the cross-price elasticity between them.
- 7.18 Conclusive data on super-elasticities is not available with respect to long distance calls within Australia. In previous submissions on the ADC allocation, Telstra has referred to research that suggests that the demand for calls is likely to be less elastic than the demand for call minutes⁵⁶. However, the study referred to by Telstra is twenty years old. Given the passage of time, the dramatic changes in terms of the pricing structures and communications technologies, and the increase in competition in the PSTN based retail markets, it is unlikely that the way customers respond to price changes would have remained constant over this time.
- 7.19 Indeed, Optus' own internal data tells a very different story to that depicted in the evidence selected by Telstra.
- 7.20 The lack of reliable and robust industry-independent price elasticity information can be attributed to the fact that it is inherently difficult to estimate the super-elasticities due to the large informational requirements to perform the relevant calculations. In fact, Ramsey pricing is often criticised for this reason.
- 7.21 The implication of this is that we cannot rely on any existing specific research to inform us of the elasticities that could form the basis of determining Ramsey prices.

⁵⁶ "Price Elasticities for Local Telephone Calls", *Econometrica*, 51, 6, November 1983, pp. 1699-1730.

Ramsey retail pricing

- 7.22 Research has shown that organisations move towards Ramsey retail pricing when they are faced with a weighted average price cap regulatory regime.⁵⁷ This is intuitive. A firm faced with the decision to reduce average prices would prefer to reduce prices on those of its services with more price elastic demands.⁵⁸
- 7.23 Therefore, despite the lack of super-elasticity data that would be required by an independent regulator to enforce Ramsey efficiency in the recovery of the ADC, Optus suggests there is some evidence to suggest that Ramsey prices can be deduced through an examination of Telstra's retail pricing structures.
- 7.24 Given Telstra argues that it charges itself an ADC through its internal PSTN OTA services, it is reasonable to assume that Telstra will seek to price its long distance calls in the way that ensures maximum profitability. Given that profit maximisation will be achieved through the use of Ramsey pricing, Optus believes that Telstra's retail prices may provide the best proxy for Ramsey efficient prices.
- 7.25 This implies the ADC should be allocated on PSTN services in a way that preserves Telstra's current retail price allocation. Clearly, we are discussing retail demands rather than wholesale demands. However, to the extent that the access price signals are reflected in the retail prices, a backwards induction would lead to efficient outcomes.⁵⁹
- 7.26 The ACCC notes that Telstra's retail prices for long distance calls in 2000-01 had a split of approximately 20:80 between flag-fall and duration. Using the reasoning outlined above, we can deduce that the 20:80 split between flag-fall and call duration of Telstra's retail prices is likely to be Ramsey efficient.

Telstra's retail price structures are consistent with international price structures

- 7.27 Assessment of the retail price allocations between flag-fall and call duration offered internationally confirms that the majority of long-distance carriers have pricing structures very similar to Telstra's.
- 7.28 If flag-fall elasticity was low while per minute elasticity was somewhat higher, we might have expected long-distance carriers worldwide to construct tariffs with relatively higher flag-fall and low per minute charges. Instead, we observe the opposite behaviour in most jurisdictions. In the US, Canada, New Zealand and most of Europe, call set-up charges are either low or non-existent.

⁵⁷ Laffont, Jean-Jacques and Tirole, Jean (2000) *Competition in Telecommunications*, Cambridge, Mass. MIT Press.

⁵⁸ A price reduction for these goods would involve a smaller loss in revenue than a price reduction on a service with price inelastic demand.

⁵⁹ That is a backwards induction of the approach advocated in the ACCC's *Access Pricing Principles Telecommunications – A guide*, 1997. The ACCC says at pg 39:

“One commonly used approach is the ‘equi-proportionate mark-up over directly attributable costs’. This involves measuring the directly attributable costs (directly attributable costs exclude common costs) of each service within the group and allocating the common costs based on each service’s proportion of the total directly attributable costs.”

Increasing flag-fall cost creates distortions

- 7.29 It is likely that short long distance calls are more price-elastic than longer calls. The attractiveness of the substitutes to long-distance calls (such as SMS, email, facsimile) is likely to diminish as the expected length of a phone call increases. While the information conveyed in a short phone call could be sent to another party via, for example, email or SMS with relative ease, both email and SMS will become increasingly inconvenient methods of contact with larger information sets. It is therefore very reasonable to assume that longer calls are less price-elastic than shorter calls.
- 7.30 If the ADC were allocated more heavily toward call minutes the retail price of a short phone call would be relatively unaffected. When there is a higher charge on the distortions arising from customers substituting towards other means of contact would be minimised.
- 7.31 Using the same reasoning, increasing the relative cost of longer calls will not create the same extent of distortions described above. Consumers of longer than average long distance calls would be less likely to substitute to, for example, email or SMS or fax when convenience factors are considered.
- 7.32 Using the Ramsey pricing framework discussed above, we can see that distortions are minimised by placing a larger proportion of the ADC on call minutes; the most price inelastic for both long calls and short calls.

Competitive impacts on access seekers

- 7.33 The ACCC makes the following observation in the discussion document to which this submission is responding:

“...Telstra does not appear to use any formal internal transfer pricing system or in particular to account for the ADC (or access charges more generally) in any explicit such fashion. Thus it would appear inconsistent for Telstra to appeal to “competitive neutrality” with respect to its rivals where its own downstream managers appear normally not to pay for PSTN OT when using it as a component in producing STD, IDD and FTM calls. This would mean increasing the access price to its rivals would seem only to serve to increase the extent of non-neutrality that is inherent in the existing arrangements.”

- 7.34 Optus concurs with this position. We note that the allocation of 50% of the ADC to call flag-fall will:
- Reduce the ability of access seekers to compete effectively with Telstra given the price sensitivity of consumers to shorter long distance calls.
 - Reduce revenues below optimal levels, as customers pre-selected to access seekers for long distance calls would be less likely to make shorter long-distance calls if the flag-fall prices encompassed the ADC. Profits could be increased if flag-fall costs were lowered, as more short calls would be made.

- 7.35 We also note there is substantial risk to access seekers if they do not reflect the ADC allocation to PSTN OTA in their retail price offerings.
- 7.36 Any internal reallocation will pose a risk for access seekers, as revenues from shorter than average long distance calls will be relatively low, while access costs would be relatively high. If an unusually large number of short calls were made within a given time frame, access seekers would be making lower than expected margins on these calls and overall profits would fall.
- 7.37 At the other end of the scale, while the internal transfer could imply the potential for windfalls through a larger than average number of longer calls (with higher margins because of the low access costs per minute), in practice, in order to remain competitive carriers must offer price caps on long distance calls. Consequently, the ability of access seekers to recover any reduced revenues arising from high wholesale costs for short calls from call minute revenues of longer calls is reduced.
- 7.38 The risk described above is both undesirable and may result in anti-competitive gaming from Telstra as it has the incentive to distort the true allocation given to access seekers.