Australian
Competition &
Consumer
Commission

Assessment of Telstra's PSTN and LCS undertakings

Draft Decision

Public version

11 September 2006

Contents

Abbreviations

2003 Model Price Terms & Conditions	ACCC, *Final Determinations for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services*, October 2003.
ACCC	Australian Competition and Consumer Commission
Act	*Trade Practices Act 1974*
ACT	Australian Competition Tribunal
CAPM	Capital asset pricing model
CCC	Competitive Carriers Coalition
ERP	Equity risk premium
IDD	International Direct Dial
IEN	Inter-exchange network
LAN	Local area network
LAS	Local access switch
LCS	Local Carriage Service
LTIE	Long Term Interests of End–users
MC	Monte Carlo
MRP	Market risk premium
NECG	Network Economics Consulting Group
n/e/r/a	NERA Economic Consulting (formerly National Economic Research Associates)
NZCC	New Zealand Commerce Commission
Optus	SingTel Optus Pty Ltd
PIE	PSTN Ingress and Egress model
POI	Point of interconnection
PSTN	Public Switched Telephone Network

PSTN OTA	PSTN Originating and Terminating Access Services
RAF	Regulatory accounting framework
RBOC	Regional Bell Operating Company
SAOs	Standard Access Obligations
STD	Subscriber Trunk Dialling
STS	Standard telephone service
Telstra	Telstra Corporation Limited
Telstra service	Service of a particular technical attribute as specified by Telstra in the undertaking
TS	Transit switch
TELRIC	Total element long-run incremental cost
TSLRIC	Total service long-run incremental cost
TSLRIC+	Total service long-run incremental cost plus indirect costs
ULLS Undertakings	Telstra's ULLS access undertakings lodged with the ACCC on 23 December 2005
VoIP	Voice over IP
WACC	Weighted average cost of capital

Glossary

Access Provider	Carrier or carriage service provider who supplies declared services to itself or other persons — see s. 152AR of the Act.
Access Seeker	Service provider who makes, or proposes to make, a request for access to a declared service under s. 152AR of the Act.
Customer access network	The network which enables the connection of telephones and other customer premises equipment to switching technology. It consists of a network of conduits and pipes in the ground with a mixture of cables containing copper wires and optical fibres. It has two parts – the distribution network and the feeder network.
Exchange	A generic term for a major node in an exchange service area (e.g. an IRIM, RSS/RSU, LAS, TS).
Inter-exchange network	The network connecting exchanges to each other.
Local access switch	This equipment provides ring current, dial tone and battery feed to end-users, as well as switching calls locally to other local access switches. It also provides number analysis for call routing and call charge recording, and enhanced (or supplementary) services such as call waiting and call diversion.
Pre-selection	Function that enables an end-user or service provider to select a preferred carrier or carriage service provider for a certain type of call (e.g. long distance calls).
Service provider	Defined in s. 86 of the *Telecommunications Act 1997*. Means a carriage service provider or a content service provider.
Total service long run incremental cost	See Australian Competition and Consumer Commission, *Access Pricing Principles – Telecommunications: A*

guide, July 1997.

Summary

Telstra lodged access undertakings (the Undertakings) specifying price-related terms and conditions upon which it undertakes to meet its standard access obligations to supply the PSTN originating and terminating access services (PSTN O/TAS) and the Local Carriage Service (LCS). The Undertakings were lodged on 22 March 2006.

Telstra's decision to submit these undertakings follows from amendments to the *Trade Practices Act 1974* (the Act) in 2002 which encourage the lodgement of undertakings as the main means of addressing access to declared services.[1]

The lodgement of these 2006 undertakings follows a series of decisions by the ACCC on PSTN and LCS charges since 2003. Telstra lodged a set of access undertakings with the ACCC on 9 January 2003 specifying the price-related terms and conditions upon which it undertook to meet its standard access obligations (SAOs) to supply the PSTN OTA, the Unconditioned Local Loop Service (ULLS) and the LCS (the core services).

In October 2003, the ACCC published its model price and non-price terms and conditions for core services, including for the PSTN OTA and LCS. Subsequently, Telstra withdrew its 9 January 2003 undertakings and submitted replacement undertakings on 14 November 2003, which would cover the period to 30 June 2006. The PSTN and LCS undertakings were accepted by the ACCC in December 2004.

The undertakings relate to the charges for the PSTN OTA and the LCS. In reaching this determination, the ACCC undertook extensive work on the assessment of appropriate price terms and conditions for the supply of the core services and it consulted widely with interested parties on all relevant issues. The ACCC issued a discussion paper in May 2006 and received a number of submissions on the undertakings. Further, as part of its assessment of Telstra's ULLS Undertakings, the ACCC commissioned its own external advice on matters relating to the PIE II model used by Telstra to determine the underlying costs of service provision.

Under Part XIC of the Act, the ACCC must accept or reject the undertakings. The process the ACCC follows to assess the undertakings is open and public, allowing parties to express their views and provide relevant information to the ACCC. In assessing the undertakings for this draft decision, the ACCC has, inter alia, had regard to, and has published (where possible):

- Telstra's 23 December 2005 ULLS monthly charges undertakings and supporting submissions;
- the ACCC's Final Determination of model price terms and conditions for the PSTN, ULLS and LCS services;

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[1] See Explanatory Memorandum, *Telecommunications Competition Bill 2002*, p. 1.

- the ACCC's draft decision on Telstra's 14 November 2003 ULLS undertaking;

- the ACCC's Final Decision on Telstra's 13 December 2004 ULLS and LSS monthly charges undertakings;

- Telstra's 22 March 2006 PSTN OTA and LCS undertakings and their supporting submissions

- submissions related to the current undertakings provided by Telstra and other parties, including consultancy services performed for the ACCC.

Subject to confidentiality restrictions, all of the above can be found at the ACCC's website www.accc.gov.au. Further information which the ACCC has had regard to in assessing the undertakings is set out in Appendix F.

The ACCC considers that Telstra's proposed pricing approach for the PSTN OTA and the LCS represents a fundamental shift in the competitive dynamics in the fixed line services markets. Telstra's proposed pricing would significantly disadvantage facilities based access seekers while providing an advantage to resellers of Telstra's end-to-end local call services.

The ACCC's conclusions in relation to its draft view to reject the PSTN OTA and LCS undertakings are informed by an assessment of the key components of Telstra's proposed undertaking under the statutory requirements. This assessment concluded that:

- The PIE II model is not considered to be able to produce an accurate estimate of TSLRIC, and therefore the ACCC is not satisfied that the estimates of efficient network costs based on this model are reasonable;

- The ACCC is not satisfied that Telstra's proposed averaged network cost charge to recover its estimated network costs is reasonable;

- The ACCC considers that Telstra's proposed WACC is too high, and therefore is not satisfied that it is reasonable;

- The ACCC is not satisfied that Telstra's proposed packaged approach to the recovery of PSTN OTA and LCS costs is reasonable.

Based on this assessment, the ACCC has reached a *draft* decision to reject Telstra's PSTN OTA and LCS undertakings.

The ACCC seeks comment from interested parties on this draft decision and the matters set out and relied upon in reaching the draft decision. To this end, the ACCC seeks submissions on this draft decision by **29 September 2006**.

Please forward written submissions to:

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Any queries on this draft decision should be directed to John Bahtsevanoglou on (03) 9290 1849 in the first instance.

1. Introduction

1.1. PSTN OTA and LCS services

The ACCC declared the domestic Public Switched Telephone Network (PSTN) Originating and Terminating Access (OTA) services in July 1997. In summary, domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a Point of Interconnection (POI) with an access seeker's network. Domestic PSTN terminating access is the carriage of telephone calls from the POI to the called party (the B-party).

The Local Call Service (LCS) is used by service providers to supply local calls to end-users. It allows competitive entrants to resell local calls without deploying substantial alternative infrastructure. The Commission declared the LCS in August 1999. On 17 July 2002, the Commission granted an order providing Telstra with an exemption under section 152AT of the Act with respect to the supply of LCS in the CBD areas of Sydney, Melbourne, Brisbane, Adelaide and Perth to take effect on 17 July 2003. The exemption is subject to a number of conditions requiring the provision of information to the Commission in particular circumstances once the exemption takes effect.

At the same time the Commission issued a determination under section 152AS of the Act granting a class exemption for all carriers and carriage service providers other than Telstra in the same areas as Telstra's individual exemption. This took effect on 31 July 2002. It is not subject to conditions.

Declaration of the services has two important consequences. Firstly, Telstra, as a supplier of the PSTN OTA and LCS, is required to supply the services to all service providers upon request. Secondly, if Telstra and a service provider cannot agree on the terms and conditions of supply, one of them can notify the ACCC of a dispute. The ACCC can then arbitrate and resolve the dispute.

To reduce the scope for disputes and therefore the need for the ACCC to conduct arbitrations, a supplier of a declared service can offer the ACCC an undertaking setting out particular terms and conditions of supply. If the ACCC accepts the undertaking, then it is prevented from making an arbitration determination that is inconsistent with the undertaking.

On 22 March 2006 Telstra lodged access undertakings specifying price-related terms and conditions upon which it undertakes to meet its standard access obligations to supply the PSTN OTA and the LCS. The public version of Telstra's supporting submission were received on 29 March 2006.

This report contains the ACCC's draft decision in respect to the reasonableness of the undertakings.

2. Background

2.1. Declaration and the regulatory framework

Once a service is declared, carriers and carriage service providers supplying the declared service to themselves or others are subject to the SAOs. These obligations constrain the manner in which those carriers and carriage service providers can conduct themselves in relation to supply of the declared service.

Section 152AR of the Act sets out the SAOs applying to those carriers and carriage service providers supplying the declared service to themselves or others. In summary,[2] if requested by a service provider[3], the carrier/carriage service provider is required to:

- supply the declared service;
- take all reasonable steps to ensure that the declared service supplied to the service provider is of equivalent technical and operational quality as that which the carrier/carriage service provider is supplying to itself;
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality as that provided by the carrier/carriage service provider to itself;
- permit interconnection of its facilities with those of the service provider; and
- provide particular billing information to the service provider.

The terms and conditions upon which a carrier/carriage service provider is to comply with these obligations are as agreed between the parties. In the event that they cannot agree, one of them can notify the ACCC of an access dispute under s152CM of the Act. Once notified, the ACCC can arbitrate and make a determination which resolves the dispute. The ACCC's determination need not, however, be limited to the matters specified in the dispute notification. It can deal with any matter relating to access by the service provider to the declared service.[4]

The Act enables a carrier/carriage service provider to resolve potentially contentious issues with the ACCC outside the arbitral process. It can do this by giving the ACCC

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[2] There are some exceptions to these obligations. These are set out in s152AR, and in any exemption issued under s152AS or s152AT of the Act.

[3] A service provider is a carriage or content service provider within the meaning of the *Telecommunications Act 1997*.

[4] See sub-section 152CP(2).

an access undertaking under s152BS of the Act, setting out the terms and conditions on which it proposes to comply with particular SAOs.

If accepted by the ACCC, the undertaking becomes binding on the carrier/carriage service provider. If a carrier/carriage service provider breaches the undertaking, the Federal Court can make an order requiring compliance with the undertaking, the payment of compensation, or any other order that it thinks fit (s. 152CD). In addition, in accepting an undertaking, the ACCC is limiting its flexibility in the context of arbitrating access disputes. Once an undertaking is in operation, the ACCC must not make an arbitral determination that is inconsistent with the undertaking.[5]

2.2. The declared services

The Commission declared the domestic PSTN OTA services in July 1997. In summary, domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a POI with an access seeker's network. Currently a POI is usually located at a trunk exchange. Domestic PSTN terminating access is the carriage of telephone calls from a POI within an access seeker's network to the party receiving the call (the B-party). This is shown in Figure 2.2.1. Further elements of the PSTN O/T services are set out on the face of the service descriptions attached to the *Deeming of Telecommunications Services* statement.[6]

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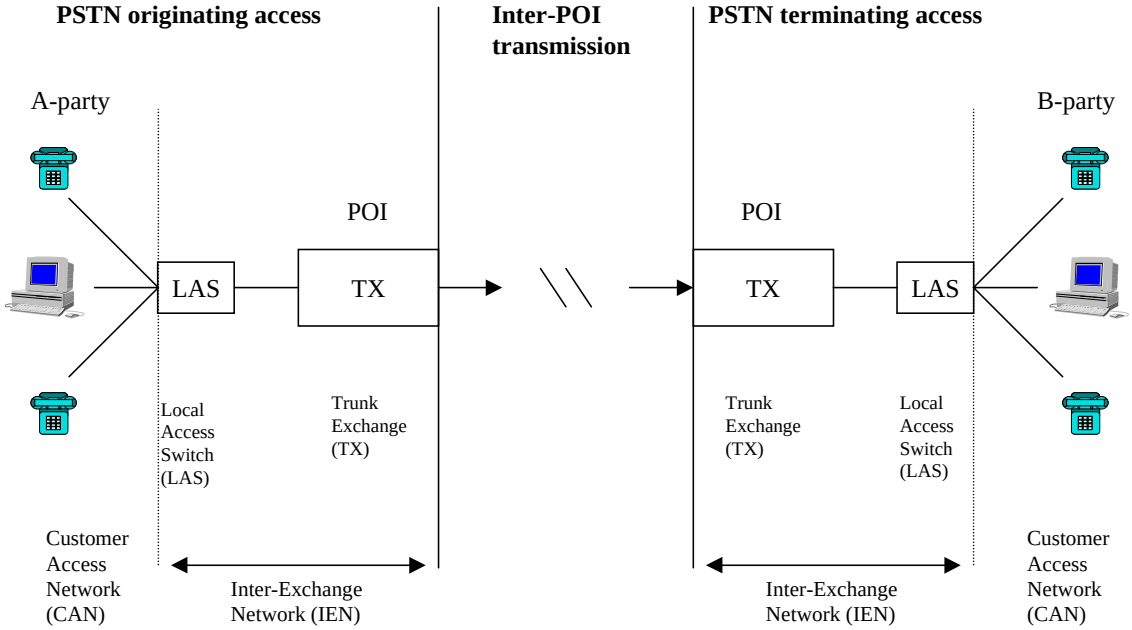
[5] See sub-section 152CQ(5).

[6] ACCC, *Deeming of Telecommunications Services – A Statement Pursuant to Section 93 of the Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997*, 30 June 1997.

Figure 2.2.1 Domestic PSTN OTA services



The declared domestic PSTN OTA services are, in general, used as inputs by service providers primarily to supply long distance calls, such as STD, IDD, as well as FTM and mobile-to-fixed ('MTF') calls to end-users in Australia. They can also be used by other network operators to interconnect with Telstra's fixed network.

The LCS is used by service providers to supply local calls to end-users. It allows competitive entrants to resell local calls without deploying substantial alternative infrastructure.

The LCS is the supply of an end-to-end voice grade carriage service between two points within a standard zone. The access provider is responsible for the carriage of the call between the calling party and called party. Access seekers then resell this service to end-users. Vertical elements which can be self-supplied, or competitively sourced, by the service provider are not included. In re-supplying the LCS to the end-user the service provider may seek to 'value add' or simply resell.

On 22 March 2006 Telstra lodged access undertakings specifying price-related terms and conditions upon which it undertakes to meet its standard access obligations to supply the PSTN OTA and the LCS.

2.3. Terms and conditions of the undertakings

Telstra's undertakings:

- describe the technical attributes of the services that Telstra will supply;
- specify the price that Telstra proposes to charge for the services.

2.3.1. Proposed charges

Telstra's proposed 'headline' charges are as follows:

	2006-07	**2007-08**
LCS (per call)	$0.0928	$0.0928
PSTN TA and PSTN non-preselect OA (per minute)	$0.0218	$0.0228
PSTN Preselect OA - per minute charge	$0.0119	$0.0124
- per customer per month	$1.44	$1.48

However, Telstra geographically de-averages the majority of these charges away from these 'headline' charges, with the exception of the LCS charge and the 'per customer' PSTN POA charges, as follows:

PSTN TA and PSTN non-preselect OA

	2006-07		**2007-08**	
	flagfall	per minute	flagfall	per minute
CBD	$0.0107	$0.0136	$0.0108	$0.0141
Metro	$0.0112	$0.0139	$0.0115	$0.0145
Provincial	$0.0134	$0.0144	$0.0137	$0.0151
Rural	$0.0378	$0.0387	$0.0386	$0.0402

PSTN preselect OA

	2006-07		**2007-08**	
	$1.44 per customer plus		**$1.48 per customer plus**	
	flagfall	per minute	flagfall	per minute
CBD	$0.0035	$0.0051	$0.0034	$0.0052
Metro	$0.0042	$0.0055	$0.0043	$0.0058
Provincial	$0.0068	$0.0065	$0.0069	$0.0068
Rural	$0.0343	$0.0340	$0.0349	$0.0352

The ACCC notes that Telstra's proposed PSTN OTA charges diverge from the ACCC's model price terms and conditions as well as the ACCC's expectations of the price trend for PSTN OTA services over time. In the model price terms and conditions determination of October 2003[7] the ACCC stated that based, among other things, on traffic and service volume estimates available at that time:

> The Commission considers that the transition from current PSTN pricing [that is, a pricing structure which includes an ADC component] to TSLRIC+ pricing should end in 2005/06 with the 2006/07 price therefore based solely on call conveyance. The starting point for the transition process should be the average negotiated PSTN price in 2002/03 with the end point being the currently estimated 2006/07 conveyance cost. Using information currently available to the Commission from both Telstra's PIE II model, and its n/e/r/a model, the Commission believes the 2006/07 call conveyance charge is likely to be well below 1 cent per minute and at this stage is forecast to be around 0.7 cents per minute.

Packaged Approach to Determination of LCS and PSTN costs

Telstra is proposing the PSTN OTA and LCS prices in the Undertaking as a package. According to Telstra, this package allows full cost recovery on a competitively neutral basis across both access seeker traffic and Telstra's own retail traffic and across all PSTN services.

Telstra's proposed Undertaking prices involve a substantial reduction in the headline LCS prices and an increase in the headline PSTN OTA prices. The proposed LCS price for both 2006-07 and 2007-08 is a 32 percent reduction compared with the 2005-06 price. The proposed PSTN OTA prices have increased by 118 percent in 2006-07 and by 128 percent in 2007-08 compared to 2005-06.

Extent of averaging/de-averaging

The Undertaking PSTN OTA charges are structured such that only half of the contribution to the total IEN cost pool that is to be recovered is by way of de-averaged (per minute/call) charges, whereas previously all of these costs were recovered on a de-averaged basis.

For PSTN TA and PSTN non-preselect OA this partial de-averaging is done by allocating half the cost (i.e. half of **[c-in-c]** million) to all four Bands and deriving an average cost for all Bands. The other half is recovered as geographically deaveraged costs in each Band.

For the PSTN preselect OA service, Telstra proposes a geographically averaged fixed fee per customer of $1.44 per month in 2006-07 to meet 50 percent of this group's

[7] ACCC, Final Determinations for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services, October 2003.

contribution to the IEN cost pool **[c-in-c]** million in 2006-07)[8] The per minute component charge is then de-averaged across the four geographic zones.

Flagfall and per minute allocations

The PSTN OTA charges in the Undertaking are also structured such that 20 per cent of the total revenue raised by the charges comes from a flagfall element and 80 per cent from a per minute charge.

This approach is similar to previous PSTN charges. Telstra submits that this allocation was chosen for a number of reasons. Firstly, to ensure that access seekers requiring services with higher than average call times are not disadvantaged relative to access seekers acquiring services with lower than average call times. Secondly, a 20:80 revenue split accords with Telstra's retail pricing structure of PSTN services, in terms of the revenues raised from fixed line rental charges compared to variable time-based charges

PSTN OA Two-Part Tariff

Telstra has proposed a two-part tariff on PSTN OA where that traffic belongs to the same access seeker that is the pre-selected carrier. The PSTN OA Undertaking proposes:

- A $1.44 and $1.48 monthly charge for each customer for 2006-07 and 2007-08 respectively; and
- A headline rate of $0.0119 per minute and $0.0124 per minute for 2006-07 and 2007-08 respectively.

Further in determining the allocation between the fixed monthly charge and the per minute charge, Telstra allocates these charges on a 50:50 basis arguing on what it believes is a reasonable structure for these charges.

By contrast for PSTN TA and non-preselected PSTN OA Telstra proposes a headline rate of $0.0218 per minute and $0.0228 per minute for 2006-07 and 2007-08 respectively, which is double the rates of originating access charges which incorporate a fixed charge.

The only other significant non-price terms relate to the SAOs. Telstra undertakes to, as required under Part XIC of the TPA, treat each access seeker on a non-discriminatory basis as required by the Standard Access Obligations in relation to the supply of the PSTN OTA and LCS. Specifically Telstra proposes that it will take all reasonable steps to ensure that:

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[8] see Telstra submission, paragraph 107.

- the technical and operational quality of the PSTN OTA and LCS are equivalent to that which Telstra provides to itself; and

- the access seeker receives, in relation to the PSTN OTA and LCS, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which Telstra provides itself.

All other non-price terms, which are not included in the undertakings, must instead be negotiated between Telstra and the access seeker.

3. Legislative Background

3.1. Form and content of an undertaking

Section 152BS of the Act provides that an ordinary access undertaking is a written document given to the ACCC under which the relevant carrier or provider undertakes to comply with the terms and conditions specified in the undertaking in relation to the applicable SAOs.

Section 152BS sets out that an ordinary undertaking may be one of the following types:

- an undertaking containing terms and conditions that are specified in the undertaking; or

- an undertaking where the terms and conditions are specified by adopting a set of model terms and conditions set out in the telecommunications access code, as in force from time to time.[9]

Telstra's undertakings fall into the first category, namely, the terms and conditions are specified in the undertakings.

3.2. Criteria for acceptance of an undertaking

Section 152BV sets out the matters which the ACCC must be satisfied before it can accept the undertaking. It applies where an ordinary access undertaking is given to the ACCC and the undertaking does not adopt a set of model terms and conditions set out in the telecommunications access code. Both of Telstra's ULLS undertakings are ordinary access undertakings.

Each of the matters set out in s. 152BV are explained in turn below.

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[9] Section 152BS(3) and (4).

3.2.1. Public process

Sub-section 152BV(2)(a) of the Act provides that the ACCC must not accept an undertaking unless:

- the ACCC has published the undertaking and invited people to make submissions on the undertaking; and
- considered any submissions that were received within the time limit specified by the ACCC when it published the undertaking.

The ACCC has posted electronic copies of public submissions on its website (http://www.accc.gov.au). Where parties have provided submissions in confidence or, where parts of submissions have contained confidential information, as claimed by submitters, these have not been included on the website.

3.2.2. Consistency with the standard access obligations

Sub-section 152BV(2)(b) provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the undertaking is consistent with the SAOs that are applicable to the carrier or provider.

The SAOs are set out in s. 152AR of the Act. In summary, if requested by a service provider, an access provider is required to:

- supply the declared service;
- take all reasonable steps to ensure that the technical and operational quality of the service supplied to the service provider is equivalent to that which the access provider is supplying to itself;
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality as that provided by the access provider to itself;
- permit interconnection of its facilities with the facilities of the service provider;
- take all reasonable steps to ensure that the technical operational quality and timing of the interconnection is equivalent to that which the access provider provides to itself;
- take all reasonable steps to ensure that the service provider receives interconnection fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself;
- if a standard is in force under s. 384 of the *Telecommunications Act 1997*, take all reasonable steps to ensure that the interconnection complies with the standard;

- if requested by the service provider, provide billing information in connection with matters, or incidental to, the supply of the declared services; and

- if an access provider supplies an active declared service by means of conditional-access customer equipment, the access provider must, if requested to do so by a service provider supply any service that is necessary to enable the service provider to supply carriage services and/or content services by means of the declared service and using the equipment.

The question of whether Telstra's undertaking is consistent with the applicable SAOs is considered in Section 5.

3.2.3. Consistency with Ministerial pricing determination

Division 6 of Part XIC of the Act provides that the Minister may make a written determination setting out principles dealing with price-related terms and conditions relating to the SAOs.[10]

Paragraph 152BV(2)(c) provides that the ACCC must not accept an undertaking dealing with price or a method of ascertaining price unless the undertaking is consistent with any Ministerial pricing determination. A ministerial pricing determination has not been made.

3.2.4. Whether terms and conditions are reasonable

Paragraph 152BV(2)(d) of the Act provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the terms and conditions specified in the undertaking are reasonable.

In forming a view about whether particular terms and conditions are reasonable, the ACCC must have regard to the range of matters set out in s. 152AH(1) of the Act. In the context of assessing Telstra's undertakings, these are:

- whether the terms and conditions promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services (the 'long-term interests of end-users');

- the legitimate business interests of Telstra, and its investment in facilities used to supply the declared services;

- the interests of all persons who have rights to use the declared services;

- the direct costs of providing access to the declared services;

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[10] In Section 152CH of the Act 'price-related terms and conditions' means terms and conditions relating to price or a method of ascertaining price.

- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility; and

- the economically efficient operation of a carriage service, a telecommunications network or a facility.

In addition, the ACCC may consider any other relevant matter.[11]

Set out below is a summary of the key phrases and words used in the above matters. While, in general, these phrases and words have not been the subject of judicial interpretation, in order to have regard to those matters it is necessary for the ACCC to form a view as to what they mean.

1. Long-term interests of end-users (LTIE)

The ACCC has published a guideline explaining what it understands is meant by the phrase 'long-term interests of end-users' in the context of its declaration responsibilities.[12] The ACCC's view is that a similar interpretation is appropriate in the context of assessing an undertaking.

In determining whether a particular thing promotes the long-term interests of end-users, s. 152AB(2) of the Act requires the ACCC to have regard to whether the terms and conditions are likely to result in the achievement three specific objectives. Subsection 152AB(3) restricts the ACCC to have regard to these three objectives alone when assessing whether an undertaking is in the LTIE. These objectives are:

- the objective of promoting competition in markets for carriage services and services supplied by means of carriage services;

- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end users; and

- the objective of encouraging the economically efficient use of, and economically efficient investment in:

    1) the infrastructure by which carriage services and services provided by means of carriage services are supplied; and[13]

    2) any other infrastructure by which listed services are, or are likely to become, capable of being supplied.[14]

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[11] Section 152AH does not use the expression 'any other relevant matter'. Rather, s. 152AH(2) states that the matters listed in s. 152AH(1) do not limit the matters to which the ACCC may have regard. Thus, the ACCC may consider any other relevant matter.

[12] ACCC, *Telecommunications Services — Declaration Provisions: a Guide to the Declaration Provisions of Part XIC of the Trade Practices Act*, July 1999.

[13] s. 152AB(2)(e)(i)

LTIE objective one – promoting competition

In determining the extent to which an undertaking is likely to result in the achievement of promoting competition in markets for listed services the Act obliges the ACCC to have regard to the extent to which the undertaking will remove obstacles to end-users of listed services gaining access to listed services. However, the ACCC is not limited to this and may consider other matters in determining whether an undertaking will achieve the promotion of competition in markets for listed services.

LTIE objective two – achieving any-to-any connectivity

Subsection 152AB(8) of the act specifies that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same service or a similar service, whether or not the end-users are connected to the same telecommunications network.

LTIE objective three – encouraging efficient use of and investment in infrastructure

In the ACCC's view, having regard to 'the objective of encouraging the economically efficient use of, and economically efficient investment in ... infrastructure' requires an understanding of the concept of economic efficiency. This concept consists of three components:

- Productive efficiency

  This is achieved where individual firms use resources such that goods and services are produced using the least cost combination of inputs

- Allocative efficiency

  This is achieved where the prices of resources reflect their underlying costs so that resources are then allocated to their highest valued uses (i.e. those that provide the greatest benefit relative to costs)

- Dynamic efficiency

  This reflects the need for industries to make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities

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[14] s. 152AB(2)(e)(ii)

Subsection 152AB(6) lists the matters the ACCC must have regard to in determining the extent to which the terms and conditions of an undertaking is likely to result in the achievement of the above objective. Those matters are:

- Whether it is , or likely to become, technically feasible for the services to be supplied and charged for, having regard to:

    1) the technology that is in use, available or likely to become available; and

    2) whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and

    3) the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks

- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope;

- the incentives for investment in:[15]

    1) the infrastructure by which the services are supplied; and

    2) any other infrastructure by which the services are, or are likely to become, capable of being supplied.

However the ACCC is not limited to these matters in its assessment of the extent to which a particular undertaking is likely to achieve the above objective (s. 152AB(7)).

Subsection 152AB(2) has been the subject of recent legislative changes that received assent in September 2005. The ACCC understands that the purpose of these amendments was to "ensure that the incentives for investment in new infrastructure by which services under consideration may be supplied, and the risk of making such an investment, is one of the matters to which regard should be had" when considering the efficient use and efficient investment aspect of the LTIE.[16]

While this amendment makes the consideration explicit, the ACCC has considered this aspect in its previous assessments. The ACCC does not consider that the amendments require significant change to the ACCC's approach in assessing whether

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[15] S. 152AB(7A) was assented to the Act in September 2005. This section requires that the ACCC, in determining incentives for investment, must have regard to the risks involved in making the investment.

[16] Telecommunications Legislation Amendment (Competition and Consumer Issues) Bill 2005, Explanatory Memorandum, p. 7.

an undertaking promotes the economically efficient use of, and investment in, the infrastructure by which the service is supplied or any relevant infrastructure.

2. Legitimate business interests of the carrier, and the carrier's investment in infrastructure used to provide the service

The ACCC is of the view that the concept of legitimate business interests should be interpreted in a manner consistent with the phrase 'legitimate commercial interests' used elsewhere in Part XIC of the Act. Accordingly, it would cover the carrier's or carriage service provider's interest in earning a normal commercial return on its investment.

However, as is explained in the ACCC's guide "Access Pricing Principles – Telecommunications" it is unlikely the access provider's legitimate business interest would extend to achieving a higher than normal commercial return through the use of market power.[17] For example, access price should not, in most cases, be artificially inflated by the lack of competition in the supply of infrastructure services. However, carriers should also not be precluded from earning higher than normal commercial returns where these returns are generated from, for example, innovative investments or unique cost-cutting measures rather than through the exercise of market power.

Following on from this, the access provider's legitimate business interests do not extend to receiving compensation for loss of any 'monopoly profits' that occurs as a result of increased competition. In this regard, the Explanatory Memorandum for the *Trade Practices Amendment (Telecommunications) Bill 1996* states:

> ... the references here to the 'legitimate' business interests of the carrier or carriage service provider … 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. [18]

When considering the legitimate business interests of the carrier or carriage service provider in question, the ACCC also considers what is necessary to maintain those interests. This can provide a basis for assessing whether particular terms and conditions in the undertaking are reasonable to maintain those interests.

3. Interests of persons who have rights to use the declared service

Persons who have rights to use a declared service will, in general, use that service as an input to supply carriage services, or a service supplied by means of carriage services, to end-users. In the ACCC's view, these persons have an interest in being able to compete for the custom of end-users on the basis of their relative merits. Terms and conditions that favour one or more service providers over others and thereby distort the competitive process may prevent this from occurring and consequently harm those interests.

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[17] ACCC, Access Pricing Principles – Telecommunications, July 1997, p. 9

[18] *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum*, p.46.

4. Direct costs of providing access to the declared service concerned

Direct costs are those costs necessarily incurred (caused by) the provision of access. As stated in the same explanatory memorandum mentioned above:

> ... the references here … the '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.[19]

This requires that an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependant market as a result of the provision of access.

This criterion also implies that, at a minimum, an access price should cover the direct incremental costs incurred in providing access. It also implies that the access price should not exceed the stand-alone costs of providing access.[20]

5. The operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility

The ACCC understands this criterion to mean that an access price should not lead to arrangements between access providers and access seekers that will encourage the unsafe or unreliable operation of a carriage service, telecommunications network or facility.[21]

6. Economically efficient operation of a carriage service, telecommunications network, or a facility

In the ACCC's view, the phrase 'economically efficient operation' embodies the concept of economic efficiency set out in section 4.2.4. It would not appear to be limited to the operation of carriage services, networks and facilities by the carrier or carriage service provider supplying the declared service, but would seem to include those operated by others (e.g. service providers using the declared service).

To consider this matter in the context of assessing an undertaking, the ACCC may consider whether particular terms and conditions enable a carriage service, telecommunications network or facility to be operated in an efficient manner. This may involve, for example, examining whether they allow for the carrier or carriage service provider supplying the declared service to recover the efficient costs of operating and maintaining the infrastructure used to supply the declared service under consideration.

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[19] *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum*, p.46.

[20] Stand-alone costs are the costs an access provider will incur providing a service assuming the access provider produced no other services.

[21] ACCC, Access Pricing Principles – Telecommunications, July 1997, p. 10.

In general, there is likely to be considerable overlap between the matters that the ACCC takes into account in considering the long-term interests of end-users and its consideration of this matter.[22]

Telstra has submitted that in determining whether Undertaking prices are reasonable, the relevant inquiry is not whether the Undertaking prices are the 'most appropriate', but whether they are reasonable. Telstra submits that, in applying the test of 'reasonableness', the Commission must consider whether the proposed model is within a "range of choice reasonably open and consistent with the criteria in section 152AH(1)".

Telstra has also submitted that, for the purpose of assessing the reasonableness of the Undertaking, three broad principles should be applied:

- full cost recovery and no more;
- encouraging efficient use of the network; and
- maintaining competitive neutrality.

Telstra submits that, if pricing meets these three broad principles, the pricing will be consistent with the statutory criteria set out in section 152AH.

Under s 152BV(2)(d), the ACCC must not accept an Undertaking unless it is satisfied that the terms and conditions specified in the Undertaking are reasonable. Section 152AH sets out the matters to which the ACCC must have regard in determining whether particular terms and conditions are reasonable. These matters include whether the terms and conditions promote the LTIE of end-users (section 152AH(1)(a)). Section 152AB(2) provides that, in relation to determining whether something promotes the LTIE, regard must be had to the extent to which it is likely to result in the achievement of certain enumerated objectives.

Against that background, the ACCC believes:

- it is the terms and conditions of the Undertaking as a whole that must be taken into account in assessing the reasonableness of the Undertaking; and
- any methodology or means used to establish or determine the terms and conditions must be considered against the matters set out in s 152AH(1) and 152AB(2).

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[22] In considering whether particular terms and conditions will promote the long-term interests of end-users, the ACCC must have regard to their likely impact on the economically efficient use of, and economically efficient investment in, the infrastructure by which carriage services and services provided by means of carriage services are supplied. Clearly there is overlap between the phrase 'economically efficient use of …' contained in the LTIE criteria and the phrase 'economically efficient operation of …' contained in this criterion

The ACCC notes that it is required to determine whether the terms and conditions of the Undertaking are reasonable, not whether they are the best possible terms and conditions or whether they could be improved. This approach is supported by the Tribunal, which noted in its decision in respect of Telstra's Line Sharing Service ([2006] ACompT 4, (2 June 2006)) that:

> "In this analysis we are limiting ourselves to asking whether Telstra's charge term and its cost allocation method is reasonable having regard to the statutory matters. We are not concerned to enquire whether any other price term or cost allocation method is more reasonable" (at [150]).

3.2.5. Expiry date

Sub-section 152BS(7) of the Act provides that an ordinary access undertaking that specifies the text of the terms and conditions, as opposed to one that adopts a set of model terms and conditions set out in the telecommunications access code, must specify the expiry time of the undertaking. Further, s.152BV(2)(e) provides that the expiry time of the undertaking must be within three years after the date on which the undertaking comes into operation.

3.3. Procedural matters

3.3.1. Confidentiality

In arriving at its draft decision, the ACCC has relied on commercial-in-confidence information supplied by Telstra and interested parties. The ACCC has assessed this material in terms of its policy on treatment of information[23] and has determined that, in most instances, it should not reproduce that material in this report.

Accordingly, where information that is commercially sensitive has been relied upon in reaching a conclusion in this report, it has either been aggregated to a level such that it is no longer commercially sensitive or, where this is not possible, masked with the designation **[c-i-c]**. Unless it is otherwise indicated, the information masked with **[c-i-c]** is information provided by Telstra over which it has made a confidentiality claim.

The ACCC recognises that its decision making processes should be as transparent as practicable. In this regard it notes that interested parties can obtain the commercial-in-confidence information from the provider of that information upon the giving of appropriate undertakings. The ACCC notes that interested parties have been able to negotiate such undertakings in respect of some of the confidential information that has been relied upon by the ACCC, however the timeliness of the provision of

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[23] ACCC, *Collection and Use of Information*, 2000.

confidential information continues to be an ongoing matter of concern to the ACCC, given the substantial delays experienced throughout this process.

The ACCC notes that, unless it can corroborate commercial-in-confidence information in some way, it is constrained in the weight that it can give to information that has not been subject to broader industry scrutiny.

3.3.2. Information relied upon

The ACCC, in its assessment of the Undertakings, has primarily used the supporting submission of Telstra, as well as the submissions of interested parties made pursuant to the ACCC's Discussion Paper. The ACCC has also relied upon relevant information from sources other than submissions where this has further facilitated its analysis, including previous ACCC reports and related processes, expert advice from consultants engaged by the ACCC, and other material such as journal articles, etc.

3.3.3. Decision-making period

The ACCC has a six month statutory time frame by which it must make a decision to accept or reject an access undertaking. For the purposes of calculating the six month timeframe certain periods of time are disregarded. In particular, the time it takes between when the ACCC makes a request for further information (under s.152BT of the Act) and when an access provider has furnished the information requested is disregarded, as is the time between when the ACCC publishes an undertaking, invites submissions[24] and the due date for receipt of those submissions (the 'Consultation Period').

The ACCC has the ability, under s. 1252BU(7) to extend, or further extend this six month period by a period of not more than three months.

[24] See sub-section 152BV(2)(a) of the Act.

4. Consistency with standard access obligations

4.1. The standard access obligations

Under s. 152BV(2)(b), the ACCC must not accept an Undertaking unless it is satisfied that they are consistent with the SAOs that are applicable to the relevant carrier or provider – in this case, Telstra. The SAOs are set out in s. 152AR of the Act. An access provider that supplies a declared service to itself or others must comply with any applicable specified obligations. These obligations were referred to above in section 3.2.2. The purpose of this provision is to ensure that an undertaking is only accepted by the ACCC where the undertaking is consistent with the SAOs applicable to the carrier or carriage service provider for the declared services. This ensures that the carrier or carriage service provider is not subject to inconsistent obligations if the undertaking is accepted.

This chapter assesses whether Telstra's Undertakings are consistent with the applicable SAOs. Section 4.2 sets out the ACCC's approach to assessing consistency with the SAOs. Section 4.3 contains the actual assessment.

4.2. Approach to assessing consistency with the standard access obligations

The Act does not detail a specific approach for assessing whether the terms and conditions in an undertaking are consistent with the access provider's SAOs. The ACCC finds it useful to consider whether the terms and conditions in an undertaking raise any inconsistencies with the SAOs. If the terms and conditions are not inconsistent with the obligations, the ACCC is likely to regard them as consistent.

The ACCC considers that terms and conditions specified in an undertaking would be inconsistent with the SAOs if an access provider in giving effect to those terms and conditions would not satisfy each of the applicable obligations. Such inconsistency could arise either expressly or by implication from the circumstances in which the terms and conditions could be satisfied.

The purpose of this assessment is to ensure that an access provider would comply with the SAOs should the Undertakings be accepted. The ACCC is not here concerned with the reasonableness of the terms and conditions of the Undertakings. Reasonableness is assessed separately in Section 5.

The ACCC has especially considered whether any of the non-price terms and conditions specified in the Undertakings (including the attachments) are inconsistent with each of the applicable SAOs. The price terms and conditions are more relevant to an assessment of reasonableness with reference to the matters to which regard must be had in s. 152AH and outlined above.

4.3. Assessment

Clause 3 of the Undertakings provides that Telstra will comply with the terms and conditions specified in the various attachments to the Undertakings to satisfy the relevant SAOs.

The terms and conditions principally relate to pricing, although the attachments also contain clauses that may be classified as non-price terms and conditions.

The Undertakings specify services of particular technical attributes (Telstra services) and then set out the terms and conditions upon which these Telstra services will be supplied. These terms and conditions do not specify all the matters which an access provider and access seeker would need to agree on in the supply of the services.

4.3.1. Non-exhaustive scope of the Undertakings

While the price and non-price terms and conditions that are contained in the Undertakings do not cover all of the matters relating to the supply of a service, it is the ACCC's view that it is not necessary for an undertaking to exhaustively address all matters that could relate to the applicable SAOs.

Any relevant matters that are not addressed in the Undertakings could be settled by commercial negotiation. Should the parties be unable to reach agreement, the matters could be determined in an ACCC arbitration if a dispute was notified.

Accordingly, the ACCC considers that the absence of terms and conditions about certain matters does not, of itself, make an undertaking inconsistent with the SAOs. However, it is open to the ACCC to take the absence into account in conducting its assessment under subsection 152BV(2).

4.3.2. Whether the Undertakings specify terms and conditions for services other than the Telstra services

The ACCC notes that there could be uncertainty about the scope of the Undertakings as they specify terms and conditions for services which are not defined in the precise form used to define the relevant declared services. In certain respects, the Telstra services would appear more limited than the declared services. Some of these limitations are noted below.

The ACCC's interpretation is that the price and non-price terms specified in the Undertakings apply *only* to the services supplied by Telstra (the Telstra Services) and not to the relevant (corresponding) declared services if there are differences in definition or specification. In other words, Telstra would not be required to supply, on the terms in the Undertakings, a form of the declared service that was different to or beyond the scope of a Telstra Service.

If the Undertakings were interpreted as specifying terms and conditions for *all* possible forms of the declared services, then Telstra could, in accordance with the Undertakings, refuse to supply any form of the declared service other than the Telstra Service specified in the Undertakings. If such an interpretation was given to the

Undertakings, the ACCC could not be satisfied that the Undertakings were consistent with Telstra's SAOs.

Accordingly, the views expressed below assume that the Undertakings specify terms and conditions only for the supply of Telstra Services and not for every possible form of the relevant declared services.

The practical consequence of this distinction depends on the extent to which a Telstra service would not actually cover all instances of the corresponding declared service.

At this time, the ACCC's consultation with access seekers has not revealed any significant current or prospective use of the relevant declared services that would not fall within the scope of the services definitions or specifications in the Undertakings. The ACCC has not been presented with evidence that such a use will emerge before the expiry of either Undertaking.

However, if an access seeker was to seek access to a form of a declared service other than as specified in the Undertakings, then the ACCC believes that it would be open to the access seeker to negotiate access to the different form of the declared service from Telstra. If Telstra and the access seeker could not agree on terms and conditions of access to such a form of the declared service, the access seeker could ask for the ACCC to arbitrate.

4.3.3. Supply, quality and fault handling in relation to the declared services

The Undertakings do not contain provisions which specifically set out how Telstra will satisfy its obligations regarding the quality and timing of fault detection, handling and rectification for the Telstra services. Nor do they contain provisions on the commencement, refusal, suspension or termination of supply. However, Attachment G does provide that Telstra will take all reasonable steps to ensure that the technical and operational quality of the relevant service is equivalent to that which Telstra provides to itself. Attachment G also provides that Telstra will take all reasonable steps to ensure that the Access Seeker receives, in relation to the relevant service, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which Telstra provides to itself.

The ACCC does not consider that this approach and lack of specificity necessarily makes the Undertakings inconsistent with the SAOs specified in section 152AR(3) of the Act. Rather, Telstra has simply chosen not to set out in detail in these Undertakings all aspects concerning how these obligations will be satisfied in respect of the Telstra services[25]. The ACCC considers that, should agreement not be reached

[25] It is understood such aspects are addressed by Telstra in its individual access agreements.

on these matters, any such disagreement could be resolved by the ACCC in arbitration.[26]

Overall, ACCC is of the view that the Undertakings in so far as they stand are consistent with the standard access obligations in relation to the supply and quality of the Telstra services and related fault handling obligations.

4.3.4. Provision, timing and content of billing information

Sub-section 152AR(7) of the Act provides that the billing information that must be provided by an access provider to a service provider must be given at such times and in a manner ascertained in accordance with the *Trade Practices Regulations*. Regulation 28S provides that billing information must be given in a manner and form, and at the times, agreed by the access provider and service provider. It also sets out the type of billing information that must be given.

The Undertakings do not contain terms and conditions on the provision, timing and content of billing information. The ACCC therefore considers that billing matters would be resolved by commercial negotiation or arbitration, and considers at this time that the Undertakings are not inconsistent with the billing information SAOs.

4.3.5. Conclusion

The ACCC's final view is that the Undertakings in as far as they address relevant provisions are consistent with Telstra's SAOs.

However, the ACCC wishes to emphasise that it considers the Undertakings cover only certain forms of the declared services – Telstra's Services – and that it would be open to access seekers to seek other forms of the declared services, including by recourse to arbitration by the ACCC if agreement cannot be reached between Telstra and the access seeker. However, the ACCC acknowledges that it is unlikely that access seekers would seek to access the declared services in different forms from that specified by Telstra during the period of operation of the Undertakings.

The ACCC also emphasises that the Undertakings do not contain a complete set of terms and conditions or deal with all aspects of the acquisition of the services covered in the Undertakings. However the Undertakings are not required to be exhaustive, and other terms and conditions of supply could be determined by commercial negotiation, or failing agreement, through arbitration by the ACCC.

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[26] It should be noted that the ACCC has also published its views on the model (non-price) terms and conditions for the ULLS and this view would also inform any dispute on such matters.

5. Draft Decision on Telstra's PSTN OTA and LCS undertakings

On 22 March 2006 Telstra submitted to the ACCC undertakings in respect of the charges for the PSTN OTA and LCS. At the same time Telstra provided to ACCC a submission in support of the undertakings.

The terms and conditions of Telstra's undertakings are outlined in further detail in Section 2.3.

In coming to its draft decision, the ACCC has relied upon material submitted by Telstra and other interested parties, as well as other material it has considered appropriate and informative. This other material includes:

- previous ACCC reports and processes related, but not limited to the PSTN and LCS;
- expert advice from consultants engaged by the ACCC; and
- general materials such as academic writings.

Where appropriate and available, citations have been provided.

5.1. The approach used by the ACCC to assess the undertakings

Subsection 152BV(2)(b) provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the undertaking is consistent with the standard access obligations that are applicable to the carrier or provider. The ACCC's assessment of this issue can be found in Section 4.

As stated in 3.2.3, no Ministerial pricing determination has been made. Therefore, the ACCC is not required to be satisfied that the undertaking is consistent with such a determination (per subsection 152BV(2)(c).

As set out in Appendix A, Subsection 152BV(2)(d) precludes the ACCC from accepting an undertaking unless the ACCC is satisfied that the terms and conditions in the undertaking are reasonable. Section 152AH provides that, in determining whether terms and conditions are reasonable, the ACCC must have regard to certain matters. In coming to its decision, the ACCC has assessed all the price and non-price terms and conditions having regard to those matters. The assessment has considered the various terms and conditions individually, combined into relevant concepts, and on a global or "whole-of-undertaking" basis. The "conceptual" analysis can be found in the following Appendices:

- the estimation of network costs is examined in Appendix B
- the packaged approach to the allocation of PSTN OTA and LCS charges is examined in Appendix C

- the appropriateness of the WACC is examined in Appendix D
- the issue of averaging and the proposed two-part tariff are examined in Appendix E.

5.2. ACCC's draft decision on the undertakings

As a result of this assessment process, the ACCC has come to following preliminary findings:

- subject to the comments made in Section 4, the undertakings **are** consistent with the standard access obligations;
- in the absence of a Ministerial pricing determination, there is no need to consider whether the undertaking is consistent with such a determination; and
- to the extent that the undertakings seek to impose price and non-price terms and conditions in accordance with Telstra's proposals on these matters, they are unreasonable.

In relation to the preliminary finding on the reasonableness of the terms and conditions, the ACCC has concluded on an overall basis that the proposed price and non-price terms and conditions contained in the undertakings:

- are unlikely to promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, and investment in infrastructure
- result in Telstra recovering more than is necessary to promote Telstra's legitimate business interests
- would harm the interest of access seekers and the persons who have rights to use the service
- exceed the direct costs of providing access
- do not impact on the operational and technical requirements necessary for the safe and reliable operation of telecommunications services
- do not promote the economically efficient operation of the PSTN OTA and LCS.

Accordingly, the ACCC is not satisfied that the terms and conditions specified in the undertaking are reasonable.

The ACCC's draft decision is therefore to reject Telstra's undertakings.

Appendix A. The ACCC's approach to assessment

This Appendix outlines the ACCC's approach to assessment of key components of Telstra's PSTN OTA and LCS undertakings, as conducted in the following Appendices. In general, the approach followed and the matters taken into consideration is standardised across each Appendix to the greatest extent possible, however variations to the standard approach are made in certain circumstances in order to reflect differences in the matters under consideration. The application of the standard approach, and any variations to that approach, are specified in the introduction to each Appendix.

A.1. Criteria for assessment

Sub-section 152BV(2)(d) of the TPA provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the terms and conditions specified in the undertaking are reasonable.

In forming a view about whether particular terms and conditions of Telstra's undertaking are reasonable, the ACCC must have regard to the following matters set out in s. 152AH of the TPA:

- whether the terms and conditions promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services (the 'long-term interests of end-users');
- the legitimate business interests of Telstra, and its investment in facilities used to supply the declared services;
- the interests of all persons who have rights to use the declared services;
- the direct costs of providing access to the declared services;
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility;
- the economically efficient operation of a carriage service, a telecommunications network or a facility; and
- in addition, the ACCC may consider any other relevant matter.[27]

[27] Section 152AH does not use the expression 'any other relevant matter'. Rather, s. 152AH(2) states that the matters listed in s. 152AH(1) do not limit the matters to which the ACCC may have regard. Thus, the ACCC may consider any other relevant matter.

In conducting its assessment, the ACCC will have regard to these matters in accordance with the interpretations set out above.

In the following Appendices, each matter is considered, either directly or indirectly. Where a particular matter is not considered to be relevant to the situation under consideration, the ACCC has included express statements to that effect.

A.2. Applying the 'future with and without' analysis

In considering the various matters set out in s. 152AH, the ACCC may utilise, where appropriate, the 'future with and without' analysis set out in the Sydney Airports case.[28] This analysis involves the ACCC, when considering particular terms and conditions, contrasting the outcome under the section 152AH assessment in the event the undertaking was accepted against the outcome in the event the undertaking was rejected. The ACCC does not consider that the 'future with or without' analysis will assist the ACCC in assessing all of the matters to which it must or may have regard to in assessing reasonableness, and the ACCC will only use the methodology where it facilitates the ACCC's analysis. Where the ACCC has used the methodology, this has been stated.

Where the methodology has been used, the ACCC has considered the effect that acceptance of the undertaking (the 'future with') based on the relevant claims made by Telstra would have on the outcomes under s. 152AH.

With respect to considering the outcome 'without' the undertaking, the ACCC notes that a number of alternative pricing outcomes might arise. The service remains declared under Part XIC and access seekers will retain rights under that section. Access seekers may continue to seek to determine terms and conditions of access via commercial negotiation.

Division 8 of Part XIC of the TPA gives the ACCC power to arbitrate access disputes. The ACCC has made its views on appropriate price terms and conditions clear to industry, and progressively updates these views as circumstances require. The ACCC appreciates that given commercial imperatives for certainty and the costs involved with pursuing a regulatory outcome, an access seeker will in some instances negotiate an access price higher than it believed could be obtained using regulatory means. However, the ACCC notes that its views are likely to influence industry in respect to achieving commercial or regulatory outcomes, and therefore that all relevant 'without' scenarios are likely to lie within a reasonable bound of the ACCC's views on appropriate price and non-price terms and conditions, where the industry could reasonably expect that it would seek to apply these views through its arbitral powers.

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[28] *Sydney Airports Corporation Ltd* (2000) 156 FLR 10

Appendix B. Network Costs

B.1. Overview

In calculating the efficient network costs over the period set out in the Undertaking, Telstra has used the PIE II model. In addition, to demonstrate the reasonableness of its claim, Telstra has compared these prices to Telstra's own historic and current costs as provided to the ACCC under the Regulatory Accounting Framework.

This Appendix contains the ACCC's assessment as to whether it can be satisfied that the network cost claims based on the PIE II model are reasonable having regard to the matters set out in s. 152AH. Furthermore, it notes the ACCC's reservations, as expressed in past deliberations, regarding the use of the PIE II model to accept Telstra's undertaking.

B.2. PIE II Model

Telstra has estimated the efficient network and associated costs using its PIE II model for the 30 month period from January 2006 to June 2008. The PIE II model has been used by Telstra for network cost estimation in support of several recent Undertakings.

The ACCC has previously reviewed the appropriateness of the PIE II model in assessing Telstra's past Undertakings. The ACCC concluded that it could not be satisfied that the PIE II model generated robust data to allow estimation of efficient network costs. Furthermore, the ACCC expressed its concern regarding the appropriateness of numerous key assumptions underlying the model and its results.[29] As a consequence, the ACCC cannot be satisfied of the reasonableness of the estimates that rely on the PIE II model.

The ACCC generally considers that prices which reflect the efficient costs of providing the service are most likely to achieve access prices which meet the LTIE.

As a result, the ACCC considers that any assessment of Telstra's submission with respect to the costs of the underlying network assets used in the provision of the service, is therefore a consideration as to whether or not Telstra's claimed costs represent a reasonable estimate of TSLRIC+[30]. Any network cost claim which is not a

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[29] See, ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS*, December 2004, Appendix C.

[30] TSLRIC consists of the sum of the operating and maintenance costs, as well as the capital costs that the firm incurs in providing the service as a whole. *Operating costs* are the continuing operational costs of providing the service, including the labour and materials costs that are causally related to the provision of the service. *Capital costs* comprise the cost of capital (i.e. the opportunity cost of debt and equity used to finance the firm) and depreciation (i.e. the decline in economic value of assets) of capital

reasonable estimate of TSLRIC+ would not achieve outcomes consistent with the LTIE. Conversely, any network cost claim which is a reasonable estimate of TSLRIC+ will be consistent with the LTIE.

B.2.1. Telstra's Support of PIE II

In its submission of 21 June 2006, Telstra noted[31]:

> The PIE-II model generates a robust estimate of the TSLRIC for the IEN based on best in use network technology. Telstra maintains that these estimated costs are clearly reasonable under the statutory criteria.

In support of its claim that the ACCC's criticisms are not warranted, Telstra noted that:

- By its nature, the model must necessary be complex and that complexity, by itself cannot be a reason for rejecting the model.
- Telstra has provided the PIE II model to interested parties, and provided detailed documentation to assist parties in assessing the model.
- The input parameters in the model need to be consistent and that it is often impossible to adjust one parameter without impacting on others. Selective changes may have unintended and undetected consequences.
- The ACCC's claim that inputs and assumptions cannot be changed was factually wrong as the ACCC itself had adjusted certain parameters.

Furthermore, Telstra noted that the requirement that the model employ best-in-use technology has generally been held to require using technology and equipment that is actually deployed in operating networks and has been proven reliable and cost-effective and can be supported from the perspective of network operations.

Therefore technologies that are not yet in commercial use (such as IP-based technologies) would not qualify for inclusion in a costing model.

B.2.2. ACCC's View on PIE II

The ACCC has on many occasions expressed its concern in using the PIE II model to assess Telstra's undertakings. Accordingly, the ACCC wishes to reiterate that:

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that is specific to the production of the service. Telstra's PIE II model uses a tilted annuity approach to calculate capital costs.

[31] Telstra's submission in response to the Australian Competition and Consumer Commission's Discussion Paper in respect of Telstra's Undertakings for the PSTN Originating and Terminating Access and Local Carriage Services, dated May 2006, 21 June 2006

- While it is true that Telstra has made the PIE available to interested parties, the ACCC and other industry participants remain of the view that the model's lack of transparency makes it difficult for the ACCC and other interested parties to assess Telstra's network claims.

- By its nature PIE II is a complex model and the ACCC agrees with Telstra's assertion that this is not a basis for rejection. The ACCC also wishes to note that the outputs of the PIE II model have not been rejected on this basis but mainly due to the lack of transparency.

- The ACCC is aware that models require underlying assumptions to be made in developing its architecture or structure. Nevertheless to the extent that Telstra has not made changes to the model as a result of the ACCC and the industry's concern raises questions regarding the suitability of the model.

As set out above, for the ACCC to accept a model for use in calculating access prices, the ACCC needs to be satisfied that the model's outputs are accurate and the terms and condition which rely on these outputs are reasonable when the ACCC has regard to the matters set out in s. 152AH.

B.3. Reasonable requirement for modelling

For the ACCC to accept a model for use in calculating access prices, the model needs to produce estimates which the ACCC believes are accurate. It is up to Telstra to satisfy the ACCC of this. In the circumstances, the ACCC is not satisfied that the model produces a reasonable estimate of TSLRIC+ nor that, given that any estimate is by definition an approximation, PIE II's modelling assumptions represent a balancing of the interests of access seekers and the access provider on both model parameters and inputs.[32]

The ACCC continues to believe that, given these requirements, a model must:

- Be sufficiently transparent that the ACCC and access seekers could reasonably assess the inputs and outputs at a disaggregated level.

- Allow users to test the assumptions in the model and analyse the impact of different changes in inputs *(and architecture)* on outputs by understanding the linkages within the model.

- Allow users to assess how element costs and capital are allocated within services.

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[32] *Trade Practices Act 1974 (Cth)*, sub-sections 152AH(1)(c) and (b).

B.3.1. Appropriateness of modelling assumptions

The ACCC has continuously pointed out that Telstra has made no adjustments to the modelling assumptions underlying the PIE II model in its estimation of the efficient network and associated costs.

To the extent that the ACCC and other access seekers cannot make significant changes to the input parameters and assumptions underlies the ACCC's view and concern that the model in its current form is a "take it or leave it proposition."

Given these concerns in relation to the transparency and manipulability of the model, it is disappointing that Telstra appears to have made no attempt to make appropriate adjustments to the model in response to the identified concerns of industry participants and the ACCC.

The PIE II model is now based on old technologies and therefore cannot be considered to be forward-looking. For instance, the model makes no attempt to model the forward looking network architecture which will underpin the move to an all-IP core network which was announced by Telstra as part of its next generation network strategy in November 2005. The ACCC understands that the introduction of an IP core network will have significant cost implications in terms of the costs of providing originating and terminating access for fixed network services since[33]:

- A common protocol means less differentiation between traffic generated by different services and greater ability to launch new services. The use of an end-to-end packet-based network allows different services and users to share capacity dynamically. This increases the efficiency with capacity is used and deferring the need to build new capacity;

- Bringing separate networks together may lead to scale economies even without any topology changes. For example, there may be savings in maintenance costs, network planning and equipment procurement;

- Further cost savings may be achieved by changes in network topology. Aggregation nodes can move closer towards end-users. Greater aggregation of traffic sooner in the network structure allows more exploitation of scale economies on links within the periphery of the network (ie at those network elements closer to the customer but before the commencement of the customer access network). In effect, the periphery becomes more like the core.

This view is supported by consultants Marsden Jacobs who were commissioned by the CCC to review the PIE II model as it relates to the costing of the IEN. Marsden Jacobs concludes that:

[33] For a more detailed discussion see .econ, Distance Gradients - Assessing the impact of NGNs on interconnection tariffs' distance gradients, March 2006.

> The PIE II cannot be regarded as a forward-looking cost model based on best practice network technology. The norm today is a Next Generation Network (NGN). Core networks have evolved significantly since the PIE II was originally developed and the design in PIE II is not reflective of forward-looking efficient costs.

and that:

> [Various developments around the world] suggest that the core network in the PIE II model cannot, as a matter of principle, be regarded as reflective of efficient, forward-looking costs. Hence the PIE II model fails the forward-looking 'test' and should not be relied on to calculate costs of core related services such as PSTN OTA. For example, the Local Access Switches (LAS) and Signal Transfer Points (STP) use the Ericsson AXE solution. To our knowledge, Ericsson no longer provides the complete AXE solution, but offers their Engine Integral Network (EIN) concept instead.

Similarly, Optus argued in its response to the ACCC's discussion paper that:

> Telstra's PIE II model, which is the basis for setting Telstra's prices, is a backward looking inefficient estimate of costs. It takes no account of Telstra's plans to migrate its voice, broadband and data services to a common core IP network that were loudly trumpeted in its November strategy briefing. Failure to reflect the cost savings that Telstra will generate from these plans will lead to a significant over recovery of costs.

The ACCC's view is also consistent with that of Telstra's operation in New Zealand which has argued in a submission to the Commerce Commission[34]:

> "… Telecom began rolling out its next generation network (NGN) during the course of the TSLRIC calculation period. TelstraClear first implemented a softwitch in its network in late 2003. It is therefore not appropriate to include antiquated switching equipment in a model that is supposed to be forward looking.
>
> NGN switches enable achievement of significant efficiencies. This means that the model's inclusion of old switching equipment has the effect of inflating costs significantly above that of an efficient operator. These inefficiencies will in turn be imposed on access seekers in the form of a higher interconnection price, with flow-on efficiency losses as a result of weakened competition and higher prices."

TelstraClear goes on to argue[35]:

> In TelstraClear's view, in order to ensure that the technology in the model is MEA [modern equivalent asset] the Commission should implement NGN as soon as possible…Implementing the NGN will affect the following costs, which should be reviewed as soon as possible:
>
> a. switching (because of smaller and fewer switches, with many switches being replaced by concentrators).

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[34] TelstraClear, Submission to a Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 26 May 2005.

[35] Ibid.

b. transmission (because of the tighter integration of voice and data networks).

c. operations and maintenance (because of the lower operating costs of NGN equipment)

d. switch housing, land and power costs (because of lower space requirements).

The ACCC notes that the concept of TSLRIC requires costs to be assessed on a forward looking basis. As Gans and King note[36]:

> TSLRIC estimates are usually based on 'forward looking' technology. This refers to the best technology currently available to produce the relevant set of outputs under analysis.

and that[37]:

> The use of forward-looking costs to estimate TSLRIC-based interconnection prices and other cost-based pricing in telecommunications has become relatively standard worldwide. "[T]oday most regulators and experts generally agree that the ideal approach for calculating the level of interconnection charges would be one based on forward-looking costs of supplying the relevant facilities and services."

This view is also supported by TelstraClear which, in a commissioned report[38] which it submitted to the Commerce Commission argued:

> TSLRIC is a forward-looking concept and TSLRIC models should include forward-looking technologies.

The report then goes on to argue that the existence of new technologies, such as IP based technologies, MPLS and ATM would indicate that a TSLRIC model based on circuit switched technology was not representative of a forward-looking efficient network provider.

Further, Telstra has chosen to respond in only a limited fashion to concerns regarding the model's network design rules. The ACCC's concerns on the PIE II model has been detailed in its Final Decision on the ULLS undertaking[39] and are equally valid in the assessment of the present undertaking. In particular, the ACCC and the industry have drawn attention to the following:

- **Network Provisioning** - The ACCC has previously stated that it does not agree with Telstra's current approach to network provisioning and that there is an onus on Telstra to show that the assumptions that are used are reasonable.

- **Operational and Maintenance Factors** - The ACCC has in the past expressed its concern regarding the manner in which operation and

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[36] Joshua Gans and Stephen King, Comparing Alternative Approaches to Calculating Long-Run Incremental Cost, June 2004.

[37] Ibid

[38] Marsden Jacobs Associates, Comments on the TSLRIC Model for Designated Interconnection Services – A report prepared for TelstraClear, may 2005.

[39] ACCC, "Assessment of Telstra's ULLS Monthly charge undertaking" Final Decision. August 2006

maintenance (O&M) cost percentages are calculated within the model. The ACCC believes that Telstra needs to provide further justification as to the manner in which all the proposed cost percentages are determined.

- **Network Planning Costs** - The ACCC has reiterated its view on a number of occasions regarding network planning costs. In this regard, the ACCC has previously held the view that although recovery of the costs associated with the ongoing maintenance and replenishment of infrastructure is appropriate, any such costs should be appropriately covered by operation and maintenance costs which are already accounted for in the model.

- **Network Design Parameters** – There is an ongoing concern that the architecture of the network as devised by the PIE II model is far from optimal. Consultants to both the ACCC[40] and to other industry stakeholders[41] have raised concerns over how the PIE II model calculates distances and how it determines where nodes should be located.

Volume forecasting

In estimating the efficient IEN cost of its PSTN using its PIE II cost model, Telstra includes confidential estimates of the traffic volumes, in term of minutes, for the services that require use of the PSTN.[42]

Telstra's submission notes public statements by it of expected declining use of PSTN services, particularly of local and long distance services.[43] Telstra's estimates are presented in the Table 1 below.

Table 1: Forecasts of End-Use Minute by Service [c-in-c]

Source: Telstra Submission

Optus has sought to provide comments to the ACCC with regards to the forecasts presented by Telstra. To that extent, Optus has sought clarification from Telstra on

[40] Analysys *Review of Specific Issues in Telstra's PIE II Model* 9 May 2006. Report for Australian Competition and Consumer Commission.

[41] Marsden Jacobs (2), NERA

[42] see paragraph 48.

[43] see paragraph 6

Telstra's forecasts. Telstra has provided a written response to the questions raised by Optus. Optus has noted that Telstra response[44]:

> provided little if any additional clarity to enable Optus to provide an informed assessment of the reasonableness of Telstra's volume data.

A major point of contention is the inability of Telstra to provide information on the volume trends assumed over the period 2004-05 through to 2007-08. Further Optus has expressed concern that the volume data submitted by Telstra in Telstra's supporting submission to the undertaking cannot be reconciled back to the volume information contained in the PIE II model. Optus sought further information from Telstra on Telstra's volume trends and in reconciling the data provided by Telstra in paragraphs 48 and 110 of Telstra's submission. Whilst Telstra has responded to Optus request, Optus notes that Telstra's response provides little if any clarity to enable Optus to provide an informed assessment of the reasonableness of Telstra's volume data.[45]

The ACCC has noted in October 2003, that:

> '...in future years there may be significant traffic migration away from the PSTN resulting in an increase in the per-minute call conveyance cost'.[46]

The ACCC considers that there is a sense in which an expectation of declining PSTN volumes may be self-fulfilling to the extent that an increase in future PSTN access prices directly or endogenously reduces demand to some degree. This said, the ACCC recognises that there are also exogenous factors influencing current consumer demand which are likely to continue to affect demand in the future for PSTN services and these need to be assessed and taken account of in forecasting future demand for PSTN services. Telstra's submission and media statement refer to a migration from fixed line services to mobile services and the greater use of broadband for internet and other (including the growing use voice over IP) services, rather than dial-up, as important drivers of declining PSTN product revenues.[47]

While noting Telstra's assertion that PSTN volumes of traffic are declining due to migration to mobile and broadband services, the ACCC agrees with Optus that it is not able to test the reasonableness of Telstra's claim without appropriate trend data and the key assumptions underlying its 2006-07 and 2007-08 assumptions.

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[44] Optus, Supplementary submission in respect of Telstra PSTN OTA & LCS Undertaking. Letter dated 14 August, 2006

[45] Optus "Supplementary submission in respect of Telstra PSTN OTA & LCS Undertaking" 14 August 2006

[46] see ACCC, *Final determinations for model price terms and conditions of the PSTN, ULLS and LCS services*, October 2003, p. 111.

[47] see paragraph 6 of Telstra's supporting submission and Telstra's Media Release, 'Telstra reduces wholesale local call prices', dated 22 March 2006.

B.4. Assessing IEN Network Costs Using RAF Data

Telstra proposed Undertaking for LCS and PSTN OTA are aimed at recovering the costs of the local switching and transmission elements of the PSTN. These elements together are known as the Inter-Exchange Network (IEN). Telstra uses the PIE II model to estimate the hypothetical efficient costs of the IEN. In addition, to substantiate the reasonableness of the total cost pool, Telstra provided:

- an assessment of the IEN total costs using the Regulatory Accounting Framework (RAF) using the historic and current cost data provided to the ACCC.

- an assessment of the IEN total costs using Telstra's calculation of TSLRIC derived from the n/e/r/a model.

Table 2 provides a summary of Telstra's assessment of the total cost pool using each methodology.

Table 2: Inter-Exchange Network Cost Pool [c-in-c]

Telstra's Undertaking is based on the lower bound estimates provided by the PIE II model using Telstra's WACC of **[c-in-c]** percent. That is, Telstra is using the lowest estimate of the cost pool in determining its proposed charges in the Undertaking.

The ACCC has attempted to replicate the Telstra analysis on historic and current costs from the information provided by Telstra but is unable to assess the accuracy of the Telstra's cost estimates as set out in Table 1. The ACCC therefore cannot verify Telstra's estimates of the IEN cost pool derived from historic and current cost data as presented in the table[48].

The ACCC considers that if Telstra is to use these estimates as supporting the reasonableness of PIE II it is incumbent on Telstra to provide transparency in their calculations and provide the input data to enable the ACCC to assess Telstra's claims. The ACCC also believes that Telstra's failure to provide full information to allow an assessment of the analysis presented in support of the Undertaking precludes the ACCC accepting the historic and current cost estimates as evidence of the reasonableness of the PIE II model.

Notwithstanding this, the ACCC has undertaken an analysis of the costs of the IEN resulting from each of the methodologies identified by Telstra using RAF and CCA

[48] From the data presented by Telstra, the ACCC has estimated the unit cost of PSTN OTA at **[c-in-c]** per end-minute. Telstra then states (paragraph 75 pg 22 of Submission) "The resulting unit cost…was multiplied by the total end-use minutes of PSTN services modelled in PIE II (local, long distance, international, fixed-mobile, PSTN OTA and LCS)". This step could not be verified by the ACCC to obtain the results provided by Telstra in estimating the IEN costs for historic and current cost accounts.

data provided as part of the Accounting Separation framework. In undertaking this analysis the ACCC notes that:

- Telstra's Cost of Capital uses a WACC of **[c-in-c]** percent. The ACCC has on a number of occasions expressed its concerns with such a high WACC. The ACCC in its analysis uses a WACC of **[c-in-c]** percent

- The ACCC is of the view that all the items in the CCA adjustments should be included as discussed earlier.

Table 3 presents the ACCC's estimates of the IEN cost pool using historical RAF data with Telstra's lower bound PIE II result and Telstra's estimate of the cost pool using historic cost data.

Table 3: Historic IEN Costs* - Comparison ACCC and Telstra Estimates [c-in-c]

Telstra's lower bound PIE II IEN cost pool is approximately **[c-in-c]** percent higher than the ACCC's estimate of **[c-in-c]** million. Moreover, Telstra's estimate using historic accounts is significantly higher than that estimated by the ACCC.

In respect to current cost analysis, Table 4 provides a comparison of the ACCC's analysis of the IEN cost pool and compares with this with Telstra's lower bound PIE II result and its IEN cost estimates using current cost accounting data.

Table 4: Current Cost IEN Costs* - Comparison ACCC and Telstra Estimates [c-in-c]

Telstra's lower bound PIE II IEN cost pool is approximately **[c-in-c]** percent higher than the ACCC's estimate of **[c-in-c]** million. Moreover, Telstra's estimate using current cost data is significantly higher than that estimated by the ACCC.

Given the limitations of the PIE II model as set out above and the ACCC's assessment of the IEN costs using historic and current cost data, the ACCC concludes that Telstra's analysis of the costs of providing IEN services do not appear to be reasonable.

The ACCC notes that there are significant differences between Telstra's estimate of IEN costs and the ACCC's analysis. Given these differences between the IEN costs provided by the RAF accounts and the PIE II model and the concerns which the ACCC has expressed with the PIE II model, the ACCC notes that since Telstra constructed the PIE II model, and wishes to use it to support its network prices, it is incumbent on Telstra to:

- Make the model sufficiently transparent in terms of inputs, outputs and assumptions to enable both the ACCC and access seekers to make a well informed decision about the estimates of the model.

- Explain the cost differences between the results obtained in the RAF database and PIE II at an appropriate level of disaggregation and provide appropriate analysis for any large discrepancies.

If Telstra wants the ACCC to accept the outputs generated by the PIE II model it is incumbent on Telstra to address the ACCC's concerns regarding the model. The ACCC continues to believe that Telstra has not discharged this onus. In coming to this conclusion, the ACCC notes that the factors it previously raised as concerns have not yet been addressed by Telstra. Telstra's failure in addressing these issues precludes the ACCC accepting the reasonableness of the PIE II model.

The Commission therefore is unable to conclude that the historic and current cost data substantiate Telstra's Undertakings.

B.5. Comparing Telstra's Undertaking for PSTN OTA and LCS with Telstra's Internal Wholesale Costs

The aim of this Section is to assess the prices in Telstra's undertaking with the internal wholesale price of Telstra's retail services, namely, local calls, domestic long distance and with Telstra's wholesale PSTN OTA service.

In assessing Telstra's reasonableness with regards to its Undertaking on PSTN OTA (2.18c headline rate) and LCS (9.05c/local call) the ACCC has used the historical and current cost data to assess the wholesale unit costs of retail local call, long distance and PSTN OTA. For consistency the volume data was extracted from Telstra Schedule 8 Service Usage report for 2004-05.

Table 5 presents the data and the ACCC's analysis. The Table presents Telstra's profitability (EBIT margin), Volume and Unit revenues and costs for retail local calls, retail domestic long distance and for wholesale PSTN OTA.

Table 5: 2004-05 Profitability, Volume and Unit Costs and Revenues

for Selected Retail Products [c-in-c]

For local calls, the analysis shows that the wholesale cost of a local call is **[c-in-c].** This compares with Telstra's Undertaking for LCS of 9.28c (including GST). This suggests that Telstra's Undertaking for LCS calls may be lower than Telstra's costs. To the extent, that PSTN OTA is estimated as a residual of the IEN cost pool and revenues derived from LCS prices suggests that Telstra's PSTN OTA undertaking of a headline rate of 2.18c may be overestimated.

By contrast, comparing domestic long distance and PSTN OTA unit costs with Telstra's Undertaking of 2.18c suggests that Telstra's proposal is significantly higher than the unit costs for domestic long distance (**[c-in-c]**) and for PSTN OTA (**[c-in-c]**). The ACCC notes that these estimates are lower than the existing PSTN OTA charge of 1c.

The ACCC's conclusion is that there are significant differences between Telstra's Undertakings and the wholesale unit cost estimates for local calls, long distance and PSTN OTA. To the extent that such differences exist, especially with regards to the PSTN OTA service, the ACCC is not satisfied that the proposed PSTN OTA prices are reasonable.

B.6. Geographic Price Averaging

The Undertaking PSTN OTA charges are structured such that half of the contribution to the total IEN cost pool that is to be recovered is by way of averaged (per minute/call) charges across all geographic bands. Previously all of these costs were recovered on a de-averaged basis.

In assessing whether the Undertaking is reasonable, the ACCC in its examination of the PIE II model concludes that the likelihood of overestimating costs in rural areas is greater than in urban areas. This is because:

- While it is reasonable to use rectilinear distances in urban areas due to street grids, rectilinear distances in rural areas may overestimate costs

- Telstra's engineering rules in country areas without the use of clustering algorithms may overestimate costs in rural areas

- Telstra's PIE II does not take into account new technologies such as WIMAX in country areas that have the potential to reduce costs.

To the extent, that the ACCC considers that the PIE II estimates are likely to overestimate regional costs, this is likely to lead to a disproportionate impact on geographically averaged prices for PSTN OTA and LCS and the cost of providers seeking access to these services in metropolitan areas.

The ACCC has in the past discussed at length the competition implications resulting from averaged charges across different geographic bands. The ACCC's conclusion has been that averaged charges will not promote competition in markets for carriage services and services supplied by means of carriage services, neither will they remove obstacles to end users gaining access to these services.

The ACCC considers that similar conclusions can be reached in the assessment of the current undertaking. This view is also supported by Marsden Jacobs who state:

> With only partial de-averaging, the access price is below efficient, forward-looking costs. Access seekers are therefore inclined to rely on access provided by Telstra. Partial de-averaging discourages investment that would allow for more efficient supply of services in rural areas.
>
> On the other hand, with partial de-averaging, prices in urban areas are above efficient, forward-looking costs. Access seekers may be more inclined to invest in their own network infrastructure in urban areas even though, from society's point of view, it is more efficient to use the Telstra network.

Similarly Optus in its submission to the ACCC's discussion paper argues that the reasons why Telstra has chosen to average on a partial basis the PSTN OTA charge is to:

- Maintain consistency with its position on the averaging of ULLS prices.

- Raise the costs faced by access seekers since access seekers will on average have proportionally more traffic in metropolitan areas than Telstra. Averaging of charges would, therefore raise the costs faced by access seekers in using PSTN services.

- Ensure revenue protection. With the growth of broadband services and the prospective migration of resale services to ULLS, Telstra faces the prospect of a diminishing revenue stream from PSTN services. As much of this traffic

will likely be lost in metropolitan areas, one way to plug the gap is to maximise the price of PSTN terminating access through averaging.

- Discourage the introduction of new services. A higher PSTN terminating access charges in metropolitan areas will discourage the successful development of VOIP services by competing providers. These services are more likely to available in metropolitan areas, at least initially.

B.7. ACCC's draft view

The ACCC has consistently acknowledged the difficulties and complexities inherent in any cost modelling process. The ACCC has consistently stated that it does not agree that Telstra has discharged its onus to provide sufficient documentation, and supporting evidence for the assumptions it has employed in its PIE II model.

The ACCC notes, in this regard, that on network costs it has continuously and specifically requested Telstra to provide clarification on a range of issues, or for Telstra to adjust a subset of variables in a manner consistent with the ACCC's view as to the reasonable range for these variables.

Telstra is entitled to put forward its view as to the appropriate level of network costs, and indeed its PIE II model is constructed for this very purpose. However, the ACCC is guided by its statutory obligations, and as such, is bound to independently assess Telstra's claims on their merits.

The ACCC has clearly expressed on numerous occasions that it has difficulty accepting the PIE II model in general, and has raised concerns with respect to specific variables. The ACCC acknowledges, as noted by Telstra, that it is yet to advance its own model in preference to PIE II. However, the ACCC continues to believe that, given its and the industry's concern relating to aspects of the PIE II model its estimates cannot be accepted as they do not appear to be reasonable.

Further, in an attempt to test the reasonableness of Telstra's claim, the ACCC has used historic and cost accounting data as a guide to examining Telstra's claim. Prima facie, the analysis although indicative has not supported Telstra's network cost claims.

A noted in section B.2, the ACCC considers that only models which are capable of producing robust estimates of TSLRIC+ will be capable of satisfying the ACCC as to the reasonableness of the relevant terms and conditions. Given the range of concerns outlined in this section, by interested parties and by the ACCC's consultants, the ACCC cannot be satisfied that the PIE II model is capable of generating robust estimates of TSLRIC+. As Telstra's claimed network costs arise from the unreasonable PIE II model, the ACCC therefore cannot be satisfied that these network costs are reasonable as they:

- do not promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, or investment in infrastructure

- will result in Telstra recovering more than is necessary to promote Telstra's legitimate business interests

- harm the interest of access seekers, and the persons who have rights to use the service would be limited in their ability to compete

- exceed the direct costs of providing access

The ACCC notes that issues regarding the appropriate estimation of TSLRIC+ have no material effect on the operational and technical requirements necessary for the safe and reliable operation of the service.

Appendix C. Packaged Approach to Establishment of PSTN OTA and LCS Charges

Telstra is proposing the PSTN OTA and LCS prices in the Undertaking as a package. According to Telstra[49], this package allows full cost recovery on a competitively neutral basis across both access seeker traffic and Telstra's own retail traffic and across all PSTN services.

Telstra argues that it is not possible to assess the proposed price for LCS in isolation from the proposed prices for PSTN OTA, as the two are dependent on each other. According to Telstra, if it were determined that the LCS rate should be lower than proposed by Telstra, then the PSTN OTA rates would need to increase to ensure full cost recovery on a competitively neutral basis across all services, and vice versa.

As noted above, Telstra's lower bound PIE II estimate of **[c-in-c]** is the starting point for determining the PSTN OTA cost pool. Telstra derives the PSTN OTA cost pool by subtracting from IEN costs the contribution made by local calls (**[c-in-c]**) and local call interconnect services (**[c-in-c]**). The remaining IEN costs (**[c-in-c]**) are then recovered from PSTN OTA.

In estimating the contribution made by local calls, Telstra uses the 2004-05 RAF historical data to estimate the RMRC charge for local calls. Its starting point is the unbundled GST exclusive local call price of 20c/call. Using the RAF data, Telstra estimates[50]:

- The average retailing cost of local calls – this is estimated at **[c-in-c]** per call.
- The average retailing cost of line rental – this is estimated at **[c-in-c]** per call.

Both the above sums are subtracted from the unbundled price of a local call to yield an LCS price of **[c-in-c]**[51] per call. An adjustment for absorbing the GST is made by Telstra consistent with the ACCC's previous methodology[52] and it is added to the LCS price of **[c-in-c]**. This yields an LCS price of 9.28c per call inclusive of GST.

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[49] Telstra's Submission in Support of its Undertaking Dated 22 March 2006

[50] Telstra's Submission in Support of its Undertaking Dated 22 March 2006. pp 23

[51] Multiplying this LCS price by the forecast volume of 2006-07 of local calls (retail and wholesale) yields the local call contribution of **[c-in-c]** to the IEN.

[52] ACCC Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services, October 2003 pp 97.

Telstra has not previously proposed such a "packaged" approach in an Undertaking in such an explicit way. The ACCC, however, notes that Telstra's proposal is similar in principle to Telstra's arguments which have been made at various times for a local call surcharge. Telstra's arguments in the past have been to the effect that those costs that cannot be recovered from local calls because of the local call price cap should be re-allocated to the PSTN and recovered through a local call surcharge on PSTN OTA services. This argument was explicitly rejected by the ACCC in the October 2003 model price terms and conditions determination[53].

Further, the ACCC has noted that a key consideration in respect to whether there is an argument to be made for such an approach is the extent to which Telstra receives other sources of funds to offset any local call revenue shortfall (which itself is likely to be small given the close relativity between local call prices and costs). The ACCC has noted that Telstra does in fact receive other sources of funds such as from industry and Government subsidy programs as well as potentially the provision of other services such as wholesale and retail xDSL which possibly fully acquit any potential shortfall.

As previously, the ACCC has concerns as to whether the approach proposed by Telstra is consistent with the ACCC's pricing principles which require costs to be determined on a service by service basis rather than across different PSTN services.

This view is supported by Marsden Jacobs who comment:

> … the main purpose of TSLRIC is not to ensure full cost recovery across all services. The main purpose of the TSLRIC methodology is to assess the efficient cost level for individual services to ensure appropriate and efficient price signals are sent to the market. To adjust the cost of individual services away from TSLRIC would result in a lost clarity of cost.

The ACCC has compared the proportion of IEN costs allocated by Telstra to PSTN OTA and LCS with the proportion of PSTN OTA and LCS traffic flowing across the PSTN. This information is set out in Table 1.

Table 1: Proportion of IEN Costs and End Minutes Allocated to LCS and PSTN OTA [c-in-c] 2006-07

Two key issues emerge from this analysis:

- Local calls (and local call interconnect) have been allocated **[c-in-c]** percent of the total IEN cost pool. By contrast, local calls account for **[c-in-c]** percent of end-minutes on the PSTN. The reverse holds for PSTN OTA with the derived PSTN OTA costs accounting for **[c-in-c]** percent of the cost pool while PSTN OTA traffic only accounting for **[c-in-c]** percent of the PSTN traffic volume.

[53] ACCC, Final Determinations for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services, October 2003, pp 62.

- A second related issue is that the implied unit cost for Local Calls per minute end is **[c-in-c]** and this compares with **[c-in-c]** for PSTN OTA (see Table C1). This derived PSTN OTA unit price coming from Telstra's "packaged" approach is significantly above the unit price for PSTN OTA derived from the PIE II model and from that determined from RAF and CCA data.

The ACCC, therefore, is not satisfied that the allocation of IEN costs between LCS and PSTN OTA is reflective of the efficient costs of providing LCS and PSTN OTA.

Optus supports this view. Optus in its submission in response to the discussion paper argues:

> Telstra calculates the RMRC of LCS. It then deducts this from the IEN cost pool, leaving the balance of costs to be allocated to PSTN services. Effectively, it is allocating any difference between the RMRC of LCS and the TSLRIC of LCS to PSTN. That is local calls do not receive their appropriate share of costs in the PSTN model. As a consequence PSTN OTA services effectively bear an LCS surcharge.
>
> This problem is further exacerbated because the LCS price includes the discount associated with basic access *(line rental)*[54] services. This is notwithstanding the fact that wholesale basic access falls outside the scope of the undertaking. However, Telstra's motive is clear, the lower the LCS price the higher the resultant price of PSTN.

The ACCC notes that it does not appear that the proposed allocation of costs between PSTN OTA and LCS would encourage the efficient use of the services by end users and as a consequence the efficient use of infrastructure used to provide the services.

Further, as noted by Optus above, the LCS price includes the discount associated with basic access services. The Commission has in its Final decision on the Local Services Review[55] noted that in implementing the interim RMRC pricing principle, the Commission will prefer separate pricing for the two services.

C.1. Commission's assessment of the packaged approach under the legislative criteria

C.1.1. Long term interests of end users

As mentioned in Section 4, the Commission considers that particular terms and conditions will promote the long-term interests of end users if they are likely to contribute towards the provision of goods and services at lower prices, higher quality, or towards the provision of greater diversity of goods and services in the long-term.

[54] *(line rental)* added to minimise confusion.

[55] ACCC Final Decision Local Services Review

Subsection 152AB(3) of the TPA restricts the Commission to have regard to three objectives alone when assessing whether an undertaking is in the LTIE. The ability of the packaged approach to achieve each of these objectives is discussed in turn.

The objective of promoting competition in markets for carriage services and services supplied by means of carriage services

In determining the extent to which an undertaking is likely to promote competition in markets for listed services, the TPA obliges the Commission to have regard to the extent to which the undertaking will remove obstacles to end-users of listed services gaining access to listed services. However, the Commission is not limited to this and may consider other matters in determining whether an undertaking will promote competition.

In considering the potential effect of the packaged approach on competition, the ACCC has examined the impact of the proposed pricing package on Telstra and on acquirers of the PSTN OTA and LCS services.

Telstra's proposal includes a large reduction of 32 percent on existing LCS prices. This however is offset by a substantial increase in the headline rate of PSTN OTA charges from 1c/min to 2.18c/min.

The ACCC has estimated the impact on Telstra's wholesale revenue[56] of the proposed LCS and PSTN OTA price changes as submitted by Telstra for 2006-07. This is shown in Chart 1. The Chart shows that while the reduction in LCS prices will result in a **[c-in-c]** loss to Telstra, the increase in average PSTN OTA prices will generate incremental revenue of **[c-in-c]** The net increase in incremental revenue to Telstra is estimated at **[c-in-c]** in 2006-07 from the proposed price changes to LCS and PSTN OTA services.

[c-in-c]

[56] In this particular instance, wholesale revenue refers to the revenues received by Telstra from access seekers from PSTN OTA and LCS services.

As a result, access seekers, as a group, will be **[c-in-c]** million worse off in 2006-07 as a result of the proposed changes. Given the relatively low margins and EBITDA levels associated with the provision of fixed line services, the ACCC considers that this redistribution of income from access seekers towards Telstra has the potential to significantly affect the level of competition in the provision of fixed line services.

More importantly, the proposed pricing structure fundamentally alters the attractiveness of resale based versus relatively lower level infrastructure based provision of fixed line services. As indicated in Diagram 1, resellers of Telstra's LCS will be **[c-in-c]** million better off as a result of the proposed changes while competitors who purchase PSTN OTA services and combine this with their own infrastructure to provide long distance and fixed to mobile or mobile to fixed services will be **[c-in-c]** million worse off under the proposed changes. In the ACCC's view, this effectively means that ULLS based competitors requiring PSTN TA and competitors offering services through a combination of their own infrastructure and preselection will be significantly worse off under the Telstra proposal. Resellers of Telstra's end-to-end local call service, on the other hand, will be relatively better off under the proposed undertaking.

Optus, for example, who is a large acquirer of PSTN OTA services has indicated that its annual PSTN cost will increase by approximately **[c-in-c]** million per year if the proposed undertaking prices are implemented. The corresponding offset from lower LCS prices will only amount to around **[c-in-c]** million per annum. Optus has indicated that had the proposed undertaking prices applied for the 2005-06 financial year Optus' Net Profit After Tax would have **[c-in-c]**.

Similarly Hutchison has indicated that, were the proposed charges to be implemented, the net impact on the company for the 2006-07 financial year will be **[c-in-c]** million.

Finally, Macquarie Telecom has stated that its modelling on the net impact of the introduction of the proposed rates for PSTN OTA and LCS has shown that there would be an approximately **[c-in-c]** on the company. That is, even accounting for the reduction in LCS, the higher PSTN OTA rates would see **[c-in-c]**

Vodafone has also recognised the attempt by Telstra to favour resale based competitors. In its submission Vodafone observes:

> Telstra states that *undertaking prices provide substantial margin for access seekers providing the full bundle of PSTN.* This is not the case for operators who require PSTN OTA services only. It appears that Telstra, in proposing to set prices in such a manner, is discriminating against a particular class of access seekers and is attempting to discourage facilities based competition. It certainly seems that the significant shift in the pricing balance between resale services and interconnection services indicates a preference for one type of competition compared with another.
>
> If Telstra is allowed to proceed with such a scheme, competition and innovation in telecommunications will be significantly diminished.

The ACCC considers that the pricing approach proposed by Telstra will not promote the LTIE as it will discriminate against facilities based competitors of fixed line services. As the ACCC has commented in the past[57]:

> The ACCC regards facilities-based competition as more likely to be long-run sustainably competitive.
>
> …
>
> Facilities-based competition is important in its own right because … [such] competition relates to supply of more of the end-to-end service and therefore more elements of the price/product/service package.

In summary, the ACCC considers that Telstra's proposed packaged approach to the establishment of PSTN OTA and LCS charges will not promote competition in markets for carriage services and services supplied by means of carriage services, neither will it remove obstacles to end users gaining access to these services. Consequently, the ACCC considers that the packaged approach is not in the long-term interests of end users.

The objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end users

The proposed packaged approach does not have any relevance under this sub-criterion.

The objective of encouraging the economically efficient use of, and economically efficient investment in:

- ***the infrastructure by which carriage services and services provided by means of carriage services are supplied; and***
- ***any other infrastructure by which listed services are, or are likely to become, capable of being supplied***

PSTN OTA enables access seekers to combine existing customer access and switching infrastructure with their own equipment so as to provide end-to-end retail and wholesale local and long-distance voice services to end-users, as well as to other service providers. This enables end-users to gain access to an increased choice of telephony service providers, therefore improving their access to those services and providing greater scope for price competition as well as product and service improvements.

Appropriate cost based pricing of the PSTN OTA service, therefore, encourages product differentiation and the creation of new and innovative bundled product packages, increases the likelihood of price competition in the supply of voice services,

[57] ACCC, Telecommunications competitive safeguards for 2003–04, March 2005.

and is therefore likely to enhance productive and allocative efficiency in those markets where PSTN OTA is used as an input.

Due to economies of scale in metropolitan areas, Telstra's PSTN OTA service is a lower cost option than the rollout of alternative networks for the provision of services in these areas. Since under a packaged approach PSTN OTA prices would be above costs, they may discourage access seekers from utilising the PSTN OTA service in these areas, where it would otherwise be efficient to do so. Instead, the proposed doubling of the PSTN OTA charges may encourage inefficient bypass of Telstra's IEN onto other, potentially higher cost, networks for originating access. As Telstra's operation itself has argued in its submission to a draft determination on the application for pricing review for designated interconnection services in New Zealand[58],

> "overstatement of the TSLRIC price will also result in unnecessary duplication and wasteful investment in alternative networks – at the expense of infrastructure investment that would have created greater value add for end-users. This investment problem is exacerbated by the irreversibility of such investment. A decision not to invest because of a possibly overly low TSLRIC price can be readily corrected when the TSLRIC price is reviewed."

This possible outcome is further reinforced by the extent of averaging of PSTN OTA prices across metropolitan and regional areas. As already discussed, averaging results in a disproportionate impact on access seekers utilising PSTN OTA in metropolitan areas, thus distorting their investment signals in favour of inefficient by-pass. This point has also been made by Marsden Jacobs in its assessment of Telstra's Undertakings for the CCC.

In summary, the ACCC considers that because Telstra's proposed packaged approach to PSTN OTA and LCS charges does not reflect the underlying costs of providing the services, this will distort access seekers build – buy decisions, leading to inefficient bypass of Telstra's IEN[59]. The ACCC, therefore, is not satisfied that the proposed packaged approach is in the LTIE.

C.1.2. Telstra's legitimate business interests

Consideration of an access provider's legitimate business interests encapsulates an assessment of the access provider's ability to recover costs from its investments and achieve a normal risk-adjusted rate of return. Hence, the ACCC has had regard to the effect of the packaged approach to the establishment of PSTN OTA and LCS charges on Telstra's ability to recover its investment costs from the IEN, and its ability to achieve a normal risk-adjusted rate of return on its investment.

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[58] TelstraClear, Submission to a Draft Determination on the Application for Pricing Review for Designated Interconnection Services, 26 May 2005.

[59] This possibility is further reinforced by the fact that the ACCC is not satisfied that the overall level of costs, as derived from the PIE II model, is reasonable.

Telstra argues that the packaged approach is in its legitimate business interests, as it allows full cost recovery of Telstra's efficient costs. The ACCC has already indicated that it views Telstra's assessment of the total IEN cost pool as not representing the efficient TSLRIC costs and a normal return on IEN assets. Further, the ACCC's analysis, as set out above, suggests that based on traffic volumes presented in the RAF, Telstra will generate additional incremental revenue as a result of the proposed charges of **[c-in-c]** million in 2006-07. This seems to be a further indication that Telstra would be over-recovering the costs of providing PSTN OTA and LCS services when considered in combination if the undertakings were in force.

In summary, the ACCC considers that Telstra's proposed packaged approach to the establishment of PSTN OTA and LCS charges is not in its *legitimate* business interests, since it would allow it to earn an above normal return.

C.1.3. Interests of persons who have rights to use the declared service

In most cases, access seekers' interests are best served by prices that reflect costs, since such prices provide efficient signals in terms of their decisions whether to compete via reselling Telstra's wholesale products, using their own infrastructure and Telstra's IEN network or investing in their own alternative networks (such as wireless, cable or fibre).

Telstra claims that full cost recovery through the packaged approach is in the interests of access seekers as it rewards efficient investment in the continued efficient and reliable operation of the network and gives Telstra incentives to efficiently maintain the network[60].

Persons who have the right to use the declared PSTN O/T service will generally use that service as an input to supply of downstream retail services such as STD, IDD and fixed-to-mobile calls. The Commission believes that pricing of PSTN O/T service should be such that it does not artificially protect a service provider, who is also active in providing downstream retail services, from being displaced by a more efficient access seeker.

An access seeker who is at least as efficient as Telstra in providing downstream services to end-users should be able to compete with Telstra on equal terms. This is achieved by setting access prices at a level that Telstra would supply the access service to itself, should it be required to do so explicitly. The ACCC believes that this price should be set based on TSLRIC+. Any upward movement away from the TSLRIC+ price is, strictly speaking, not in the interest of persons using the declared service.

As already indicated, the PSTN OTA service is not priced at its TSLRIC+ level and thus the ACCC considers that the packaged approach is not in the interests of persons who have rights to use the PSTN OTA service separately to the LCS.

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[60] Telstra submission 22 March 2006, page 9.

C.1.4. Direct costs of providing access

Direct costs are those costs necessarily incurred (caused by) the provision of access.

One of Telstra's arguments in support of the packaged approach is that it is necessary from a cost recovery perspective. In its submission supporting the Undertakings Telstra states[61]:

> [the existing approach to charging] fails to take into account any restrictions on Telstra's ability to recover costs from individual services. Most notably in the past, the equal allocation of costs to traffic has resulted in more costs being allocated to local calls than could possibly be recovered under the retail price controls.

The ACCC notes that Telstra has long argued for an unrecovered local call shortfall contribution to be added to other calls. For example in a submission in response to the ACCC's discussion paper on future access pricing approaches for PSTN OTA, ULLS and LCS, Telstra stated:

> ...Telstra submits that the price of LCS should preferably set on the basis of TSLRIC plus an allocation of common and indirect costs. If however the LCS price is to be limited in some way because of the existence of the price cap on the supply of local calls by Telstra to its retail customers, then the Commission musts ensure that the efficient costs of providing LCS and retail local calls, which cannot be recovered, are recovered through the provision of other PSTN services. (p. 5)

The ACCC has in the past rejected this view[62]. Further, the ACCC notes that costs that may or may not be able to be recovered by Telstra as a result of exogenous factors, such as retail price controls, are not caused by the provision of access. That is, in the absence of access seekers utilising PSTN OTA and LCS services, Telstra would still be constrained by retail price controls from recovering these costs directly from the services in question. However, the provision of access under these circumstances in no way alters Telstra's inability to recover these costs directly from the declared services, and therefore it is difficult to conclude that these costs represent direct costs of providing access.

In addition, the Commission is not satisfied that the packaged approach is reasonable under the direct costs criterion because it causes access seekers to bear more than the efficient costs of provision of the PSTN OTA service. The appropriate prices should be consistent with the prices that would occur if the access provider faced the threat of being displaced as a supplier.[63] If an alternative IEN existed, Telstra would not be able to charge prices that are substantially above cost for the PSTN OTA, as it is proposing in its Undertakings. The ACCC, therefore, is not satisfied that the packaged approach

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[61] Telstra submission 22 March 2006, page 28

[62] See for example, ACCC, Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services, October 2003; ACCC, The Need for an ADC for PSTN Access Service Pricing, February 2003.

[63] ACCC, *Access Pricing Principles – Telecommunications*, July 1997, p. 14.

to PSTN OTA and LCS pricing is reasonable under the direct costs criterion of s. 152AH(1)(d).

C.1.5. Operational and technical requirements necessary for safe and reliable operation

Telstra has argued that full cost recovery through the packaged approach allows efficient investment in the continued efficient and reliable operation of the network and gives Telstra incentives to efficiently maintain the network[64].

The ACCC considers that PSTN OTA and LCS charges, which reflect the efficient network costs of providing each of the services, would provide sufficient revenue to fund the operational and investment requirements necessary for the safe and reliable operation of the IEN.

As already indicated, the ACCC considers that the efficient costs of the IEN are significantly below those claimed by Telstra. The ACCC has also expressed the view in its recent review of the LCS declaration, that appropriately defined TSLRIC+ costs of providing local calls and line rental are likely to have declined significantly in recent periods, and may now be below access prices set under the current RMRC pricing approach. The ACCC also concluded that while Telstra's estimates of the underlying costs of providing the LCS appeared to place the TSLRIC+ costs at slightly above access prices, these estimates would not appear to be robust.

The preceding discussion suggests that individual access prices for the PSTN OTA and LCS set at TSLRIC and RMRC respectively would allow Telstra to recover its efficient network costs, and this would ensure that Telstra can invest in infrastructure that ensures the safe and reliable operation of the network. Therefore, the Commission concludes that the packaged approach to the establishment of PSTN OTA and LCS charges is not required for the safe and reliable operation of telecommunications services and the telecommunications network.

C.2. ACCC's view

Based on its consideration of the matters set out in s. 152AH of the TPA, the ACCC is not satisfied that the packaged approach to the establishment of PSTN OTA and LCS charges proposed by Telstra is, on balance, reasonable. The ACCC's draft view is to reject the packaged approach proposed in Telstra's undertakings on the grounds that it:

- would not promote the LTIE, as it would not promote competition, nor encourage the economically efficient use of, and investment in infrastructure;

[64] Telstra submission 22 March 2006, page 9.

- would result in Telstra recovering more than necessary to promote its legitimate business interests;
- would harm the interests of persons who have rights to use the PSTN OTA service;
- would exceed the direct costs of providing the PSTN OTA service;
- is not required for the safe and reliable operation of telecommunications services and the telecommunications network

Appendix D. WACC

D.1. Introduction

The ACCC uses a post-tax vanilla WACC in its assessment of Telstra's proposed PSTN OTA and LCS undertakings. The WACC is employed primarily as an input into Telstra's PIE II model to estimate the annualised network costs of providing a range of services, including the PSTN OTA and LCS.

For the purposes of these undertakings, Telstra has relied upon a series of WACC estimates recommended by Professor Robert Bowman. Bowman recommends two potential values for the WACC, which he refers to as the 'Low' and 'High' WACC. Similar to other aspects of Telstra's undertakings, it is not clear to what extent Telstra relies upon either of these WACCs when determining prices to apply under the undertakings.

The ACCC's analysis of Telstra's preferred WACCs is set out in sections D.4 and D.5 below, which deal with Telstra's preferred input parameters and the arguments presented regarding asymmetric social outcomes respectively.

D.2. Telstra's supporting submission

Telstra commissioned Professor Bowman to estimate a series of WACCs for PSTN OTA and LCS network costs, including WACCs adjusted upward by one standard deviation to take account of claimed asymmetry in social outcomes.

Bowman (and therefore Telstra) argue that WACC components are estimated with error, and therefore WACC is estimated with error. Further, Telstra argues that the consequences of estimation error in the WACC are asymmetric and that long-term social costs of under estimating the cost of capital are higher than the long-term social costs of over estimation.

In choosing a WACC that balances these claimed asymmetric costs, Bowman proposes that a WACC should be calculated by increasing the WACC parameter point estimates by one standard deviation. To do so, Bowman has determined what he believes to be appropriate WACC parameter point estimates and estimated on a preliminary basis what he considers to be the standard deviations in relation to specific WACC parameters. He then adds the two to arrive at WACC parameters one standard deviation higher than his own point estimate. These are combined to determine the appropriate post-tax nominal (vanilla) WACCs.

D.3. Submissions in the ULLS matter

The analysis undertaken by Professor Bowman as part of the PSTN OTA and LCS undertakings is identical to that undertaken by Professor Bowman in respect to

Telstra's ULLS undertakings. Consequently, the ACCC considers that material presented as part of the ULLS undertakings assessment is directly relevant to the assessment of the present undertakings.

In the ULLS undertaking assessment process, AAPT submitted a report by Associate Professor Neville Hathaway that reviews the WACCs estimated by Bowman on behalf of Telstra.[65]

Optus also provided a report by Jason Ockerby that reviewed Bowman's theory and method.

In the ULLS undertaking assessment Telstra provided the ACCC with a further three reports by Bowman. The three submissions provided Bowman's response to the Hathaway paper, the Ockerby paper and the ACCC's draft decision on the ULLS undertakings assessment respectively.

D.4. Inputs

In this appendix WACC input parameters which are in contention in these undertakings are examined in further detail. Input parameters which are not the subject of contention are noted, but not examined in detail.

D.4.1. Gearing Ratio

$$\frac{D}{V} \ \& \ \frac{E}{V}$$

Gearing ratios measure the proportion of an entity's finance that is raised through either debt or equity. There are several variations as to how the debt and equity values can be measured.

Telstra's position

Bowman supports using the optimal gearing ratio for a company but considers that determining this optimal ratio is problematic.[66] He therefore considers that it is most appropriate to use Telstra's target debt-equity ratio of the company rather than any regulator-determined value:

> Although regulators may have views about capital structure for a firm, they do not have to face the economic consequences of their views. It seems presumptuous for a regulator

[65] Hathaway, N., *Telstra's WACCs for Network ULLS and the ULLS and SSS Businesses—Review of Reports by Prof. Bowman*, Capital Research, 15 March 2006.

[66] Bowman, *Response to ACCC's draft decision on Telstra's ULLS network undertaking*, August 2006, p. 8.

> to set policy based on an assumption that the management of a company does not know how to make capital structure decisions that are in the best interests of the company.[67]

Consequently, Bowman proposes a financial leverage of 20 percent for the CAN on the basis of Telstra's market-measured target debt ratio of **[c-i-c]** per cent.

Bowman also states that he considers that book values are not acceptable measures of gearing.[68]

Submissions of other interested parties

Hathaway accepts Bowman's argument for the network gearing. He states that he believes Bowman's gearing ratios are reasonable but that Bowman does not present reasonable justification for his proposed values. However, he also considers Bowman's claimed gearing of 16 percent for Telstra is probably too low.[69]

The ACCC's View

Since the ACCC's 2000 assessment of Telstra's second PSTN undertakings, the ACCC has held the view that a debt ratio (D/V) of 40 per cent and an equity ratio (E/V) of 60 per cent are reasonable.[70] In determining this ratio, comparisons were drawn against observed gearing estimates of competitors and other regulatory decisions. The ACCC concluded that a gearing ratio should be estimated by reference to the Telstra-wide historic book value gearing ratio (43.1 percent) at the time of Telstra's privatisation is appropriate because:[71]

- at privatisation, Telstra most closely resembled a pure PSTN provider
- a gearing ratio that was outside the range of 25 percent and 60 percent could not be an appropriate benchmark for a regulated company.

The ACCC holds the view that the WACC is not highly sensitive to the debt and equity ratios. Bowman holds a similar view:

> …the WACC becomes flat over a wide range of leverage. Where the WACC curve is flat, there is little advantage to changes in the level of debt.[72]

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67 Bowman, March 2006, Appendix C.

68 Bowman, *Response to ACCC's draft decision on Telstra's ULLS network undertaking*, August 2006, p. 8.

69 Hathaway, op. cit., p. 19.

70 ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000, p. 74-77

71 ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000, p. 77.

72 Bowman, March 2006, Appendix C.

Comparisons against several overseas regulatory decisions indicate that Bowman's proposed debt ratio is on the lower end of the range. A recent Ovum report demonstrates that the preferred debt ratios of European regulatory bodies are in the range of 25 to 50 percent:

Figure 1. – European fixed line regulators' appropriate debt ratios[73]

Source	Estimate
Denmark	35-50%
France	40%
Italy	25-40%
UK	30-35%
Germany	39.7%
Average of fixed line regulators	37.4%

Bowman says the optimal leverage ratio is the correct measure to use in the WACC calculation but due to asserted difficulties in obtaining this number chooses to use the target debt ratio as a proxy. Bowman also says:

> I also see no basis for predicting that the target debt ratio will change going forward.[74]

The ACCC considers that Telstra's target debt ratio may change with any future change in the level of government ownership. It also considers that this target debt ratio is generally low compared with other Australian infrastructure companies and international fixed line telecommunication companies. It may not be reasonable to assume that the optimal leverage ratio for Telstra will continue to be this low. Bowman has provided no submissions in response to this consideration.

The ACCC does not consider that it should depart from its previous position on the gearing ratio. The ACCC continues to consider that 40 percent is the appropriate gearing ratio when calculating a WACC for services based on the PSTN network, based on both its past reasoning and the Ovum information. However, the ACCC in any case notes that the WACC is not highly sensitive to this assumption.

D.4.2. Return on Debt

The cost of debt is calculated as the risk-free rate-of-return plus a debt premium. The debt premium is added to cover investors for the specific debt risk of the firm in question. As with the risk-free rate-of-return, the cost of debt should reflect the current cost of debt rather than a historical rate.

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[73] Bieler, D. and Nicoletti, S., *Regulation of Cost of Capital in the European Fixed-line Telecoms Sector*, Ovum, 22 February 2006.

[74] Bowman, March 2006.

Telstra's position

Bowman proposes the inclusion of debt issuance costs to the return on debt, such that:

$$R_d = R_f + DP + DIC$$

Where: R_d is the cost of debt

R_f is the risk-free rate

DP is the debt risk premium and

DIC is the issuance cost of debt.

The specific inputs, risk free rate, debt risk premium and debt issuance costs, are each separately detailed in their respective subsections.

D.4.3. Risk-free rate

Telstra's position

Bowman recommends using a 10-year government bond rate without averaging when estimating the cost of equity capital for the PSTN OTA and LCS.

Submissions of other interested parties

Hathaway considers the risk free rate of 5.11 per cent proposed by Bowman to be acceptable.

The ACCC's view

The ACCC agrees with Telstra's proposal to use a 10 year duration in calculating the risk-free rate in the WACC for the purposes of the assessment of Telstra's Undertakings.

Since Telstra's 1999 second PSTN undertaking, the ACCC has used rates for the 10 days leading up to the start of the regulatory periods. This is to address any potential concerns regarding day-to-day market volatility. Bowman states that, in his opinion, there is sufficient liquidity in the market to obviate the need for any such averaging.[75] However, Bowman advances no evidence to support this statement in his initial report. In his response to the ACCC's draft decision on the ULLS undertaking, Bowman again declines to provide any evidence, arguing that his position is standard. The ACCC considers that in the absence of supporting evidence Bowman's position should not be accepted.

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[75] Bowman, March 2006.

Further, the ACCC has concerns regarding the choice of dates by Bowman for calculating the risk-free rate. It is not appropriate to seek to apply TSLRIC notional modelling assumptions in the manner Bowman has with regards to the 'overnight' rebuild assumption. Issues regarding Bowman's partial application of bottom-up TSLRIC modelling assumptions to the CAPM are discussed in further detail in section D.4.9 below.

The ACCC's draft decision sought further explanation from Bowman about why, given that the undertakings commence on 1 January 2006, he had used a rate for 30 June 2005 to estimate a risk free rate for the period from 1 January 2006 to 30 June 2006. Bowman replied that he used the rate at 30 June 2005 because a WACC was needed for the entire 2005-06 financial year.[76] The ACCC considers that Bowman's need to use a 30 June 2005 figure may therefore reflect limitations in Telstra's PIE II model. The ACCC considers that it would be more typical to use the most up-to-date information that was available at the date the undertaking was submitted.

Furthermore, Bowman has calculated the 'current' rate to be applied to future periods from the rate applicable on 31 October 2005. Given the availability of far more 'current' information to Bowman and Telstra prior to the submission of the undertakings, it is not clear why they have sought to rely upon these rates in the WACC for these undertakings given that Bowman has clearly stated that:

> In my opinion, the current interest rate conditions support the view that the best estimate of future interest rates for the fiscal years 2006-07 and 2007-08 is the current interest rate.[77]

The ACCC notes that the rate at 31 October 2005 was 5.48 percent, and that the period around late October and early November represents the peak of the yield on 10 year government bonds for the second half of 2005. Bowman, in responding to the ACCC's concerns in the ULLS matter, did not provide a response to the ACCC's concerns on the use of the 31 October 2005 rate. Again, the ACCC would have expected that Telstra would use the most up-to-date information available when it submitted the PSTN OTA and LCS undertakings.

The ACCC considers that it is not satisfied that it is appropriate to accept Telstra's proposed estimates of the risk-free rate as inputs into the WACC for the purposes of these undertakings, and retains particular concerns about the risk-free rates calculated for 2006-07 and 2007-08. The ACCC would have expected that the up-to-date rates applicable at the time that Telstra submitted the undertaking would have been more relevantly used by Telstra to calculate the risk-free rate for the purposes of assessing the reasonableness of the undertaking as submitted.

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[76] Bowman, *Response to ACCC's draft decision on Telstra's ULLS network undertaking*, August 2006, p. 9.

[77] *Ibid.*, p. 17.

D.4.4. Debt Premium

This value typically represents the value added to the risk free rate to account for debt specific risk in estimating the return on debt.

Telstra's position

Bowman uses the difference between Telstra's 10 year debt and the government's 10 year debt as at 30 June 2005 to calculate the debt risk premium to arrive at a value of 1.06 per cent. He then proposes an increase to 1.15 per cent for the second and third periods.

Submissions of other interested parties

Hathaway suggests that the debt risk premiums of 1.06 per cent and 1.15 per cent proposed for the network are inconsistent with one of Professor Bowman's previous comments in the target gearing analysis that the network is less risky than Telstra as a whole. He therefore argues that the debt risk premium is too high and that the sensitivity premium added to the network debt premium exacerbates the problem.

The ACCC's view

A firm's debt premium will vary with its credit rating and its level of gearing. Generally, given Telstra has had both an excellent credit rating and a very low gearing ratio, a small debt premium has been appropriate. Theoretically, the debt risk premium is estimated for asset-specific costs rather than Telstra as a whole. In practice, the ACCC has believed that the debt premium observed in the market for Telstra bonds gave the best measure of the premium required by investors, as it would be based on their assessment of Telstra's credit rating. In recent years, a debt risk premium of 0.8 per cent has been preferred.

Bowman's projected debt premiums are unverifiable future values. The ACCC notes that his predicted increases in the debt premium are in broad agreement with trends observed in Bloomberg market data, where Telstra's debt premiums subsequently did increase. However the debt premiums on a benchmark A-rated bond did not. The ACCC also notes that Bowman's value of 1.15 per cent debt premium for Telstra at 31 October 2005, on which he bases his projected debt premium, does not appear to accord with the figure obtained from Bloomberg data by the ACCC.

At a more theoretical level, the inconsistency noted by Hathaway appears relevant. It is unlikely that Telstra's positions on both the relative levels of gearing and on the relative levels of debt risk premium for the network versus Telstra as a whole can be held to be consistent. Although the debt premiums for Telstra as a whole seem to be valid, there is disagreement between Hathaway and Bowman on the debt premiums attributable to the network. The ACCC considers that it might be expected that the Telstra network would be less risky than Telstra as a whole, given that Telstra as a whole could be expected to be subject to more competitive pressure than would the network assets.

The ACCC considers that Bowman's debt premiums for Telstra as a whole would appear to be appropriate at the time used by him in his calculations. However it

considers that Telstra should have used more up-to-date information available at the time that the undertaking was submitted. The ACCC also considers that benchmark information is generally appropriate in that it gives regulated companies appropriate incentives to seek out more efficient financing arrangements over time.

The ACCC also retains concerns that Telstra's forecast debt risk premiums cannot be considered appropriate for the underlying network assets associated with Telstra's IEN over which the PSTN OTA and LCS is provided. However it notes again the practical difficulties with obtaining an appropriate measure of asset-specific debt premiums.

D.4.5. Debt Issuance Cost

The debt issuance costs are costs to the firm for raising debt, such as underwriting, management fees, accounting fees and legal fees.

Telstra's position

The basis for the inclusion of debt issuance costs to the cost of debt is that the ACCC has accepted, in some instances, the inclusion of such a cost in the context of gas transmission. Bowman has estimated the issuance cost of debt to be 0.2 per cent for the regulatory period. This is based on his assumption that debt offerings would be in the $1 billion range. An approximation is calculated through a weighted average of publicly issued debt costs and private placements costs. The sources for these percentage costs are Lee, Lochhead, Ritter and Zhao (1996)[78], Brealey and Myers (2003)[79] and Hays, Joehnk and Melicher (1979)[80]. Bowman proposes a conversion of the total issuance cost to an annualised cost of capital rate for a ten-year maturity:

> The ACCC recently allowed debt issuance costs of the order of 10.5 to 12.5 basis points to be recovered in electricity and gas decisions. Furthermore, the Australian Competition Tribunal allowed 25 basis points in its determination on the GasNet Access Arrangement, increasing the allowance in the earlier ACCC decision. As the principle has now been accepted, the issue is to estimate the appropriate amount for the costs in this particular context.[81]

Submissions of other interested parties

Hathaway asserts that, because debt issuance costs are typically episodic at best, they should be included, if at all, in the appropriate cash flow. Further, he contends that the only forward looking costs to be recognised are rollover or re-issuance costs of debt. In particular, he concludes that:

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78 Lee, I., Lochhead, S., Ritter, J. and Zhao, O., *The Costs of Raising Capital*, Journal of Financial Research, Spring 1996., pp. 59-74, table 2.

79 Brealey, R. and Myers, S., *Principles of Corporate Finance* (7th ed), McGraw-Hill/Irwin, Boston, 2003, p. 714.

80 Hays, P., Johnk, M. and Melincher, M., *Determinants of Risk Premiums in the Public and Private Bond Market*, Journal of Financial Research, Fall 1979, pp. 143-152.

81 Bowman, March 2006.

> The appropriate cost of capital is an opportunity cost (as described above in section E) so it does not have to include all the historical or sunk costs of raising a new tranche of debt. It would be quite inappropriate for the ACCC to recompense a regulated business like Telstra for costs it would no longer have to incur.[82]

Hathaway's additional comments are that if the debt issuance cost is included, the value of the proposed 0.2 per cent rate is acceptable. However, he believes that the range is too high (0.15 per cent) and he personally estimates the cost at 0.1 per cent with a 0.05 per cent range.

The ACCC's view

The ACCC has also previously accepted the inclusion of debt issuance costs in the return on debt in a situation where these costs were not able to be placed in the cash flows:

> Debt-issuance costs have previously been accounted by the Commission within its n/e/r/a model in terms of its TSLRIC estimates. There was no need, therefore, to account for these in the WACC. However, Telstra has stated that the PIE II model does not account for these costs, which means that for the purposes of setting indicative prices, the Commission will allow debt-issuance costs to be recovered through the WACC.[83]

Given that Telstra's PIE II model cannot account for debt costs in the model's cash flows, the ACCC considers that it would be appropriate debt issuance costs to be recovered in the WACC. However it considers that a future model might better recover those costs within cash flows.

The Allen Consulting Group (ACG) has recommended the inclusion of debt issuance costs in a consultancy report prepared on behalf of the ACCC in the context of decisions made regarding gas and electricity companies:

> Given that transaction costs associated with debt would continue to be incurred for the whole value of the investment, we consider that the most appropriate means of making this allowance is through either an addition to the estimated weighted average cost of capital, or as a direct allowance to operating expenses. [84]

The ACCC considers that the use of ACG's benchmark costs is appropriate in the context of recovering costs of refinancing Telstra's debt relating to a regulated asset, the CAN or PSTN.

Bowman has referenced a past ACT decision on GasNet which allowed 25 basis points for the debt issuance costs. Bowman has also referenced recent electricity and gas decisions which allowed debt issuance costs of 10.5 to 12.5 basis points. The ACCC considers that the appropriate debt issuance costs depend on the particular

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82 Hathaway, op. cit., p. 21.

83 ACCC, *Final Determinations for Model Price Terms and Conditions for the PSTN, ULLS and LCS Services*, October 2003, p. 39.

84 The Allen Consulting Group, *Debt and Equity Raising Transaction Costs – Report to the Australian Competition and Consumer Commission*, December 2004, p. xiii.

facts of each case and that the benchmark costs based on the updated ACG results provide a better measure of appropriate costs than simple comparisons of raw numbers.

In summary, Telstra's proposed 20 basis points is much higher than even ACG's highest benchmarked rate of 10.4 basis points. The ACCC noted in its draft decision on the ULLS undertakings that this might be because Bowman estimated debt issuance rather than refinancing costs. Bowman stated in response that he considered all of Telstra's debt issuing would be high cost.[85] The ACCC considers that it is better to use appropriate verifiable benchmark data than rely on subjective impressions such as Bowman's.

The ACCC's position is to reject Telstra's proposed debt issuance costs as being inappropriate.

D.4.6. Return on Equity

A widely accepted method of determining an appropriate return on equity is the use of the capital asset pricing model (CAPM). The CAPM states that:

$$R_e = R_f + \beta e\left(R_m - R_f\right)$$

Telstra has proposed that the return on equity also include equity issuance costs. Under this proposal the return on equity can be expressed as:

$$R_e = R_f + \beta e\left(R_m - R_f\right) + EIC$$

Where: r_f is the risk-free rate of return

β is the firm's Beta coefficient

r_m is the required equity market return

(r_m - r_f) represents the market risk premium (the premium required by equity investors to compensate them for bearing systematic risk)

EIC is the equity issuance costs.

D.4.7. Equity beta (βe) and Asset beta (βa)

$$\beta_e = \beta_a + \left(\beta_a - \beta_d\right)\{1 - \left[\frac{R_d}{1+R_d}\right]\left(1-\gamma\right)T_e\} \cdot D/E$$

Where: βe is the equity beta

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[85] Bowman, *Response to ACCC's draft decision on Telstra's ULLS network undertaking*, August 2006, p. 11.

βa is the asset beta

βd is the debt beta (defined and valued below at zero)

γ is the imputation factor

Te is the effective tax rate

r_d is the return on debt and

D/E is the debt to equity ratio.

The method favoured by the ACCC in determining the WACC is de-levering and levering using the Monkhouse formula relating asset beta and equity beta. In the past, the ACCC has considered that direct estimation of the equity beta through Telstra's economic returns could not be done. This was because Telstra had only been listed for a short period of time[86]. The ACCC considers that circumstances have now changed, enabling direct estimation and allowing for viable comparisons between estimates of beta.

Telstra's position

Bowman takes three approaches in determining the equity and asset beta for Telstra's PSTN OTA and LCS. First, Bowman performs a direct estimation using one of many possible measurement intervals of Telstra's historical data and derives a value of 0.8 for Telstra's equity beta. Second, Bowman applies first principles analysis to a selection of overseas studies on income elasticities and results in a range of 0.4 to 0.9 for the asset beta. Third, Bowman obtains estimates of the equity betas of four US RBOCs and five comparable international companies, converts these to asset betas and then derives a weighted average of the asset betas of 0.8.

In summary, Bowman proposes an asset beta value of at least 0.7, with a standard deviation of at least 0.3. After conversion to an equity beta, Bowman's final recommendation for a forward-looking equity beta is 0.873.[87]

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[86] ACCC, *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access services*, July 2000, p. 89.

[87] Bowman, March 2006.

Figure 2. –Bowman's estimates for Equity and Asset Beta

Bowman's estimates of Betas under alternative approaches	Range/ std dev	Estimate
Direct Estimation approach		0.74 asset
(for Telstra as a whole)		0.8 equity
First Principles approach	0.4-0.9 asset	
Benchmark approach		0.8 asset
Bowman's final recommendation for Betas		
Asset Beta	Standard deviation of 0.3	0.7
Equity Beta		0.8 (2005-06)
		0.873 (2006-08)

Submissions of other interested parties

Hathaway estimates an equity beta of 0.53 through the direct estimation approach.[88] In contrast, Bowman estimates 0.8. Hathaway finds Bowman's use of a Scholes-Williams estimate less than compelling and believes that the choice of 0.8 for equity beta is at the upper end of a range. Hathaway also considers that another problem with Bowman's analysis is that, since Telstra has recently adopted a large dividend payment strategy, the share price provides a misleading view of the relative performance of the stock to the market.

Hathaway estimates an asset beta for the network, using an infrastructure index risk against the all ordinaries market risk, to be 0.47, compared to Telstra's proposed asset beta of 0.7.[89]

The ACCC's view

The overall WACC is highly sensitive to equity and asset beta values. The use of three different methods for estimating beta by Bowman has the tendency of exaggerating the size of the range of reasonable point estimates for beta.

Direct estimation method

There are some potential difficulties with using a direct estimation method to calculate equity betas. These might include:

- Low free float of share capital affecting the volatility of returns.

[88] Hathaway, op. cit., p. 37.

[89] *Ibid.*

- Lack of a suitable reference market.
- The selection of inappropriate or unrepresentative timeframes or data frequency for analysis.

However as noted above, the ACCC considers that there is some scope to conduct a direct estimation of the equity beta in order to assess the validity of Bowman's submission on this method.

Accordingly, the ACCC has conducted its own direct estimation of the equity beta from unadjusted data obtained from Bloomberg. Bloomberg provides an independent, internationally recognised data source. The ACCC has used Bloomberg's data to provide a comparison to the numbers produced by Bowman. The results obtained by the ACCC exhibited large variation with the size of the measurement interval and the frequency of data contributing to a wide range of plausible estimates for beta:

Figure 3. – Direct Estimation of Telstra's Equity Beta[90]

Telstra equity beta at 30 June 2005		**Telstra equity beta at 23 December 2005**		**Telstra equity beta (at 7 August 2006)**	
Time interval & frequency	**Beta**	**Time interval & frequency**	**Beta**	**Time interval & frequency**	**Beta**
24 month	0.50	24 month	-0.27	24 month	0.06
60 week	0.77	60 week	0.48	60 week	-0.08
104 week	0.50	104 week	0.38	104 week	0.21
4 year weekly	0.43	4 year weekly	0.45	4 year weekly	0.24
5 year weekly	0.46	5 year weekly	0.46	5 year weekly	0.25
5 year monthly	0.23	5 year monthly	0.11	5 year monthly	0.08
18 months–daily	0.64	18 months–daily	0.68	18 months–daily	0.48

Source: Bloomberg.

Figure 3 demonstrates that the beta estimate is very sensitive to the date of the estimation, the choice of time interval and frequency of data points. This uncertainty was also noted by Bowman in his initial report.[91] However, all results obtained by the

[90] *Source*: Bloomberg, viewed on 7 August 2006

[91] Bowman, March 2006.

ACCC are less than Bowman's direct estimate of 0.80 for the equity beta. The ACCC also notes that there is some suggestion that Telstra's equity beta is declining with estimates in August 2006 significantly lower than those of 30 June 2005 and at 23 December 2005. The ACCC considers that the 18 month daily estimate is likely to be the most appropriate indicator of Telstra's equity beta. This figure suggests a value of 0.68 for the equity beta, based on data available to Telstra at the time of submitting the undertaking.

Given the results from the ACCC's own direct estimation analysis sourced from Bloomberg and the concerns identified by Hathaway on Bowman's direct estimation technique, the ACCC considers that it is not satisfied that Bowman's estimate is appropriate.

First principles analysis

Given the availability of alternative methods to estimate the asset beta, it is not clear why Bowman has proposed a first principles analysis. A first principles approach is not commonly used by regulators or finance practitioners. It is clear from Bowman's statement that this analysis is qualitative, and as such, lacks adequate quantifiable evidence in the matters examined and the outcomes reached relative to available alternatives. The ACCC does not consider that this technique is useful or relevant. The ACCC considers that the technique should therefore be excluded from the overall estimation procedure for the beta.

The ACCC notes that Bowman appears to have stepped away from the use of this approach in his response to the ACCC's draft decision on the ULLS undertakings. In that report, he does not advocate the use of first principle analysis to calculate a particular estimate. Instead, Bowman seems to only advocate its use as an input into the benchmark approach, stating that:[92]

> …I use the first principles analysis to inform our choices of comparable companies.

Benchmark Approach/Comparable Companies

The use of benchmark betas is prevalent among regulators and finance practitioners. It is unlikely that an assessment of equity beta would be considered complete if it did not include some comparison with comparable companies.

The use of benchmark companies to provide the primary starting point for beta estimation depends on the availability of suitable benchmark companies or assets. The closer the comparators are to the base asset the better the beta estimate. Most benchmark comparators will differ in some element such as asset nature, time period or relevant geographic market. The significance of the nature of the difference needs to be assessed.

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[92] Bowman, *Response to ACCC's draft decision on Telstra's ULLS network undertaking*, August 2006, p. 12.

The ACCC remains of the view that benchmarking is a useful approach for beta estimation. The ACCC consider that it remains appropriate to use the benchmarking approach it has adopted in previous proceedings to provide a tool in comparing betas proposed by different participants and to compare betas evaluated by different methods.

The Regional Bell Operating Companies (RBOCs) were identified as being close to having CAN/PSTN only services in the 1997-1998 PSTN undertaking. Today, the RBOCs are more integrated with services in long distance, mobile and data, etc. Previous RBOC beta estimates can still provide an appropriate comparator for the riskiness of the CAN/PSTN. However the ACCC considers that current estimates, as would appear to have been used by Bowman, are likely to represent a different asset mix and therefore are less likely to be appropriate to estimate the beta for the PSTN.

In the past, the ACCC has used international comparisons from UK and Canadian regulators as well as values taken from the US RBOCs presented to the ACCC by Telstra.[93] Since the 1997-98 PSTN undertaking, a range of 0.6 to 0.8 has been the ACCC's default value for the equity beta. Further, based on estimates from Telstra, OFTEL, IPART, PBSA and Ibbotson Associates, the ACCC considered a range of 0.4 to 0.8 to be appropriate for the asset beta.[94] Adjusting for a lower systematic risk relative to Telstra as a whole, the ACCC's position has since been an asset beta of 0.5.

To supplement the use of historical international benchmarks, the ACCC has obtained 2006 US unlevered adjusted asset beta values from Ibbotson for the transportation, communications, electric, gas and sanitary services sector. These values are 0.49 (median) and 0.70 (SIC composite).[95] The ACCC continues to consider that an adjustment for the lower systematic risk of the PSTN would be necessary and notes that the most recent data similarly suggests that an asset beta value of 0.5 would not be inappropriate.

ACCC's overall view

Bowman has used three estimation techniques to estimate Telstra's equity beta. The ACCC does not accept that a first principles analysis should be undertaken for beta estimation and notes that Bowman himself now only considers this as an input into a benchmarking approach. Direct estimation undertaken by the ACCC has yielded significantly contrasting results to those of Bowman, and thus it is not satisfied that Bowman's estimates are appropriate. The ACCC's own benchmarking analysis

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93 Telstra Corporation Limited, *Submission in support of the Undertaking for Domestic PSTN Originating and Terminating Access – Part A: Economic Submission*, 6 May 1998, p. 30.

94 ACCC, *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access services*, July 2000, p. 90.

95 Ibbotson, Transportation, Communications, Electric, Gas and Sanitary Services, Cost of Capital 2006 Yearbook, Data Through June 2006.

http://www.ibbotson.com/download/valuation/sample/SIC_4.pdf

further confirms that the ACCC should not be satisfied that Bowman's benchmarking method results are appropriate.

Accordingly, the ACCC considers, given the results of its own empirical direct estimation and benchmarking assessment, that it is not satisfied that Bowman's estimated asset and equity betas are appropriate. The ACCC considers that an asset beta of 0.5 would be an appropriate reflection of the systematic risk of the PSTN.

D.4.8. Market Risk Premium

Under the CAPM models, the return on equity required by investors must take account of the risk of investing in the market. That is, in order to encourage investors to invest in assets that carry risk, they must receive a return over and above that offered on risk-free assets. The extent of the difference between the rate investors could earn by investing generally in the market and that on a risk-free government bond is referred to as the market risk premium (MRP) or equity risk premium (ERP).

While the concept of the WACC and its application to determine regulated revenue streams is unambiguously forward looking, estimates of the future cost of equity are not readily available. In practice, therefore, applications of the CAPM rely on analysis of historical measures of the returns to equity to estimate the MRP. Whilst a historical measure may not always give the most appropriate forward-looking estimate, the past is often the best available indicator of the future. This is especially the case where MRPs are based on expectations of the future and historical measures can influence future expectations.

Telstra's position

Bowman takes two approaches in estimating the MRP; a historical approach and a benchmark approach. A selection of historical estimates of the Australian MRP is provided and then a mid-point of 7.0 per cent is chosen. Bowman asserts that the 6.0 per cent rate the ACCC prefers is inconsistent with historical data and that the ACCC has not presented a credible defence of such a view. This is accompanied with a caveat:

> This is not necessarily a deficiency as the MRP is to be a forward-looking estimate.[96]

However Bowman does not believe the historical approach is a valid basis for estimation of the MRP. After referencing his own previous work he makes an assumption that there is an absence of relevant historical data for the purposes of deriving the market risk premium for Australia[97]. The primary reason is that the Australian market was segmented from the world market prior to de-regulation from

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[96] Bowman, March 2006.

[97] Bowman, R.G., *Estimating the Market Risk Premium*, JASSA, issue 3, Spring 2001, pp 10-13.

1984 to 1992, unlike the current Australian market where "investment funds now move freely into and out of the country, the securities market and the currency".[98]

Bowman instead bases his final 7.0 per cent rate on the benchmark approach, where the results from a benchmark country are taken and then adjusted for country-specific factors. Bowman provides a number of sources, including academic literature and an online poll, to establish that his estimate of the long-horizon US MRP is 5.5 per cent. Then, to estimate the appropriate MRP in Australia, he considers differences between Australia and the USA in taxation, equity markets and indices. Bowman argues that there are no clear adjustments to be made from taxation or country risk differences between the United States and Australia, but that an adjustment is appropriate for differences in markets. In Bowman's opinion, the average beta of Australian firms listed on the S&P500 would have a range of 1.2-1.5:

> An incomplete list of factors that would support a higher MRP in Australia include being a smaller market, with less liquidity, smaller companies, less diversity and fewer risk management opportunities.[99]

The foundation for this methodology is cited as "one of the best-known books on valuation"[100]. Bowman considers that there should be an addition of 1.1 percent to 2.75 percent to the US MRP to account for market differences, giving rise to an Australian MRP range of 6.6 per cent to 8.25 per cent with a mid-point value of 7.43 percent. However, ultimately Bowman advocates a 7.0 percent rate.

Finally, Bowman graphs the ten year equity premium in Australia in an attempt to examine the reasonableness of the ACCC's position. Bowman suggests that there is increased volatility and uncertainty which he argues means that the MRP could not have recently fallen below the historical average.

Submissions of other interested parties

Hathaway disagrees with Bowman's calculation of the MRP. In particular, he believes the 1.8 per cent premium that is added to the US MRP is not justified. Hathaway argues that the evidence contradicts Bowman's analysis:[101]

> (1) The empirical Australian MRP has been declining in recent years towards a value of 5 per cent.
>
> (2) The long run real return on the Australian market is 7.6 per cent post World War 2 which implies an MRP of about 5 per cent.

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98 Bowman, March 2006.

99 Bowman, March 2006, Appendix B.

100 McKinsey and Company, Ltd, *Valuation: Measuring and Managing the Value of Companies*, 2000 (John Wiley & Sons: New York) University 3rd edition.

101 Hathaway, op. cit., p. 13.

> (3) The Australian market is systematically *less* risky than the world markets (beta = 0.7) and as it is only systematic risk that is captured in the CAPM then we could not assert that the Australian equities collectively would have higher betas but that they also have less portfolio risk. It is not consistent.

Hathaway further argues that: [102]

- Telstra's proposition that Australia has a higher risk than the US market because it is a higher risk resource based economy is incorrect. Hathaway provides an example depicting a decrease in representation of resource based companies from 1973 to 2005.

- Bowman states he uses the same approach applied to estimate the Market Risk Premium as UBS. Hathaway notes that, contrary to Bowman's positive adjustment, UBS makes a negative adjustment of 0.2 per cent to arrive at a MRP for Australia of 4.8 per cent, compared to the global risk premium of 5 per cent.

- There is a difference between institutional international and personal international investors when determining the marginal investor. Hathaway draws links to practitioners advising institutional investors as they are preferred as the marginal investor. A table of practitioner's valuation reports, including estimates of MRP, is provided and indicating Australian MRP values are in the range of 4.5 per cent to 6 per cent.

- Bowman has confused the difference between statistical uncertainty in historical estimates and uncertainty in the ex ante MRP. Hathaway demonstrates the problem from an implication of Bowman's assertion and proposes that the expectation of the MRP could not be as high as that implied by a standard deviation of 2.5 per cent. He notes:

  > We have no established theory on how the expected MRP is formed in the market place.
  >
  > Instead of using the volatility of the historical market data as the source of inherent uncertainty in the MRP we can examine the uncertainty in the ex ante estimates reported by practitioners.

Ockerby also raises some issues with Bowman's contentions. Ockerby's response covers the two approaches adopted by Bowman—the historic approach and the benchmark approach.

With respect to the historical approach, Ockerby questions the validity of Bowman's assertion that the MRP should be given as 7 percent. Ockerby raises the fact that there is substantial variation in measuring the MRP from historical data. Also, historical data fails to take into account permanent changes in domestic and international markets that would support the ACCC's choice of a lower bound estimate of the

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[102] Hathaway, op. cit., p. 18.

historic MRP. Ockerby argues that there is evidence that the forward-looking MRP for the USA is at 5.5 percent, below the reported historic average MRP of 7.6 percent. Ockerby suggests that this substantiates that permanent changes in markets have reduced the MRP over time.

The ACCC's view

In its decisions since the assessment of Telstra's 1997-98 PSTN undertaking,[103] including decisions in other processes and industries, the ACCC has determined that the appropriate MRP for determination of the regulatory WACC is 6 per cent. This view has been upheld through numerous processes where various submissions have been made to the ACCC arguing for either an increased or decreased MRP.[104]

Bowman has argued in favour of an MRP of 7 per cent. In contrast, Hathaway and Ockerby have critically evaluated the basis on which Bowman has formed this view, and identified numerous difficulties with his assumptions and methodologies. Hathaway presents a contrary set of analyses which would support an MRP of 5 per cent, and also points to a survey of broker MRP estimates in the range of 4.5 per cent-6.0 per cent.[105]

On the basis of the evidence presented to the ACCC in this undertaking assessment, it considers that it is not satisfied that an MRP of 7 per cent is an appropriate input for the purposes of estimating the WACC.

The ACCC also considers that Professor Bowman's views that the market is international, but that there should be an Australia-specific MRP, are not reconcilable. This is because investors in a international market should be able to diversify away any Australia-specific risk. The ACCC considers that:

- If it is appropriate to use an Australia-specific WACC, then the WACC should be estimated using historical estimates of the MRP, adjusted for trends in the historic Australian data. Estimation of the MRP using this approach results in an estimated MRP of 6 percent.

- If there is an international market, and the MRP is to be estimated based on more readily available USA data, then the USA MRP should not be adjusted for Australia-specific factors, as investors will diversify away any Australia-specific risk. Based on Bowman's figures, the resulting MRP should be 5.5 percent.

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[103] ACCC, *Assessment of Telstra's Undertaking for PSTN Originating and Terminating Access, Cost of Capital (Revised)*, June 1999, p. 18

[104] The ACCC examined the MRP in depth and concluded that the appropriate Australian MRP was 6 percent in its Statement of Regulatory Principles: ACCC, *Statement of principles for the regulation of electricity transmission revenues—background paper*, December 2004, pp. 98-101.

[105] *Ibid.*, p. 17.

The ACCC regards this adjusted benchmarking approach adds another uncertain variable to the MRP calculation, and demonstrates that the USA data is not directly applicable to Australia, which both increase the scope for regulatory error.

The ACCC considers that it is not satisfied that an MRP of 7 percent is an appropriate input into the WACC. The ACCC considers that the MRP for Australia is 6 percent.

D.4.9. Tax Rate

The ACCC has chosen to adopt a post-tax nominal WACC ('vanilla WACC') for the purposes of this undertaking assessment. Under this approach, tax payments will be treated as an on-going cost of business and will be passed through to Telstra on a cash flows basis.

As a result of this, the WACC does not need to be as high to cover for taxation payments, as investors will receive enough revenue to cover taxation payments in their cash flows. The WACC will, however, still need to be adjusted for taxation as the rate-of-return on debt is usually expressed in a pre-tax form, and the rate-of-return of equity is usually expressed in a form which does not account for the impact of imputation credits.

In this form of the WACC, the tax rate will only appear in the levering of the asset beta or the de-levering of the equity beta. However, the major consideration between an effective or statutory tax rate is dependent upon the ability of access provider to utilise accelerated depreciation. This allows a firm to claim higher tax deductions in the early years of an asset's life. Allowing for the time value of money, this can mean that the effective rate of taxation is lower than the statutory rate.

Telstra's position

In weighing up the two general approaches to the tax rate—the corporate statutory rate or the effective tax rate—Bowman opts for the statutory rate partially due to changes in tax law and also because under TSLRIC assumptions, all assets are put in place at the beginning of the fiscal year being estimated. This implies that no accelerated depreciation is possible. In his opinion, it is reasonable to assume that the effective tax rate would approximately equal the statutory tax rate for the PSTN OTA and LCS.

Submissions of other interested parties

Hathaway believes the statutory corporate tax rate of 30 per cent to be appropriate but does not provide any analysis on the issue.

The ACCC's view

The explanation for the ACCC's historical application of an effective tax rate can be found in the 2000 PSTN undertaking report, specifically in appendices 3, 4 and 6.[106] An effective tax rate of 20 per cent has been preferred by the ACCC since the 2000 final decision.

Most of Telstra's assets were in place before the Ralph reforms and were able to take advantage of accelerated depreciation:

> Depending on the asset life and tilt factor for an asset, the estimated effective tax rate can range from anywhere between 9.7 and 26.5 per cent. For the vast majority of estimates, however, the effective tax rate lies between 13 and 26 per cent.[107]

It was noted at the time that modifications to the model may be required in the future:

> In subsequent assessments, an increasing proportion of the assets will indeed be ineligible for accelerated depreciation provisions, and these will have to be treated appropriately when making revenue assessments. This may require a modification to the cost model.[108]

Bowman has not made an attempt to measure the effective tax rate and states that it is in his opinion reasonable to assume that the effective tax rate approaches the statutory rate. The ACCC considers that Bowman's reliance upon Telstra's preferred modelling approach to determine forward-looking economic costs is not a suitable defence for his position. The determination of TSLRIC can be accomplished in many different ways, primarily through either a bottom-up engineering/economic cost model or top-down model by adjusting current cost accounts. The fact that Telstra has chosen a bottom-up method does not automatically imply that the modelling assumptions used, in an abstraction from reality, can be exported to calculations such as these. The difficulty with Bowman's statements can be demonstrated by assuming that Telstra had instead taken a top-down modelling approach to TSLRIC. If this optimisation method had been chosen, it is far less clear that Bowman could claim that the statutory rate is appropriate.

Setting aside Bowman's argument on those grounds, the relevant question for the ACCC is whether it is appropriate to continue to apply a rate which differs from the statutory rate. Both Bowman and Hathaway agree that it is likely to be appropriate to apply the statutory rate. Earlier decisions on this matter by the ACCC noted that, over time, the rate would tend towards the statutory rate in the absence of further taxation reforms. However, it is noted that changes to depreciation allowances were made in

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[106] ACCC, *Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services – Final Decision*, July 2000

[107] ibid., p. 84.

[108] ibid., p. 84.

the most recent Commonwealth Budget.[109] These changes potentially have implications for the ACCC's previous statements with respect to a likely convergence between the statutory and effective tax rates over time. The ACCC also notes that under a TSLRIC construct that the effective tax rate and statutory tax rate may diverge for reasons other than the presence or absence of appreciated depreciation. The ACCC therefore remains of the opinion that the effective rate of taxation should be used in estimating the WACC.

The ACCC is not satisfied that Bowman's proposal to adopt the statutory tax rate is appropriate. However it notes that a reliable estimate of the effective tax rate requires the financial modelling of Telstra's expected cash flows throughout the life of the undertaking. However, the ACCC does not have access to such a model that would enable it to derive an effective tax rate. Accordingly, the ACCC has used the statutory tax rate in its calculations as a pragmatic solution for the purposes of assessing this undertaking. It considers that in future assessments it may be better placed to assess Telstra's effective tax rate.

Sensitivity analysis conducted by the ACCC indicates that the tax rate used in the calculation does not have a significant bearing on the result for the vanilla WACC.

D.4.10. Imputation Factor

The value of the imputation factor depends on:

- the extent to which the firm pays franked dividends (the amount of imputation credits distributed)
- the value of franked dividends in the hands of equity investors.

Telstra's position

Whilst Bowman believes recent empirical evidence supports an imputation factor of zero he has agreed that, given the considerable uncertainty associated with this component of the WACC calculation, a factor of 0.50 is an acceptable position.

Submissions of other interested parties

Hathaway considers that Telstra's imputation factor of 0.5 is too high, and recommends the use of an imputation factor of 0.35. Detailed theoretical analysis is supported by his and R. Officer's recent and previous empirical results.[110] Discussion

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[109] P Costello (Treasurer) and N Minchin (Minister for Finance and Administration), *2006-07 Budget Paper No 1 - Budget Strategy and Outlook 2006-07*, Commonwealth of Australia, Canberra, 9 May 2006, p. 1-11.

[110] Hathaway, N. and Officer, R., *The Value of Imputation Tax Credits*, manuscript, University of Melbourne, 1992, also Hathaway, N. and Officer, R., *The Value of Imputation Tax Credits—Update 2004*, Capital Research, November 2004.

relating to practical issues, practitioners' application of the imputation factor, and empirical evidence in company buy-backs is presented in Hathaway's report.

The ACCC's view

The ACCC agrees that further examination of the imputation factor may be required to update the research of the past preferred position, with both Bowman and Hathaway perceiving the value to be lower than 0.5. Despite this, Bowman deems the ACCC's past preferred value as acceptable due to the uncertainty surrounding the imputation factor.

> However, there is considerable uncertainty associated with the value of gamma [imputation factor].[111]

The ACCC notes that Hathaway's range for the imputation factor is from 0.25 to 0.45. The ACCC also notes that Hathaway's practitioner survey reflects imputation factor values closer to and higher than 0.5.

The ACCC has similarly concluded that there is no consensus on the appropriate value for the imputation factor and that a value of 0.5 is in accordance with the available empirical evidence.[112] The ACCC remains of the view that an imputation factor of 0.5 remains appropriate.

D.4.11. Debt Beta

In some regulatory models, a debt beta term is included in order to calculate the return on debt component of the WACC. Just as the equity beta term tries to capture the risk faced by equity holders, the debt beta term tries to capture risk faced by debt holders.

Telstra's position

Bowman follows the convention amongst Australian regulators and past ACCC decisions and assumes a value of zero for the Debt Beta.

Submissions of other interested parties

Hathaway does not agree with a debt beta value of zero as it attributes all equity risk into the asset risk, hence implying the debt premium to be zero.

ACCC's view

Since the final decision of Telstra's 1999 2nd PSTN undertaking, a value of debt beta value of zero was preferred from a range of 0.0 per cent to 0.6 per cent. Other ACCC

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[111] Bowman, March 2006, Appendix E.

[112] ACCC, *Statement of principles for the regulation of electricity transmission revenues—background paper*, December 2004, pp. 116-118.

decisions for the debt beta have also varied[113]. The ACCC considers that a value of zero remains appropriate.

A report prepared by the Allen Consulting Group for the ACCC considered this information and suggested that an appropriate range for the debt beta would be between 0 and 0.15 per cent.[114].

Bowman and Telstra's proposed debt beta is within the ACCC's preferred range, and is therefore considered to be appropriate.

D.4.12. Equity Issuance Cost

Telstra's submission

By referencing an ACCC decision that includes an equity issuance cost, Telstra and Bowman propose to include a similar cost in Telstra's undertaking:

> In its Final Decision on GasNet[115], the ACCC decided GasNet's access arrangement should (page 151) "include an allowance for equity raising costs of 0.224 per cent of regulated equity, to be recovered as an annual non-capital cost cash flow.[116]

Bowman estimates an equity issuance cost of 0.15 per cent for all three years in the regulatory period. He makes this assessment based on predominantly the same sources as the debt issuance cost estimation; Lee, Lochhead, Ritter, Zhao (1996), Brealey and Myers (2003), Vernimmen, Quiry, Dallocchio, Fur and Salvi (2005) and Dechow, Sloan and Soliman (2004)[117]. A conversion is also made on the percentage of offering size to an annualised cost of capital rate.

Submissions of other interested parties

Hathaway considers that these costs are not appropriate:

> The appropriate cost of capital is an opportunity cost (as described above) so it does not have to include all the potential costs of running a minor IPO nor should it include historical costs. It would be quite inappropriate for the ACCC to recompense a regulated business for costs that it most unlikely would never incur. The only cost to include would be any forward looking new equity placement which would be nothing like the costs implicit in these Reports.[118]

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[113] ACCC, decision for *Statement of principles for the regulation of electricity transmission revenues-background paper*, 2004, p.107

[114] The Allen Consulting Group, *Empirical evidence on proxy beta values for regulated gas transmission activities, final report for the ACCC*, July 2002, pp. 28-29.

[115] ACCC, *Final Decision for NSW and ACT Transmission Network Revenue Cap TransGrid 2004-05 to 2008-09*, 27 April 2005

[116] Bowman, March 2006.

[117] Bowman, March 2006.

[118] Hathaway, op. cit., p. 38.

The ACCC's view

Equity issuance costs are costs incurred by an entity when it issues capital, and the ACCC considers it appropriate that they be recovered in some form by regulated entities.[119] However, the ACCC considers that equity issuance costs should not be recovered in the WACC. Rather, it considers that equity issuance costs should ideally be recovered through a specific allowance when they arise. This approach is different from that for debt issuance costs, reflecting the fact that companies will typically be refinancing debt on a continual basis but that equity raising tends to be lumpy.

The ACCC notes that Telstra has not actually raised equity. However the ACCC considers that it should abstract from Telstra's particular scenario and more appropriately use some form of benchmark equity raising costs.

The ACCC considers that an appropriate treatment of equity issuance costs may be to capitalise those costs when equity issuing occurs and then have those costs included as part of the asset base of the regulated firm. The costs would not be a recurring cost recovered in the WACC but would only be recovered as they arise.[120]

Accordingly, the ACCC considers Telstra's proposed method for recovering equity issuance costs is inappropriate. However it notes that it would be inappropriate not to allow recovery for equity issuance costs. It does not appear that the equity issuance can be appropriately recovered in the PIE II model. The ACCC considers that the treatment of equity issuance costs will require further consideration by the ACCC but for the present purposes of this undertaking is prepared to allow Telstra's claimed 0.15 per cent uplift. However the ACCC will have to reconsider the appropriate treatment of any such costs in future assessments.

In any case, the ACCC does not consider that the overall WACC is sensitive to this temporary position of the ACCC.

D.5. Social Consequences of over or under estimating WACC

D.5.1. Telstra's submission

Bowman contends that there is an asymmetry in social consequences from over or under estimating the WACC. On the basis of this contention, Bowman proposes to adopt a WACC value which is greater than his best estimate. Overall, Bowman contends that 'the consequences of estimation error in the WACC are very asymmetric.'[121].

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[119] ACCC, *Statement of principles for the regulation of electricity transmission revenues—background paper*, December 2004, pp. 119.

[120] Allen Consulting Group, *Debt and Equity Raising Transaction Costs – Report to the Australian Competition and Consumer Commission*, December 2004.

[121] Bowman, March 2006.

To adjust for the effects of his contention, Bowman proposes increasing his best point estimate, by one standard deviation. He proceeds to comment on each of the input parameters and provides ranges when he concludes they are necessary.

D.5.2. Submissions of other interested parties

Hathaway does not comment on this matter other than to state that:

> He has justified using estimates of the WACC parameters that make an allowance for regulatory risk by adding on this estimate of the 'upper' estimate of the parameters. In some important cases, he has added ranges that are far too wide to be justified in any rational manner.[122]

Ockerby criticises Bowman's approach of advocating a WACC one standard deviation above the point estimate. Bowman makes a strong assertion that all regulatory WACCs should reflect his claimed asymmetry in social welfare as a matter of principle.

Ockerby claims that for the approach taken by Bowman to be justified, the error in the WACC must have a direct effect on investment and that the loss of surplus from too little investment is greater than the lost surplus from too much investment.

Ockerby's arguments are:

- A large proportion of capital invested in the network is sunk. Therefore the decision of whether or not to invest is not affected by the regulated WACC.
- There is a lack of convincing evidence that Telstra would fail to invest in a significant revenue-raising project due to a small error in the WACC. A case in question may be the failure to maintain the PSTN could jeopardise $7.7 billion of Telstra's revenue[123]. By contrast, even a 10 percent error in the WACC only costs Telstra $88.7 million per annum (being 10 percent of annual new investment in the PSTN)124
- Telstra's cost of not investing to maintain the PSTN is materially positive. By considering these costs, the case for asymmetric costs of regulatory error reverses. Setting the WACC too high will likely impose greater social costs in the form of higher consumer prices and over-investment, than setting the WACC too low.
- Overstating the WACC has significant consequences for consumers. The setting of prices above marginal cost entails a significant detriment to consumer surplus, refuting Bowman's claim that overstating the WACC would not have a detectable affect on individual consumers.

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[122] Hathaway, op. cit., p. 39.

[123] Telstra Annual Report, 2005, p. 76, revenue from PSTN products.

[124] Telstra Annual Report, 2005, p. 118, being 10 percent of the net cash invested in customer access.

In summary, according to Ockerby, there is no evidence that capital expenditures associated with the varying of the WACC is asymmetric and nor is there evidence that consumers valuation of different levels of capital expenditure is necessarily asymmetric.

Bowman has provided a response to the Ockerby paper. Bowman responds that:

- Setting the WACC too low necessarily results in a reduction of investment and with it all social surplus associated with that investment.
- The idea that most network assets are sunk and are unaffected by the WACC is a narrow view of investment and is not true as Telsta continuously maintains and/or replaces network assets.
- Although it is unlikely that Telstra would fail to maintain the PSTN, that does not mean that Telstra would not adjust its PSTN maintenance program in response to an inadequate regulated revenue stream.
- Ockerby's claim that the cost of not investing is materially positive and that, in reality, the costs of not investing almost certainly exceed the costs of investing is not substantiated by any evidence.

D.5.3. The ACCC's view

The ACCC is not satisfied that Bowman's claims regarding the potential existence of an asymmetry in the social consequences of over or under estimating the WACC are valid.

The claims made by Bowman and Ockerby are based around qualitative statements and counter-statements. The ACCC view is that substantive and quantifiable evidence be presented to legitimise a claim; a feature lacking in the overall discussion of this idea of asymmetric social costs.

Bowman states that:

> It is widely agreed that in a regulatory environment, the long-term social costs of under estimating the cost of capital are higher than are the long-term social costs of over estimation.[125]

However, Bowman provides no references to economic or financial literature to support this contention. Further, and more importantly, Bowman makes no attempt to relate this general statement to the matters specifically under consideration in these undertakings, nor does he advance any quantitative evidence to support his claim of asymmetry in consequences.

Bowman qualitatively claims that, if the WACC is set too high:

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[125] Bowman, March 2006.

> … there will be a cost imposed on the ultimate consumers, but this is unlikely to have a detectable welfare effect on individual consumers. The provider of the services will have sufficient incentives to engage in maintenance of the service and its quality and to invest in innovation and improvements in the service assets.[126]

The basis for Bowman's contention that there is no detectable welfare effect is unclear. In particular, he does not present and qualitative or quantitative support for the contention that the cost on individual consumers is not detectable. Bowman also seems to be suggesting that the only concern for consumers is the maintenance of the services and he concludes that firms will retain incentives to engage in such maintenance and invest in innovation. The ACCC considers that this completely ignores the negative welfare effects from excessive pricing.

Furthermore, the ACCC notes that the cost of excessive pricing will not be offset by quality improvements. Firms, regardless of whether they are subject to regulation, are likely to behave in a profit-maximising manner. Bowman has stated that, in his view, these services are regulated because they are offered in a market with few or no alternative suppliers and which is characterised by high barriers to entry.[127] In these circumstances, a profit-maximising firm would not be relatively more likely to invest in higher service quality, or innovate where it was being offered an excessive rate of return compared to a situation in which it was offered a non-excessive rate of return. The firm is likely to undertake profit-maximising investments and service improvements in either case.

Accordingly, where the WACC is set too high, there would only be the negative welfare effects flowing from the requirement to pay prices in excess of efficient costs with no offsetting quality benefits; resulting in an unambiguous welfare loss as against his claimed absence of a 'detectable welfare effect'.

Bowman claims that, if the WACC is set too low:

> … there will be short-run benefits to the ultimate consumers of the service, but there will also be disincentives for the provider of the service to invest or to properly continue maintenance or service quality.[128]

Again, the basis for Bowman's contention is not clearly specified. It is conceivable that a firm, subject to the identified market conditions, may engage in this form of behaviour. However, the firm may also seek to improve its efficiency in service delivery rather than quality degradation. The ACCC also notes that undertaking periods are generally short, and it would be open to Telstra to demonstrate that service degradation is taking place and show any link between this and under-compensation through the WACC, if it could be found to exist.

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126 *Ibid*.

127 *Ibid*.

128 *Ibid*.

The ACCC also notes that Telstra, as TelstraClear, has argued against its argument to this undertaking assessment on the asymmetry of outcomes, arguing that there is the asymmetry of risk in favour of setting a low price:

> A lower TSLRIC price will reduce incentives for inefficient/duplicative investment in alternative networks. In this regard, there is an asymmetry of risk associated with setting the interconnection price too high versus too low. In particular, if it set too low, investment by Access Seekers may be discouraged because they prefer to rely on Telecom. But this can be reversed subsequently by a correction in price. If the interconnection price is set too high inefficient investment in duplicative network may be encouraged, which cannot be reversed even if the interconnection is subsequently corrected.[129]

Telstra, as TelstraClear, also argued that:

> the [New Zealand Commerce] Commission should not repeat its approach of taking a "conservative" approach that it took with the initial price by favouring a higher TSLRIC price but should favour a lower final price, which emphasises promotion of competition.[130]

Overall, the ACCC notes that there is potential for undesirable outcomes under the s. 152AH statutory matters of *both* over and under estimating the WACC. Neither under-pricing nor over-pricing will be efficient. However, it is not clear that there is any asymmetry in outcomes and therefore that one or the other is relatively more likely to promote the LTIE, or that deviations from the best estimate of the WACC could or should be made to account for any asymmetry.

Setting aside the theoretical basis upon which Bowman has recommended an adjustment for asymmetry, he has subsequently stated that:

> It is more sensible and defensible to address the asymmetry using statistical methods. In my opinion, this asymmetry should be dealt with using confidence intervals. That is, the ACCC should choose a confidence level that reflects the relative long-term costs of under or over estimating the WACC.[131]

However, Bowman goes on to acknowledge that:

> The difficult issue is to determine the appropriate confidence level that reflects the relative costs to society of over and under estimating the WACC.[132]

Bowman's submission has not sought to quantify the relative costs of incorrectly estimating the WACC, and therefore has not addressed this 'difficult issue'. Despite

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[129] TelstraClear, *Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services*, 26 May 2005, p. 12.

[130] TelstraClear, *Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services*, 26 May 2005, p. 10.

[131] Bowman, March 2006.

[132] Bowman, March 2006.

this, Bowman proceeds to give estimates to take account of this unquantified relativity:

> … although I do not fully develop and defend ranges for each of the parameters in this report, I discuss all of the parameters, provide some further information on the critical parameters and give my preliminary estimates of appropriate ranges to reflect one standard deviation.[133]

Thus Bowman's position in favour of an adjustment for asymmetric social consequences can be characterised as one where:

- he has not sufficiently demonstrated the theoretical and empirical basis for an asymmetry in social outcomes
- he has acknowledged that determining the appropriate confidence interval to take account of asymmetry is difficult, and he has not attempted to undertake such an exercise
- despite this, he has proposed mark-ups to many parameters which he acknowledges are not fully developed or justified.

In the context of any undertakings assessment, the onus remains with Telstra to demonstrate to the ACCC that its proposed prices are reasonable within the meaning of s. 152AH. It is the ACCC's view that Bowman (and therefore Telstra) has not provided sufficient proof to demonstrate that asymmetry of outcomes exists, that the matters to which regard must be had under section 152AH are better served by adjusting the WACC to take account of it, and that his proposed adjustment appropriately performs this adjustment function. Accordingly, the ACCC is not satisfied that this aspect of Telstra's proposed WACC is appropriate

D.6. ACCC's draft view

The ACCC's draft view is to reject Telstra's proposed WACCs. Taking into account the matters in s. 152AH, the ACCC is not satisfied that the proposed WACCs are reasonable.

The ACCC is not satisfied that the techniques used by Bowman lead to an accurate conclusion on the WACC. The ACCC notes that expert advice commissioned by third parties to the ULLS proceeding was critical of Bowman's methods for determining the values of certain specific parameters as well as the parameter estimates adopted from the application of these methods. The ACCC's own assessment of Bowman's methods and estimates also raised significant concerns with his approach.

The ACCC is particularly concerned with Bowman's advocacy of the appropriateness of accounting for a claimed 'asymmetry in social outcomes' from over- or under-

[133] Bowman, March 2006.

estimating the WACC. As discussed above, Bowman is implicitly arguing that the ACCC should weight different matters under s. 152AH differently when determining access prices, arguing that, by doing so, the LTIE is likely to be better served. However, Bowman has not provided sufficient theoretical or empirical evidence to support his claims regarding asymmetric outcomes from erring on the low side of the 'correct' WACC relative to the high side. Accordingly, the ACCC is not satisfied Bowman's approach is appropriate.

Following his qualitative statements on asymmetric outcomes, Bowman makes no attempt to demonstrate that his proposed adjustments (increasing the point estimates by one 'standard deviation') deal appropriately with the claimed asymmetry.

Overall, Bowman's position in favour of an adjustment for asymmetric social consequences can be characterised as follows:

- he has not sufficiently demonstrated the theoretical and empirical basis for an asymmetry in social outcomes
- he has acknowledged that determining the appropriate confidence interval to take account of asymmetry is difficult, and he has not attempted to undertake such an exercise
- despite this, he has proposed mark-ups to many parameters which he acknowledges are not fully developed or justified.

In an undertaking assessment, the onus is on Telstra to demonstrate to the ACCC that its proposed prices are reasonable within the meaning of s. 152AH. It is the ACCC's view that Bowman (and therefore Telstra) has not provided sufficient proof to demonstrate that asymmetry of outcomes exists, that the matters to which regard must be had under section 152AH are better served by adjusting the WACC to take account of it, and that his proposed adjustment appropriately performs this adjustment function. The ACCC is not satisfied that this aspect of Telstra's proposed WACC claims is appropriate.

Overall, the ACCC is not satisfied that Telstra's preferred WACC estimates used for the purposes of estimating network costs, and particularly Telstra's 'High' WACCs, are appropriate. Therefore, to the extent that the price terms and conditions of the undertakings seek to impose a charge based on Telstra's preferred WACCs, the ACCC considers that it is not satisfied that they are reasonable.

Appendix E. Extent of averaging and two part tariff

E.1. Introduction

The Undertaking PSTN OTA charges are structured such that only half of the contribution to the total IEN cost pool that is to be recovered is by way of de-averaged (per minute/call) charges, whereas previously all of these costs were recovered on a de-averaged basis. The reason given by Telstra for partial deaveraging of the rates is to reduce the per minute price in rural areas as compared to the charge that would otherwise apply if a fully de-averaged approach was adopted. For example, Telstra states the per minute rural charge for PSTN TA and PSTN non-preselect OA services would have to rise to 6 cents per minute compared to the 3.87 cents per minute using its proposed partial de-averaging.[134] Even so, this rural charge is approximately three times the average rate of 1.39 cents per minute in the metropolitan area.

For PSTN TA and PSTN non-preselect OA this partial deaveraging is done by allocating half the cost (ie half of **c-in-c** million) to all four Bands and deriving an average cost for all Bands. The other half is recovered as geographically deaveraged costs in each Band.

For the PSTN preselect OA service, Telstra proposes a geographically averaged fixed per customer fee of $1.44 and $1.48 per month in 2006-07 and 2007-08 respectively to meet 50 percent of this group's contribution to the IEN cost pool (**c-in-c** million in 2006-07)[135]. The per minute component charge is then deaveraged across the four geographic zones. This produces a headline rate of $0.0119 per minute and $0.0124 per minute for 2006-07 and 2007-08 respectively.

By contrast for PSTN TA and non-preselected PSTN OA, Telstra proposes a headline rate of $0.0218 per minute and $0.0228 per minute for 2006-07 and 2007-08 respectively, which is double the rates of originating access charges which incorporate a fixed charge.

Telstra submits that implementation of a two-part tariff structure where appropriate will improve efficiency. It argues that the efficiency benefits of a two-part tariff are the result of lowering the variable component of the price toward variable costs encourages more efficient use of the PSTN.

The ACCC has in the past discussed at length the implications on competition resulting from averaged charges across different geographic bands.[136] The ACCC has not been satisfied that averaged charges will promote competition in markets for

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[134] ibid.

[135] see Telstra submission, paragraph 107.

[136] For the ACCC's most recent discussion of these issues, refer to ACCC, *Final Decision – Assessment of Telstra's ULLS monthly charge undertaking – August 2006*, Appendix C.

carriage services and services supplied by means of carriage services, nor remove obstacles to end users gaining access to these services.

The ACCC considers that similar conclusions can be reached in the assessment of the current undertaking.

This view is supported by Optus which in its submission to the ACCC's discussion paper argues that the reasons why Telstra has chosen to average on a partial basis the PSTN OTA charge is to:

- Maintain consistency with its position on the averaging of ULLS prices.
- Raise the costs faced by access seekers since access seekers will on average have proportionally more traffic in metropolitan areas than Telstra. Averaging of charges would, therefore raise the costs faced by access seekers in using PSTN services.
- Ensure revenue protection. According to Optus with the growth of broadband services and the prospective migration of resale services to ULLS, Telstra faces the prospect of a diminishing revenue stream from PSTN services. As much of this traffic will likely be lost in metropolitan areas, one way to plug the gap is to maximise the price of PSTN terminating access through averaging.
- Discourage the introduction of new services. A higher PSTN terminating access charge in metropolitan areas will discourage the successful development of VOIP services by competing providers. These services are more likely to be available in metropolitan areas, at least initially.

E.2. ACCC's draft assessment

In this section, the ACCC considers the partial averaging proposed by Telstra in light of the matters to be considered in section 152AH of the Act. The ACCC also provides some views in relation to Telstra's proposed two-part tariff.

E.2.1. Long term interests of end users

Subsection 152AB(3) of the TPA restricts the ACCC to have regard to three objectives alone when assessing whether an undertaking is in the LTIE. Each of these objectives is discussed below.

The objective of promoting competition in markets for carriage services and services supplied by means of carriage services

In determining the extent to which an undertaking is likely to promote competition in markets for listed services, the TPA obliges the ACCC to have regard to the extent to which the undertaking will remove obstacles to end-users of listed services gaining access to listed services. However, the ACCC is not limited to this and may consider other matters in determining whether an undertaking will promote competition.

In CBD and metropolitan areas, averaged PSTN OTA charges would be above efficient costs, however, in regional and rural areas averaged PSTN OTA charges

would be below efficient costs. The ACCC has considered the competitive effects of such charges in both of these distinct areas.

The ACCC considers that higher PSTN OTA charges in CBD and metropolitan areas, above efficient costs, would negatively impact on the business case for access seekers who require PSTN OTA in theses areas as an input to downstream retail services. As already indicated in the previous section, Optus, supports this view since it considers that access seekers will, on average, have proportionally more traffic in metropolitan areas than Telstra. Further, the ACCC agrees with Optus' view that higher averaged PSTN OTA charges in CBD and metropolitan areas are likely to negatively impact on the deployment of new and innovative services such as VOIP, which require PSTN OTA as an input. Such services are likely to be offered in CBD and metropolitan areas initially until providers achieve a level of market share that will enable roll out of the services more widely. PSTN OTA charges that are above efficient cost based levels are likely to make it more difficult to achieve the critical mass required for effective and sustainable competition from such innovative services both in metropolitan and regional areas.

The impact of averaging on the incentives for infrastructure-based competition via the deployment of alternative technologies is also a relevant consideration with respect to the promotion of competition. Average charges distort access seekers' build-buy decisions by understating the true costs of PSTN OTA, relative to alternative infrastructure. Average PSTN OTA charges, which are below cost in rural areas, may therefore encourage a reliance on PSTN OTA based resale services and discourage the deployment of alternative wireless infrastructure which could be an effective substitute to Telstra's IEN. In the long-term this would act as a barrier to effective and sustainable competition and the ACCC considers that this would not be in the interests of end users.

In summary, the ACCC is not satisfied that Telstra's proposed averaged PSTN OTA charges will promote competition in markets for carriage services and services supplied by means of carriage services, nor remove obstacles to end users gaining access to these services. Consequently, the ACCC is not satisfied that averaged PSTN OTA charges are in the long-term interests of end users.

The objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end users

The averaging of network costs does not have any relevance under this sub-criterion.

The objective of encouraging the economically efficient use of, and economically efficient investment in:

- ***the infrastructure by which carriage services and services provided by means of carriage services are supplied; and***
- ***any other infrastructure by which listed services are, or are likely to become, capable of being supplied***

A report by the OECD[137] acknowledges the distortions that averaged prices can have on build-buy decisions. The OECD suggests that the only way to avoid inefficient entry with averaged wholesale charges is to impose a ban on new entry, where the Government or regulatory agency were certain that such entry was inefficient. This highlights the point that averaged wholesale pricing can easily distort both competition and investment outcomes.

Since averaged PSTN OTA prices would be above costs in metropolitan areas, they would discourage access seekers from utilising Telstra's IEN in these areas, where it would otherwise be efficient to do so. This would represent an inefficient outcome if it was previously uneconomic to bypass under de-averaged (cost reflective) charges. Instead, averaged PSTN OTA charges will encourage possibly inefficient bypass of Telstra's IEN onto other, potentially higher cost, networks.

If there are rural areas where competition based on PSTN OTA is only viable under averaged charges, then this could be an inefficient outcome to the detriment of higher levels of allocative and productive efficiency that may otherwise be achieved through bypass onto alternative networks.

The report by Marsden Jacobs, submitted by the Competitive Carriers' Coalition, reaches similar conclusions. Marsden Jacobs states:

> With only partial de-averaging, the access price is below efficient, forward-looking costs. Access seekers are therefore inclined to rely on access provided by Telstra. Partial de-averaging discourages investment that would allow for more efficient supply of services in rural areas.
>
> On the other hand, with partial de-averaging, prices in urban areas are above efficient, forward-looking costs. Access seekers may be more inclined to invest in their own network infrastructure in urban areas even though, from society's point of view, it is more efficient to use the Telstra network.

In summary, the ACCC considers that because Telstra's proposed averaged PSTN OTA charges do not reflect the underlying costs of the PSTN OTA service in CBD and metropolitan areas on the one hand and regional areas on the other, they will distort access seekers build – buy decisions, leading to inefficient bypass in CBD and metropolitan areas and underinvestment in efficient alternatives in regional and rural areas. The ACCC is therefore not satisfied that Telstra's proposed averaged PSTN OTA charges are in the LTIE.

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[137] OECD Competition Committee, *Access Pricing in Telecommunications*, Paris, 2004, pp. 134-135.

E.2.2. Telstra's legitimate business interests

The ACCC assesses Telstra's legitimate business interests as being its ability to recover the costs (including a normal commercial cost of capital) of efficiently incurred investments.

Telstra has not argued that averaged PSTN OTA charges are necessary in order to protect its legitimate business interests.

The ACCC considers, therefore, that as long as the overall cost pool from which the PSTN OTA charges are derived reflects the efficient TSLRIC costs of providing the service, the level of averaging or deaveraging of the charges between different areas is likely not to have an impact on Telstra's legitimate business interests.

Even if Telstra's legitimate business interests were served by averaged PSTN OTA pricing (and the ACCC does not accept this), it would not follow that averaged pricing is reasonable, having regard to the s152AH matters. Rather, in these circumstances, the ACCC would be required to balance competing s152AH considerations in deciding whether it was satisfied of the reasonableness of averaged pricing. Having regard to the other s152AH considerations, in particular the competition and efficiency effects of averaged pricing, the ACCC would nonetheless conclude that it could not be satisfied that Telstra's proposed average pricing structure is reasonable.

E.2.3. Interests of persons who have rights to use the declared service

As already discussed, access seekers' interests are best served by cost reflective prices. These provide efficient signals in terms of their decisions whether to compete via reselling Telstra's wholesale products; using a combination of their own and Telstra's infrastructure or investing in their own alternative networks (such as wireless, cable or fibre).

Lower access charges in regional areas may provide incentives for access seekers to utilise Telstra's IEN in these areas. However, this will only be in the interests of access seekers if Telstra's fixed IEN is the best platform for delivering services in these areas, which may not necessarily be the case.

It is mainly in the higher density metropolitan areas where access seekers are interested, at least initially, in competing against Telstra. It is therefore likely that any benefits that access seekers gain from lower access charges in regional areas will be outweighed by the detriment they face as a result of access charges that are above efficient costs in metropolitan areas.

On balance, the Commission considers is not satisfied that averaged PSTN OTA charges are in the interests of persons who have rights to use the declared service.

E.2.4. Direct costs

The ACCC is of the view that there are several pricing structures that could be implemented that would enable Telstra to recover its direct costs. The ACCC therefore is not satisfied that this matter materially affects the ACCC's overall assessment of whether Telstra's proposed average charges are reasonable.

E.2.5. Operational and technical requirements necessary for safe and reliable operation

So long as PSTN OTA charges, whether averaged or de-averaged, are based on a recovery of efficient network costs, then this would ensure that Telstra can invest in infrastructure that ensures the safe and reliable operation of the network. Therefore, the ACCC is not satisfied that averaged PSTN OTA charges would have a material effect on the operational and technical requirements necessary for the safe and reliable operation of telecommunications services and the telecommunications network.

E.2.6. Economically efficient operation

There is considerable overlap between this matter and the analysis outlined above under the long-term interest of end-users. The ACCC is not satisfied that the proposed average charge is likely to lead to the economically efficient operation of Telstra's IEN.

E.3. Draft conclusions on PSTN OTA averaging

On the basis of information submitted, and after having regard to the matters listed in s. 152AH, the ACCC is not satisfied that Telstra's proposed averaged ULLS charges are reasonable. In particular, the ACCC has decided to reject the averaged PSTN OTA charge proposed in Telstra's undertakings on the grounds that it:

- adversely affects competition in the markets for basic telephony and broadband services; and
- distorts usage and investment decisions, resulting in the inefficient use of, and investment in, telecommunications infrastructure.

Even if Telstra's legitimate business interests were served by averaged PSTN OTA pricing (and the ACCC does not accept this), it would not follow that averaged pricing is reasonable, having regard to the s152AH matters. Rather, in these circumstances, the ACCC would be required to balance competing s152AH considerations in deciding whether it was satisfied of the reasonableness of the extent of averaging in proposed prices. Having regard to the other s152AH considerations, in particular the competition and efficiency effects of averaged pricing, the ACCC is not satisfied that Telstra's proposed averaged price is reasonable.

E.4. Two-part tariffs

In the discussion paper the ACCC noted that it has not examined the issue of two-part tariffs in respect to PSTN services in the in any detail in the past.

However, in a report commissioned by Optus in 2003, NERA[138] concluded that the introduction of a fixed monthly charge per customer for PSTN OTA would promote competition by moving downstream prices closer to marginal cost and:

[138] NERA, Competitive Neutrality In Access Pricing, July 2003.

- have an unambiguously positive impact on the efficient utilisation of the PSTN with customers increasing their demand for long distance and mobile to fixed calls;

- allow competitors to match Telstra's pricing packages in retail markets and thus remove a potentially significant barrier to competition 'on merit' in markets downstream to the PSTN; and

- reduce the need for the ACCC to engage in examination of whether Telstra's price discrimination strategies in downstream markets involve a 'price squeeze' or are simply 'aggressive competition'.

The ACCC considers that the introduction of two part tariffs have, in theory, the potential to improve economic efficiency by moving usage charges closer to marginal cost while ensuring that the access provider recovers a greater proportion of its fixed and common costs through non-distortionary lump sum transfers.

However, the ACCC, at this stage, is not convinced that the two part tariff as proposed by Telstra will be in the LTIE. The ACCC notes that Telstra has not provided any information to indicate what the effect of the proposed pricing approach will be on the various types of wholesale customers who purchase PSTN OTA services from Telstra. It is, therefore, difficult for the ACCC to assess the competitive implications of the two part pricing proposal. The ACCC, therefore, considers that the two-part tariff proposal represents a significant change in the pricing structure for PSTN OTA services. The ACCC also considers that no information has been presented to indicate that the proposal will result in improvements to economic efficiency at the wholesale level. The ACCC also notes that none of the submissions to the discussion paper raised serious concerns about this particular aspect of Telstra's proposed pricing structure.

Appendix F. Section 152CGA Specification of Documents

For the purposes of section 152CGA, the documents that the ACCC examined in the course of making its decision are specified in this section.

Below is a list of submissions that have been submitted to the ACCC and were examined by the ACCC as part of this undertaking assessment.[139]

Many of these documents contain confidential information. Where this is the case, the document title has been marked with an asterisk (*). In most cases public versions of documents are available, and confidential versions may be accessed subject to appropriate confidentiality undertakings with the owner of the information.

F.1. Telstra submissions in support of the undertaking

(*) Telstra, *Telstra's Submission in Support of Its Undertakings Dated 22 March 2006*.

(*) *"Description of PIE II Model"* Annexure A to Telstra's Supporting Submission, March 2006.

(*)Mitchell, M. B., "Appropriateness of Telstra's 2005 Cost Modelling Methodology". Annexure B to Telstra's Supporting Submission, March 2006.

(*)Bowman, R. G., *Report on the Appropriate Weighted Average Cost of Capital for PSTN OTA and LCS, Prepared for Telstra*, Annexure C to Telstra's Supporting Submission, March 2006.

F.2. Submissions in response to the PSTN OTA and LCS Discussion Paper

Telstra
(*) Telstra's submission in response to the ACCC Discussion Paper in respect of Telstra's Undertakings for the PSTN Originating and Terminating Access and Local Carriage Services, dated May 2006, 21 June 2006

(*) Submission in relation to PIE II Model, Annexure A to Telstra's submission in response to the ACCC Discussion Paper.

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[139] These submissions may refer to other submissions to earlier core services undertaking assessments or model price determinations. Although not necessarily be listed here, public versions of these documents are likely to be available on the ACCC's website.

(*) Submission in relation to PIE II Model, Annexure A to Telstra's submission in response to the ACCC Discussion Paper.

Optus

(*) Optus Submission to Australian Competition and Consumer Commission on Telstra's PSTN OTA and LCS Undertaking. July 2006.

(*) Optus Submission to Australian Competition and Consumer Commission on Telstra's PIE II model. July 2006.

(*) Supplementary Submission in respect of Telstra's PSTN OTA and LCS Undertaking. 6 August, 2006.

(*) Comments on PSTN Conveyance Costs in PIE II. A report for Singtel Optus. Prepared by NERA. March 2004.

Competitive Carriers' Coalition

(*) Comments on the ACCC's Discussion Paper. Telstra's undertakings for the PSTN Originating and Terminating and LCS Access services. A confidential report prepared by Marsden Jacob Associates for the Competitive Carriers' Coalition.

Engin

Engin response to ACCC Discussion Paper. Telstra's Undertaking for the PSTN Originating and Terminating and LCS Access Service. June 2006.

Verizon

(*) Submission to ACCC: Telstra's Undertaking for the PSTN Originating and Terminating Access and LCS services. Discussion Paper.

Macquarie

Confidential Communication. 13 July 2006.

Hutchison

Hutchison's response: Telstra's Indertaking for the PSTN OTA and LCS Access services. 13 July 2006.

F.3. Submissions in response to the ULLS discussion paper

The following submissions which were received in response to the ACCC's ULLS discussion paper were considered as part of this assessment.

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Hathaway, N., *Telstra's WACCs for Network ULLS and the ULLS and SSS Businesses—Review of Reports by Prof. Bowman*, Capital Research, 15 March 2006.

F.3.2. Competitive Carriers Coalition

CCC, *Submission in Response to Telstra Undertakings for the ULLS*, 28 March and 5 May 2006.

Marsden Jacob Associates, *Averaging vs. De-averaging—A Report Prepared by Marsden Jacob Associates for the Competitive Carriers Coalition*, 28 March 2006.

(*) Marsden Jacob Associates and Europe Economics, *Comments on Discussion Paper—Telstra's Undertaking in Relation to the Unconditioned Local Loop Service*, 4 May 2006.

F.3.3. Telstra

(*) Bowman, R.G., *Report on WACC in Response to ACCC Draft Decision on ULLS and SSS, Prepared for Telstra Corporation Limited*, September 2005.

(*) Ergas, H., *Response to Inaccurate Citations by the ACCC of Previous Expert Reports by Henry Ergas*, CRA International, September 2005.

(*) Mitchell, B.M., *Commentary on Network Costs Section of ACCC Draft Decision*, 29 September 2005.

(*) Sidak, G., *Expert report of J. Gregory Sidak*, 22 September 2005.

(*) Telstra, *Telstra's Response to the ACCC's Draft Decision on Telstra's ULLS and LSS Monthly Charges Undertakings*, 23 September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Draft Decision on Telstra's ULLS and LSS Monthly Charges Undertakings, Annexure A, Background*, 23, September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Draft Decision on Telstra's ULLS and LSS Monthly Charges Undertakings, Annexure B, ULLS and LSS Specific Costs*, 23 September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Draft Decision on Telstra's ULLS and LSS Monthly Charges Undertakings, Annexure D, Network Costs*, 23 September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Draft on Telstra's ULLS and LSS Monthly Charges Undertakings, Annexure F, Response to Access Seekers Submissions*, 10 October 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Draft Decision on Telstra's ULLS and LSS Monthly Charges Undertakings, Annexure G, Previous Submissions*, 23 September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Discussion Paper in Respect of ULLS Dated January 2006*, 14 March 2006.

F.4. ACCC's draft ULLS decision

ACCC, A*ssessment of Telstra's ULLS monthly charge undertaking—draft decision*, June 2006.

F.5. Submissions provided in response to the ACCC's draft ULLS decision

F.5.1. Competitive Carriers Coalition

Competitive Carriers' Coalition Inc., *Submission in Response to Telstra Undertakings for the ULLS*, 7 July 2006.

F.5.2. Optus

Attenborough, N. and Sharma, Y., *Assessment of the PIE II Model: A Report for Optus*, National Economic Research Associates, July 2003.

Frontier Economics, *Telstra's ULLS Undertaking – Impact of average ULLS Charges on Promotion of Competition: A Report Prepared for Optus*, July 2006.

Hird, T., *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, National Economic Research Associates, July 2003.

Kalmus, P. and Sorensen, S., *Comments on PSTN Conveyance – Costs in PIE II: A Report for Singtel Optus*, National Economic Research Associates, March 2004.

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Optus, *Optus Submission to the Australian Competition and Consumer Commission on Telstra's PIE II Model*, May 2006.

F.5.3. Network Strategies

Network Strategies, *An accurate assessment of the comparative costs of wireless access technologies in Australia: Report to ACCC*, 7 July 2006.

F.5.4. Telstra

Bowman, R.G., *Telstra's WACCs for Network ULLS and the ULLS and SSS Businesses - A Reply to Jason Ockerby's "Response to a Report on the appropriate weighted average cost of capital for the ULLS network by Professor Bowman dated December 2005": Prepared for Telstra*, 27 July 2006.

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F.6. Past ACCC reports and decisions

ACCC, *Deeming of Telecommunications Services – A Statement Pursuant to Section 93 of the Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997*, 30 June 1997

ACCC, *Access Pricing Principles – Telecommunications*, July 1997.

ACCC, *Access Arrangement by Transmission Pipelines Australia, Final Decision*, October 1998.

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(*) ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS – Final Decision*, December 2004.

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ACCC, *Final Decision for NSW and ACT Transmission Network Revenue Cap, TransGrid 2004-05 to 2008-09*, 27 April 2005.

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(*) ACCC, *Assessment of Telstra's ULLS and LSS Monthly Charge Undertakings—Draft Decision*, August 2005.

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ACCC, *A strategic review of the regulation of fixed network services—an ACCC discussion paper*, December 2005.

ACCC, *Current Cost Accounting Report Relating to Accounting Separation of Telstra for the Half Year to June 2005*, December 2005.

ACCC, *Declaration inquiry for the ULLS, PSTN OTA and CLLS—final determination*, July 2006.

ACCC, *Local Services Review—final decision*, July 2006.

ACCC, Assessment of Telstra's ULLS monthly charge undertaking. Final Decision. August 2006

F.7. Past Telstra submissions and reports

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(*) Telstra, *Telstra's detailed submission in support of its PSTN OTA and LCS undertaking dated 9 January 2003*, 31 July 2003.

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F.8. Additional information examined by the ACCC

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