



FINAL REPORT

Telstra's retail price controls

Economic and social impacts

*Prepared for
The Australian Department of Communications
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Executive summary

Retail price controls currently apply to Telstra through the Telstra Carrier Charges — Price Control Arrangements, Notification and Disallowance Determination No. 1 of 2005 (The Determination). The Determination was amended in 2010 and 2012.

The current price controls include price caps and other constraints and restrictions imposed on the price of selected services offered by Telstra at the retail level.

The CIE has been asked to provide a review of the impacts of retail price controls from 2012 to 2014, to assess the state of competition in retail telecommunications services and to consider future regulatory options to address market failures and achieve social equity objectives in the provision of telecommunications services. The economic analysis of retail price controls set out in this report is an input into two processes being undertaken by the Department of Communications:

- a post-implementation review (PIR) of the amendments to the Principal Determination, as made by the Amendment Determination; and
- the provision of advice to government on the future of price control arrangements.

Assessment of retail price controls from 2012 to 2014

The Department of Communications is required to prepare of post implementation review of the 2012 amendment to retail price controls. Our assessment forms an input into this post implementation review.

Our key findings are as follows.

- With the development of a competitive retail market for telecommunications services Retail Price Controls are redundant.
- Retail price controls have had no discernible impact on prices charged by Telstra from 2012 to 2014 — Telstra offers prices below the level required by price controls in all four baskets of services. Its prices are substantially below in basket 1, which contains the majority of services.
- It is likely that Telstra would have offered nationally consistent prices in the absence of retail price controls. All 16 other providers of voice services did not have regionally differentiated prices, Telstra does not differentiate regionally where it is allowed to do so, Telstra and other mobile providers do not differentiate prices regionally and there are few examples of regional price differentiation amongst overseas telecommunications companies.
- Retail price controls have imposed a net economic cost because of administration costs for the ACCC and Telstra, at around \$0.5 million over 2 years. Potentially the cost could have been larger, if the level at which retail price controls were set had

constrained competitive pricing and led to distortions in investment and restrictions on competition.

- The objectives of retail price controls were to address a lack of competitive tension in Telstra's fixed line service pricing, promote greater social equity in ensuring affordability of access to services, ensuring efficiency benefits are passed on to customers and safeguarding low-income consumers. Because retail price controls have not led to any discernible changes in prices relative to what would have otherwise occurred, retail price controls have played no role in achieving the objectives sought. This largely reflects that the development of a competitive market rather than government regulation has led to the achievement of these objectives.
- Retail price controls have not acted as a barrier to competition from 2012 to 2014.

Assessment of the state of competition in the telecommunications market

Over time, alternatives to using fixed line voice services have become increasingly important in the Australian market. More minutes of voice calls are now made on mobile networks than on fixed line networks, the penetration of infrastructure to offer competing services through broadband (combined with regulation of Telstra's copper loop) and the increased use of wholesale rental of infrastructure from Telstra have all provided some level of competitive constraint on Telstra. However, despite this, Telstra retains the majority of market share in fixed line telecommunications products and has the largest market share in mobile communications.

It is our view that, despite Telstra's substantial market share, there are sufficient constraints around Telstra pricing in the retail component of the delivery of telecommunications services. This is due to a number of factors.

- The infrastructure required to provide fixed line voice services is a natural monopoly. However, under the *Competition and Consumer Act 2010* telecommunications providers may gain access to telecommunications monopoly infrastructure in order to provide a competitive service.
- There are no economic barriers to entry into the retail component of providing telecommunications services, given regulated access to telecommunications infrastructure.
- As such, there is a sufficient competitive constraint on Telstra's retail pricing.

Note that the level of competitive pressure is lower in regional areas. This partly reflects that prices in these areas recover lower margins and hence it is not profitable for entry. There is also less of a constraint from competition from mobile services, as Telstra retains a greater market share in regional areas. However, it is unlikely that removal of price controls would result in differential pricing from Telstra. The evidence for this is that no service provider currently engages in differential pricing in regional areas, even where the company is free to do so for either fixed line or mobile telecommunications voice services. Where Telstra is able to price on a differential basis, for example in mobile services it does not. As such, consumers in regional area benefit from competition in

metropolitan areas because of national pricing. Telstra has also indicated that it is commercially rational for it to continue to price on a uniform national basis rather than introduce region specific pricing. If Telstra does move away from national pricing and there was a view that this was a concern, it is open to the government to reintroduce price controls to address regional pricing concerns.

The clearest evidence that Telstra has been constrained in the retail market by competition is that the prices that it charges are well below the prices allowed under retail price controls, particularly for basket 1, which contains the largest part of revenue from voice services.

We also note that Telstra retains substantial market share in markets where it does not have ownership of infrastructure, such as on the National Broadband Network. This also suggests that market share is not necessarily the best indicator of competition.

Assessment of future options for Government intervention

The key objectives that might underpin Government intervention in retail telecommunications markets are as follows.

- 1 To constrain the use of market power by Telstra, should it possess such market power — this is a standard market failure problem
- 2 To ensure that all households can access telecommunications services sufficient to allow social inclusion and at prices that do not lead to standard of living below a minimum acceptable standard — this is a social equity objective

■ **There is no rationale for government intervention in retail pricing of fixed line voice services on the basis of market power**

Our assessment is that effective wholesale regulation is the most appropriate intervention to address issues related to market power. Retail price controls would impose net costs to the community, reflecting additional administrative costs and potentially additional economic costs depending on the level of price controls.

- Over a five-year period, the administrative costs imposed would be around \$1 million (discounted to today's dollars).
- Additional costs could be much higher than this should retail price controls be effective in constraining prices and distort market outcomes to less efficient services or less efficient service providers.
 - The amount of the costs imposed would depend on the level of prices that were set. If retail price controls reduced retail prices to 5 per cent below cost, then this would impose a net economic cost in the order of \$2 to \$4 million per year, or in the order of \$10 million over five years.
 - The costs would be larger still if price controls led to a decline in service quality or a withdrawal of service.
 - If price controls were adjusted in a similar manner as they have been in the past, the likelihood of retail price controls impacting on prices over the next five years is low. This is because prices for the largest set of services (Basket 1) are over 10 per

cent below the currently allowable level. It would therefore take substantial changes in underlying costs to push the market price above the price control in the short term.

We have also considered whether there would be different outcomes in regional versus metropolitan areas if retail price controls were removed. We consider that it is likely that retail prices are not sufficient to cover costs in many regional and rural areas and that this is a primary reason for lack of entry into these markets. Despite this, the evidence suggests that it is likely that Telstra would continue to charge nationally consistent prices. Telstra currently sets nationally consistent prices, even where not required to do so. Other telecommunications companies in Australia and overseas also generally set consistent prices across their areas of operations. If Telstra did move to differentiate pricing by location then this could well align prices more closely to costs, in which case there is not a market failure rationale for government intervention. Wholesale regulation would allow for entry of competitors if regional prices increased to a level at which entry is commercially viable.

We have also considered retail price monitoring as an alternative option for addressing market power. We also consider that imposing retail price monitoring is likely to impose net costs. It would impose administrative costs and is unlikely to have any impact on the prices charged for services. Retail price monitoring may provide comfort to consumers and, at a political level increase the likelihood of the removal of retail price controls.

■ **There is no rationale for government intervention through price controls in fixed line voice services on the basis of social equity**

Our assessment is that there is no need for additional Government interventions in the form of retail price controls or additional subsidies on social equity grounds.

- It is most likely that Telstra will maintain similar pricing of telecommunications services across Australia, as discussed above. In this case, the welfare system redistributes income in order to achieve minimum acceptable standard of living and there would be no need for additional telecommunications specific subsidies. (Note that Centrelink already provides a Telephone Allowance.)
- Should Telstra decide to charge different prices across Australia in order to reflect different costs, we do not view this as a major concern. Prices for many essential products (such as food, water, electricity and housing) vary between regional and metropolitan areas. If this does eventuate, targeted subsidies to households that are low-income and in areas with high telecommunications prices would align most closely to social equity objectives. In contrast, retail price controls may provide implicit cross-subsidies that do not reflect a well-defined social equity objective.
- The additional (minor) retail price control arrangements targeted at social equity objectives should also be removed.
 - The social equity basis for limiting line rental prices for schools and charities to that charged for residential is not clear. . If this provision is required, a direct subsidy is a more appropriate mechanism for achieving desired price outcomes for schools and charities. Hence this price control should be removed.

- The requirement that untimed local calls are charged at a maximum of 22 cents (except for discount plans) is not having any impact on prices. Currently, Telstra charges 30 cents for discount plans and zero for other plans (that is, they are included in a fixed monthly price).
- The requirement that local calls from payphones should be charged at a maximum of 50 cents is not likely to have an impact on prices charged by Telstra. Telstra is required to provide payphones through a contract with the Telecommunications Universal Service Management Agency (TUSMA). This arrangement does not set prices, but could be extended to include prices if required, although this would require renegotiation of contracts between TUSMA and Telstra.
- Telstra is required to provide untimed local calls within (and to adjacent) Extended Zones in its contract with TUSMA. Telstra would be unlikely to put in place separate pricing arrangements for the small amount of revenue at stake in extended zones.

1 Background

Telstra's retail price controls

Current controls

Retail price controls on Telstra were introduced in 1989, at a time when Telstra was the only telecommunications provider and fixed line telephony was the only telecommunications service.

Retail price controls currently apply to Telstra through the Telstra Carrier Charges — Price Control Arrangements, Notification and Disallowance Determination No. 1 of 2005 (The Determination). The Determination was amended in 2010 and 2012.

The current price controls include price caps and other constraints and restrictions imposed on the price of selected services. The services subject to price caps are split among four regulated baskets.

- The first basket of services consists of local calls, national long-distance and fixed-to-mobile calls (grouped as 'trunk' calls), international calls and line rentals. These services are usually purchased by retail consumers as part of a 'bundle' which can reduce the price of individual call and line rental services. While Telstra is able to vary individual prices in the basket, the combined variation of all prices must equal a nominal price increase of zero per cent.
- The second basket consists of Telstra's basic line rental product offered to residential customers (branded as HomeLine Part). This product is capped by growth in the CPI.
- The third basket consists of the basic line rental product supplied to business customers and charity customers. Branded as BusinessLine Part, this basket is also capped by growth in the CPI.
- A fourth basket consists of ten individual connection services which are all capped by growth in the CPI.¹

Other price controls introduced by the Determination and subsequent amendments include:

- The price for untimed local calls is not to increase above 22 cents (GST inclusive) for each call (other than a local call made from a public payphone, or a local call made using a calling card), except in the case of discount plans when a customer may be required to pay more than 22 cents per local call.

¹ The basket of 10 connection services was introduced by the 2012 amendment and replaced a single price cap for all connection services.

- Local calls, and Telstra's most basic line rental product, supplied in non-metropolitan areas, must be offered at the same or a lower price and on the same price-related terms as in metropolitan areas.
- Telstra must offer a line rental to schools and charities at a price at or below the standard line rental offered to residential customers.
- Increases in residential line rentals must be notified to the ACCC, and are subject to the ACCC being satisfied that Telstra has in place a low-income package endorsed by low-income consumer advocacy groups.
- The price of each call to an internet service provider using a data network access service number starting with the numerals 0198 is not to exceed 22 cents (GST inclusive).
- Calls in and between adjacent extended zones, and Bigpond calls made from these zones, are required to be charged as untime local calls.
- Telstra must notify the Minister in advance if it intends to alter charges for directory assistance services, with the Minister able to disallow the proposed changes if they are considered not to be in the public interest.

The review process

Formal reviews of the price controls imposed on Telstra have taken place every two to three years since introduction in 1989. The review process has typically involved a public inquiry conducted by the ACCC, which has been guided by a terms of reference set by the Minister For Communications.² The outcomes of the review then inform the development of the determination. Past reviews have considered, among other issues, the continued need for price controls given the level of competition across the telecommunications market and the duration and design of the price controls.

The most recent reviews were conducted by the ACCC in 2010 and the Department of Communications in 2012.³ Submissions to these reviews generally noted that retail price controls were no longer necessary to promote competition.

- The ACCC found in 2010 that price controls should continue until 2012 and recommended a number of arrangements to streamline price controls.
- The Department of Communications found in 2012 that there was a valid case for reducing or removing retail price controls over time and a further review should occur in 2014 prior to the expiry of the current Determination.

It should be noted that the emphasis of these reviews was whether there was sufficient evidence to discontinue retail price controls. In contrast, this report considers that retail price controls should be revoked unless there is sufficient evidence that continuation of controls would lead to net benefits to society.

² The 2011 review of Telstra price controls was conducted by the Department of Broadband, Communications and the Digital Economy.

³ ACCC 2010, *Review of Telstra's retail price control arrangements*, March; Department of Broadband, Communications and the Digital Economy 2012, *Retail price controls review*.

The setting of price caps

Price caps have generally been designed in the form of $CPI - X$, where CPI is an annual rate of growth in the consumer price index and X reflects the expected annual growth in Telstra's total factor productivity (TFP) for fixed-line voice infrastructure. The latter has typically been estimated by the ACCC based, in part, on past rates of productivity growth. This price cap design helps to ensure that efficiency gains are passed onto retail consumers.

The value of X has also previously been chosen to help the prices of selected Telstra services rebalance to more efficient levels. For example, in 2002 a price cap of $CPI+4.0$ was imposed on business and residential line rentals as the retail price of these services had fallen below the estimated efficient cost of provision. This in part reflected the introduction of sub-caps imposed on line rentals in previous reviews.

The price changes allowed since 2005 have used an unusual form for the largest basket of services, basket 1. They have been specified as a zero nominal increase in prices.⁴

There is also potentially a problematic relationship between wholesale market regulation and retail price controls. There is some necessary gap between wholesale and retail prices necessary to cover retail costs. If regulatory arrangements lead to this gap being insufficient at some times or in some areas, then this would lead competitors to discontinue retail competition enabled by wholesale infrastructure access.

History of price caps

Retail price caps were first applied with the introduction of the *Telecommunications Act 1989* and have been subject to a number of reviews processes since.

Price restrictions have typically applied to a basket of services with additional restrictions placed on individual services within the basket. A history of the retail price controls imposed on the telecommunications sector is provided in table 1.1 below. The changes in the composition of the baskets of services that are regulated reflect:

- changes in the competitiveness of some telecommunication markets (e.g. leased lines and mobile services)
- a need to rebalance the price of selected services provided by Telstra.

⁴ The ACCC recommended that CPI-4 per cent be applied to this basket in 2005 (ACCC 2005, *Review of Telstra's retail price control arrangements*, February). In 2010 it recommended CPI-0 be applied (ACCC 2010, *Review of Telstra's retail price control arrangements*, March).

1.1 Restrictions placed on telecommunication service prices

Period	Basket(s) of services	Annual (nominal) price growth cap
1989 to 1992	Line rentals, local calls, STD and IDD calls	CPI - 4%
1992 to 1995	Line rentals, local calls, international calls, connection services, leased lines, mobile services.	CPI -5.5%
1996 to 1999	Line rentals, local calls, international calls, connection services, leased lines, mobile services.	CPI + 7.5%
1999 to 2001	Line rentals, local calls, international calls, connection services, leased lines, mobile services.	CPI - 5.5%
2002 to 2005	<ol style="list-style-type: none"> 1. Local, trunk, international calls 2. Business and residential line rentals 3. Connection services 	<ol style="list-style-type: none"> 1. CPI – 4.5% 2. CPI + 4.0% 3. CPI – 0%
2006 to 2014	<ol style="list-style-type: none"> 1. Local, trunk, international calls, line rentals 2. Basic line rental services to consumers 3. Basic line rentals services to business 4. Connection services 	<ol style="list-style-type: none"> 1. 0.0% 2. CPI 3. CPI 4. CPI

Note: Sub-caps often apply to services within the baskets identified above.

Sources: ACCC, CIE.

Objectives sought from the retail price controls

Currently, Telstra retail price controls seek to address four policy objectives.

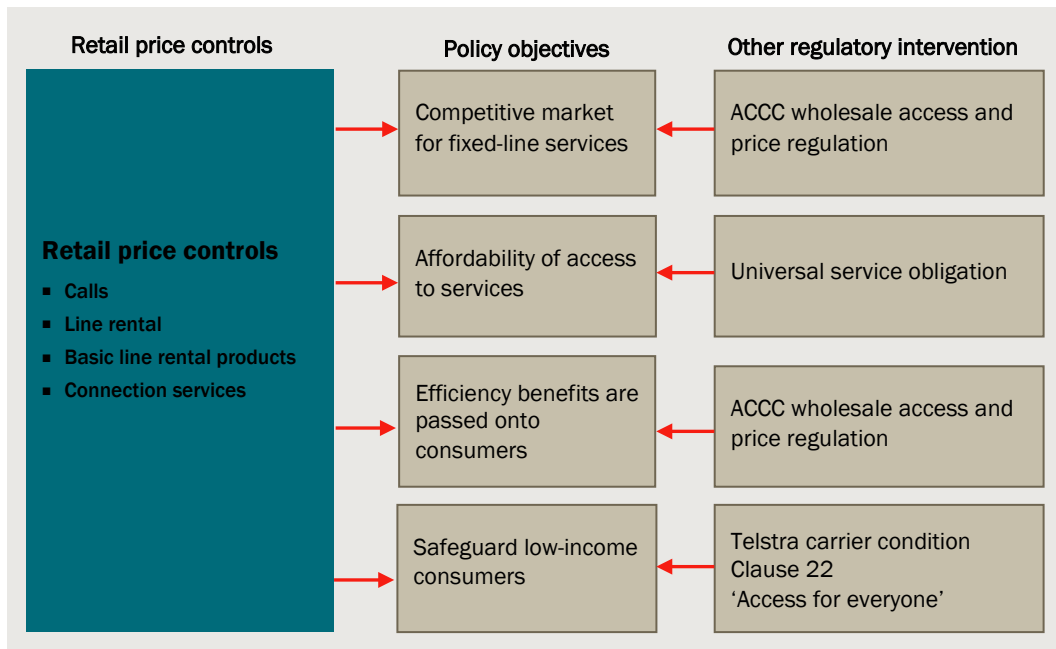
- 1 Address a lack of competitive tension in Telstra's fixed-line service pricing
- 2 Promote greater social equity in ensuring affordability of access
- 3 Ensure that efficiency benefits are passed on to customers
- 4 Safeguarded low income consumers.

In essence, objectives 1 and 3 are about market power and objectives 2 and 4 are about social equity.

Other government interventions in telecommunications markets

The Government intervenes in a number of other ways into telecommunications markets. These interventions often seek to achieve the same objectives as retail price controls. For example, wholesale access and price regulation aims to address issues of market power. Understanding this context is important because it influences what the counterfactual would be in the absence of retail price controls. The main interventions made by the Government are set out below, where these are expected to overlap with objectives of retail price controls. A detailed set of Government interventions is set out in Attachment A.

1.2 Areas of regulation in the telecommunication sector



Source: The CIE.

The legislative arrangements that are applied to telecommunications are set out in table 1.3.

1.3 Regulation in the telecommunication sector

Regulatory Act/Declarations	Key provisions
Telecommunications Act 1989	Retail price controls
Telstra (Dilution of Public Ownership) Act 1996	Customer service guarantee (CSG)
Telecommunications Act 1997	Licence conditions Industry code of conduct
Carrier Licence Declaration 1997	Low income measures Network Reliability Framework Priority Assistance Scheme
Telecommunications (Consumer Protections and Service Standards Act 1999	Universal Service Obligation Customer Service Guarantee Telecommunications Industry Ombudsman
Telstra Carrier Charges 2005	Trunk calls International calls Line rentals Connection services
Telecommunication Consumer Protection Code (2012)	Offers Advertising Selling practices Billing Complaint handling
Competition and Consumer Act 2010	Anti-competitive behaviour in the telecommunications sector ACCC determination of telecommunication services

Source: The CIE

This review

The Department contracted the CIE to undertake an economic analysis of Retail Price Controls to inform the following processes.

Post implementation review

The Department of Communications is required, by the Office of Best Practice Regulation, to undertake a post implementation review of the Amendment Determination from its implementation on 30 June 2012. This is an assessment of the extent to which the Amendment Determination is efficient and effective in achieving its stated objectives and whether the Principal Determination (as amended by the Amendment Determination) remains appropriate.

Advice to Government

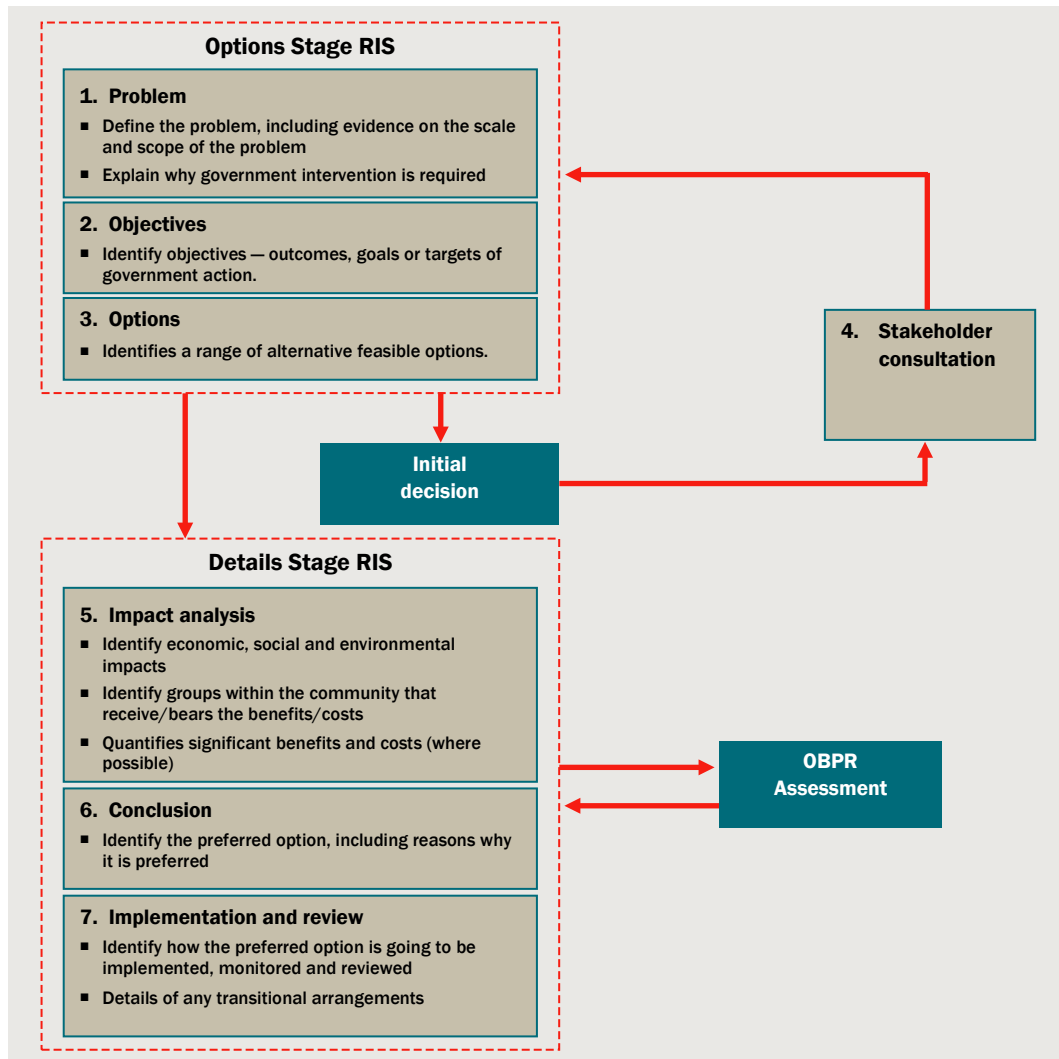
With the Principal Determination expiring on 30 June 2014 the department is required to advise the government on future arrangements for price controls. This advice will be framed within the government's broader deregulation agenda and will assess the degree to which the policy intentions of price controls continue to be relevant.

This project contributes to the above two requirements of the Department of Communications. In particular, the terms of reference are to:

- 1 Provide a quantifiable cost-benefit analysis of the Amendment Determination (from commencement on 30 June 2012). (Chapter 3)
- 2 Analyse and report on how efficient and effective the Amendment Determination has been in meeting its objectives. (Chapter 3)
- 3 Report on the extent to which the Principal Determination may act as a barrier to competition in the telecommunications market. (Chapter 4)
- 4 Assess the current state of competition for retail telecommunications voice services. (Chapter 4)
- 5 Examine future regulatory options for retail price controls. This should include considering the problem being addressed, the scale of the problem and the costs and benefits of options to address the problem. (Chapters 5, 6 and 7)

The standard framework used for undertaking regulation impact statements is set out in chart 1.4.

1.4 RIS requirements



Source: The CIE.

Post implementation reviews seek to ask similar questions, although looking backwards as well as forwards. A post implementation review is considered against the following five criteria.⁵

- 1 Has the PIR identified the problem?
- 2 Does the PIR explain the original objectives of the regulation?
- 3 Has the PIR adequately presented and analysed the impacts of the regulation?
- 4 Does the PIR accurately present the findings from stakeholder consultation?
- 5 Is the conclusion supported by available evidence?

⁵ Office of Best Practice Regulation, Post implementation review guidance notes, http://ris.dpmc.gov.au/files/2012/03/pir_guidance_note.pdf. Note that this guidance is likely to change as review processes are under revision.

Acknowledgements

The CIE has been assisted in preparing this report by Analysys Mason and Evans and Peck. This work has also benefited from consultation with the ACCC and Telstra.

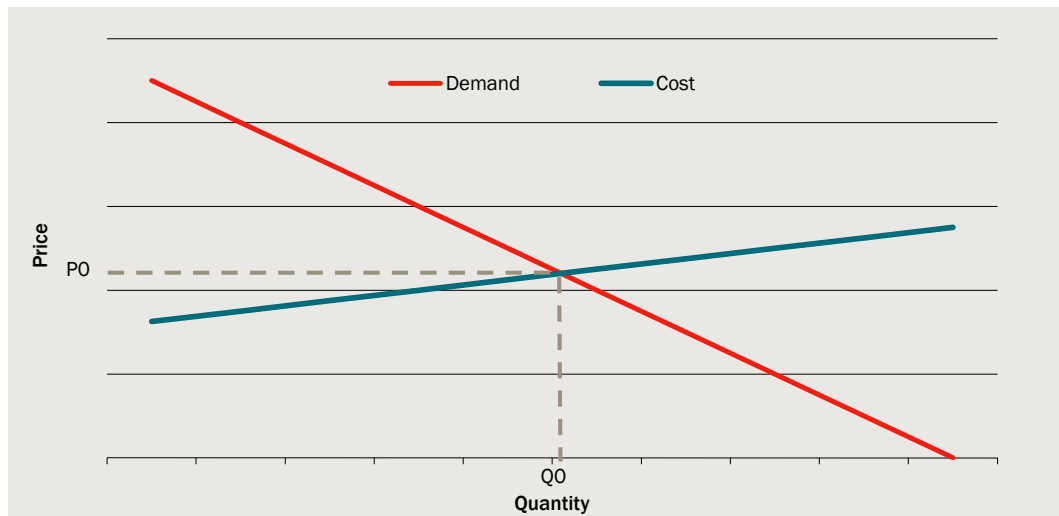
2 *Framework for considering costs and benefits*

The economic impacts of price controls depends on the level of the price set by the regulator, compared to prices that would occur in a competitive market and to prices that would be set in the absence of price controls. This chapter sets out the basic economic theory of the impacts of price controls.

Pricing in a competitive market

In a competitive market, the price charged should reflect the costs of providing services to the next customer (i.e. the marginal cost). This is shown in the chart below, where P_0 is the price and Q_0 is the quantity demanded and supplied.

2.1 Pricing in a competitive market



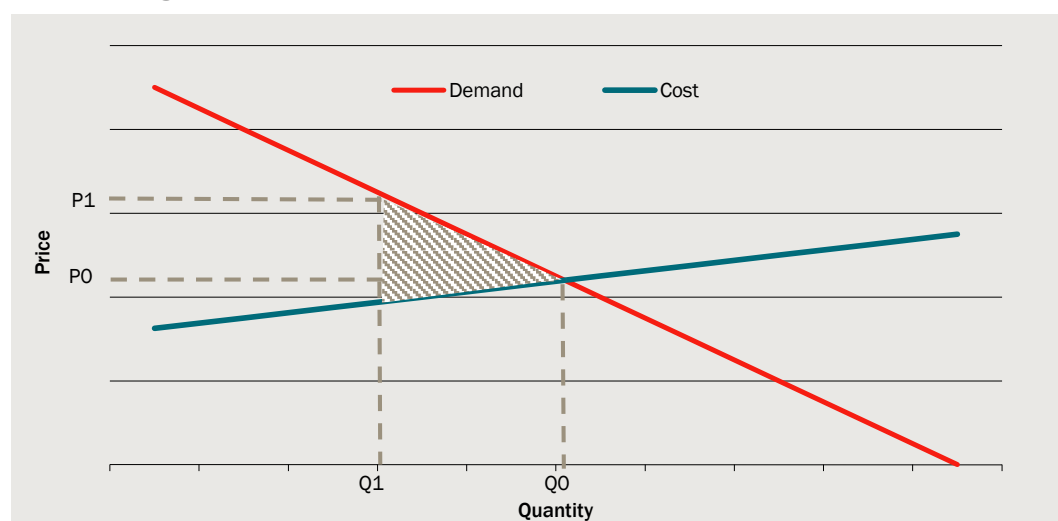
Source: The CIE.

Note that there are complexities in a market such as telecommunications, where a large part of the capital costs have been invested historically and are now sunk. In many such cases, such as electricity, water and telecommunications networks, this capital is incorporated into prices for accessing infrastructure through allowing some amount of historical capital into a regulated asset base. The retail price then combines a wholesale component plus a retail component. The retail component covers costs of billing and marketing, for example.

Pricing in a market where a supplier has market power

Where a supplier has (and uses) market power, they are able to increase their profits by charging a price that is higher than the marginal cost of the last unit supplied. The price will therefore be higher than in a competitive market. For example, in chart 2.2 the supplier can raise the price to P_1 , at which point the quantity Q_1 would be demanded and supplied. The welfare loss in this case is equal to the shaded triangle.

2.2 Pricing where a supplier has market power



Source: The CIE.

Market power may not result in as large a social loss as set out in chart 2.2 if a business can price differentiate. In this case, it would seek to charge different prices to different consumers in order and this may lead to a quantity supplied closer to the competitive level. The distribution of outcomes from differentiated pricing is different to a single price, with producers obtaining a larger profit and consumers paying higher prices.

In the above welfare analysis, the benefit (or cost) to the community is the sum of the benefits/costs to consumers and service providers. For the purpose of the regulatory impact assessment process, cost-benefit analysis will typically focus on the benefits and costs to Australia. To a large extent, this aligns with the welfare analysis outlined above. However, where the regulated firms are owned by foreigners, some of the 'producer surplus' will be transferred overseas.

The impacts of price controls

The impacts of price controls can be assessed by considering what the price would be in a competitive market, with retail price controls and in the actual market. Allow P^C to be the price in a competitive market, P^M to be the price in the market given that there is market power and P^R to be the regulated price (i.e. price control). Then the following three scenarios are possible.

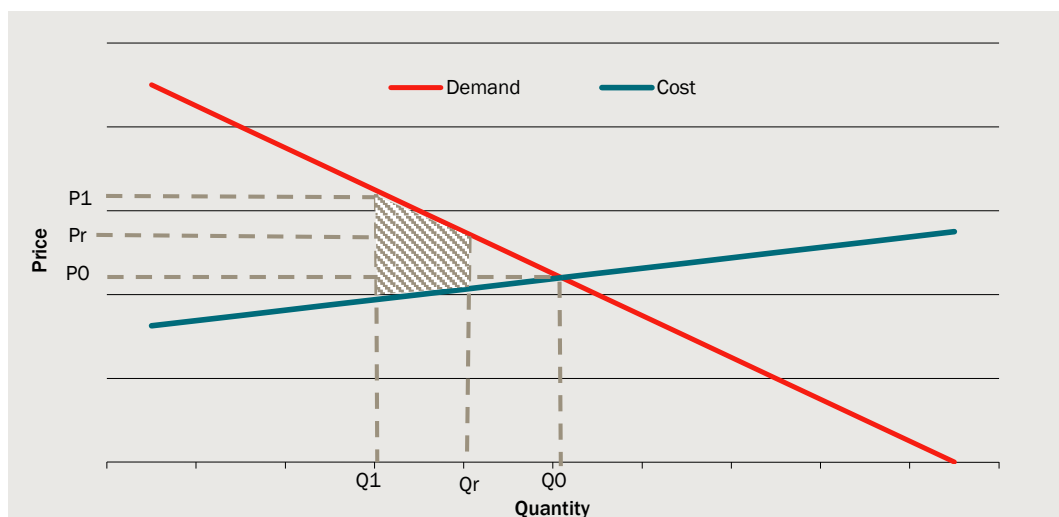
- 1 $P^C \leq P^R \leq P^M$ — in this case the price control moves the price closer to the regulated price and there is a net benefit to the community
- 2 $P^R \leq P^C \leq P^M$ — in this case the price control is below the competitive price and there is a combination of benefits and costs
- 3 $P^C \leq P^M \leq P^R$ — in this case the price control is above the price that would be charged by the supplier with market power and has no impact (except administration costs).

The likelihood of setting a price control that has benefits depends on the information available to the regulator and the nature of the market. In general, where there is a substantial amount of market power then the gap between P^C and P^M is larger and there is a greater likelihood of a beneficial regulatory price. Otherwise there is a greater likelihood of either putting in place non-binding price controls (scenario 3) or price controls below competitive prices.

There may be asymmetric effects of getting price controls wrong, particularly where this may lead to suppliers withdrawing from the market (or reducing their quality of service provision). Price controls may also lead to cross-subsidisation across markets, which also has negative economic welfare implications.

In case 1, the price set by the regulator (p_r) is between the efficient price (p_0) and the price that the supplier would have charged in the absence of the price controls (p_1). In this case, price regulation moves the price closer to the efficient level. Price regulation therefore delivers a benefit to the community, equivalent to the shaded area in chart 2.3.

2.3 Welfare impacts of price controls – case 1



Source: The CIE.

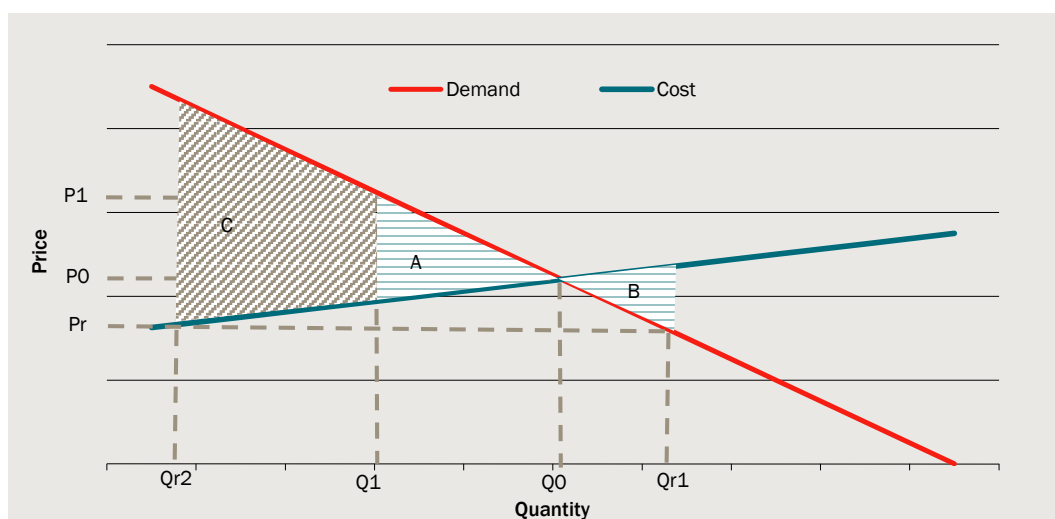
In case 2, the price set by the regulator (P_r) is below both the price that a supplier with market power would charge in the absence of price controls (P_1) and below the efficient price (P_0). In this case, the impact of price regulation is ambiguous. Since the price set by the regulator is below the marginal cost of supply, the supplier would choose to supply only Q_{r2} units, less than the Q_1 units supplied in the absence of price controls. This

would impose a welfare loss on the community equivalent to the green shaded area (area C).

However, where the supplier is required by regulation to continue to supply all consumers who demand the service at the regulated price — as is the case with Telstra — quantity Q_{r1} would be supplied. The welfare impact of this would be ambiguous. There is a welfare gain in reducing the price down towards the efficient price, equivalent of the shaded area A. Over this range, the benefits to consumers from lower prices outweigh the losses to suppliers. However, where the price is pushed even lower, the additional costs to the supplier start to outweigh any additional benefits to the supplier, resulting in a net loss to the community (area B). In this case, whether the price controls deliver a net benefit or cost to the community depends on whether Area A is larger than Area B.

Importantly, the dynamic cost of regulators setting a price that is lower than the cost of supply are likely to be much higher than the static cost shown in the chart. In particular, this situation is unlikely to be financially viable for the supplier in the longer term. Where this ultimately leads to bankruptcy, this can be quite disruptive for customers, supplier and shareholders and potentially the government. The California electricity crisis in 2000 and 2001 demonstrates the potential cost to the community of this type of regulatory error (see box 2.6 for further details).

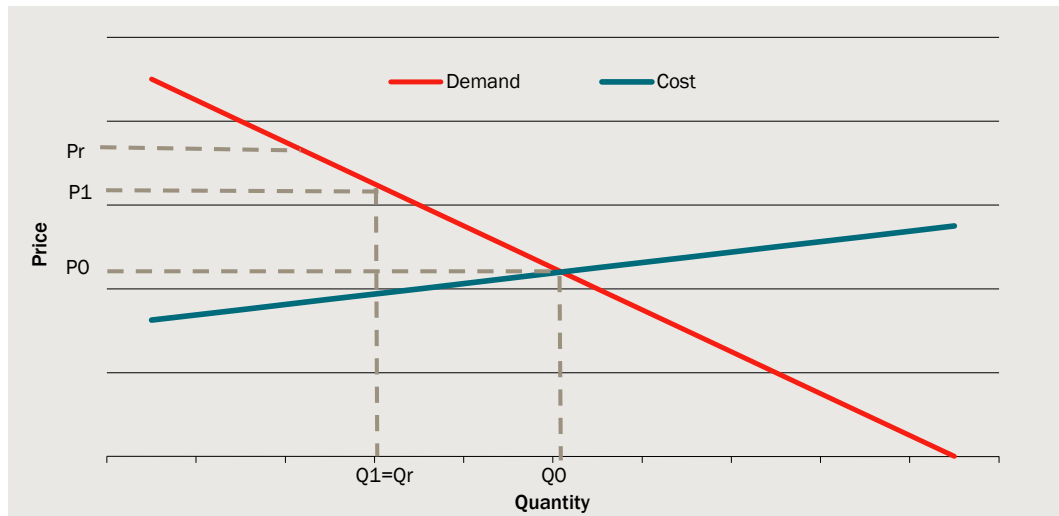
2.4 Welfare impacts of price controls — case 2



Source: The CIE.

In case 3, the price set by the regulator is above the price that a supplier would charge in the absence of price controls. This could potentially indicate (although not necessarily) indicate that the supplier does not have significant market power. In this case, the price regulation has no welfare impact because the actual price charged is the same price that would have been charged in the absence of price controls (P_1).

2.5 Welfare impacts of price controls — case 3



Source: The CIE.

A key point from this analysis is that price controls will deliver a net benefit to the community only if the regulated price is somewhere between the (unknown) efficient price and the price a supplier with market power would choose in the absence of the price controls. This may be a fairly narrow range if there is little market power.

The above static examples also do not take into account some other factors that complicate the task of regulators in setting an efficient price. These include the following.

- Rapid changes in market conditions — where market conditions change rapidly, regulators can be slow to respond.
- Differences in costs across services areas — where the cost of providing a service varies across service areas, this can complicate the task of regulators significantly.

Other impacts of price controls

In addition to the welfare effects outlined above, price controls can have a range of other impacts. These impacts include the following:

- Administrative costs for the regulator and regulated businesses — the regulatory process imposes costs on the regulator. It may also impose administrative costs on regulated businesses, such as complying with information requests, preparing submissions and other administrative tasks. While more sophisticated regulatory frameworks are more likely to set a price that improves social welfare (i.e. case 1 above), the administrative costs for both regulators and regulated businesses will also be higher. Where the welfare improvement from price regulation is relatively small, they may be outweighed by the additional administrative costs.
- Less competition — where the regulated price is set close to or below the cost of supply, there is little incentive for new firms to enter the market. A lack of competition can potentially have the following consequences.
 - Lower quality service — where there is less competition, there is less incentive for incumbent suppliers to provide a high quality of service

- Less product variety
- Perpetuate the need for retail price controls — there is a risk price regulation can become a self-perpetuating system, in which price regulation leads to a lack of competition, driving the need for continuing price regulation ⁶
- Where price controls are retained in a competitive market, the AEMC notes the following risks.⁷
 - Creating a focal point — if retailers base their market offers only in relation to regulated price, market innovation can be impeded.
 - Risk of tacit collusion — a regulated price may enable retailers to set a very similar market price without active collusion.

Regulated prices can also be slow to respond to rapid changes in market conditions. The California electricity crisis of 2000 and 2001 demonstrates that these costs can potentially be large (see box 2.6).

2.6 The California electricity crisis

In 2000 and 2001, the US State of California suffered major disruptions to its electricity supply. Retail price controls were one factor that contributed to this situation, among several others.

The unregulated wholesale price for electricity began to increase sharply from mid 2000. However, retail price controls prevented retailers from passing on this increased cost onto consumers. As a result, the two major retailers Pacific Gas and Electric and Southern California Edison began to lose large amounts of money — reportedly around \$50 million per day by December 2000. With the retailer's requests to the regulator to increase the retail price either refused or deferred, the retailers became unable to meet payments to suppliers and on some financial obligations by January 2001.⁸

With the two major retailers effectively insolvent, wholesalers began to refuse to offer supply. The resultant rolling black-outs during this period were disruptive for businesses that rely on a reliable supply of electricity and inconvenienced millions of households. Ultimately, the State of California (through the California Department of Water Resources) was ultimately required to step in to maintain supply at a high cost to taxpayers.

⁶ Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales*, Final Report, 3 October 2013, pp. 59-60.

⁷ Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales*, Final Report, 3 October 2013, pp. 59-60.

⁸ See Joskow, P.L. California's Electricity Crisis, National Bureau of Economic Research, Working Paper 8442, August 2001, pp. 26-42.

General parameters of cost benefit analysis

The costs and benefits of government action must be assessed against a plausible baseline. The baseline is what would have happened without government action: in this case, what would have happened without retail price controls.

Benefits and costs are also generally considered over time. We estimate the costs and benefits over a five year period. The time period can matter where there are large upfront costs in exchange for a stream of benefits over time.

Where the costs and benefits are estimated over time, it is also necessary to discount future benefits and/or costs using an appropriate discount rate. A discount rate of around 7 per cent is generally considered appropriate. The discount rate makes a significant difference for projects where up-front costs are substantial and benefits accrue over time. For regulatory measures, it is less important and we do not show results under alternative discount rates.

Social equity considerations

The retail price controls also include objectives that relate to social equity. In many cases, net social costs are imposed in achieving social equity objectives. This is not to say that these objectives are not valid. Cost benefit analysis can assist in providing information on the net cost of achieving social equity objectives and how this can be done at least cost. However, cost benefit analysis cannot inform trade-offs between social equity objectives and costs.

This report seeks to identify a clear social equity objective related to the provision of telecommunications services and then uses this to consider options for policy interventions.

Other issues

The Australian Government is committed to rolling out an open-access, wholesale-only telecommunications network that will be available to all access seekers on transparent and non-discriminatory terms.

The National Broadband Network (NBN) is for people in Australia to have access to data download speeds of 25 to 100 megabits per second (Mbps) by the end of 2016, and between 50 and 100 Mbps by the end of 2019 in 90 per cent of the fixed line footprint.

While it is agnostic on technology, consistent with NBN Co's Strategic Review, the NBN will utilise fibre to the node, fibre to the premises and HFC technology, with the remaining premises served by a combination of next-generation fixed wireless and satellite technologies.

This network will replace Telstra's existing copper network on which price controls are imposed, rendering them redundant when the network is completed. Whilst some price

controls also apply to the National Broadband Network these are beyond the scope of this report.

The analysis in this report covers a five year period. We therefore anticipate that retail price controls for Telstra's services provided over the copper network will remain relevant for many areas for part of this period.

3 *Review of retail price controls over the past two years*

In this chapter, we review the impact that the retail price controls have had over the past two years.

What would have occurred in the absence of retail price controls?

As discussed above, a key element of cost benefit analysis is establishing a baseline/counterfactual — what would have occurred in the absence of retail price controls? It is against this counterfactual that the costs and benefits of the policy intervention are estimated.

The counterfactual cannot always be observed, and hence development of the counterfactual is not necessarily straightforward. For the retail price controls, we consider that there is strong evidence that in the absence of retail price controls prices would have been largely the same. In particular:

- The prices charged by Telstra are below the price cap for each basket of services. This means that the price cap cannot have acted as a constraint on Telstra.
- The evidence suggests that Telstra would retain nationally consistent pricing regardless of this requirement.

Note there may have been minor differences in pricing in the counterfactual, such as for charities and schools. These are a very minor part of the retail price controls.

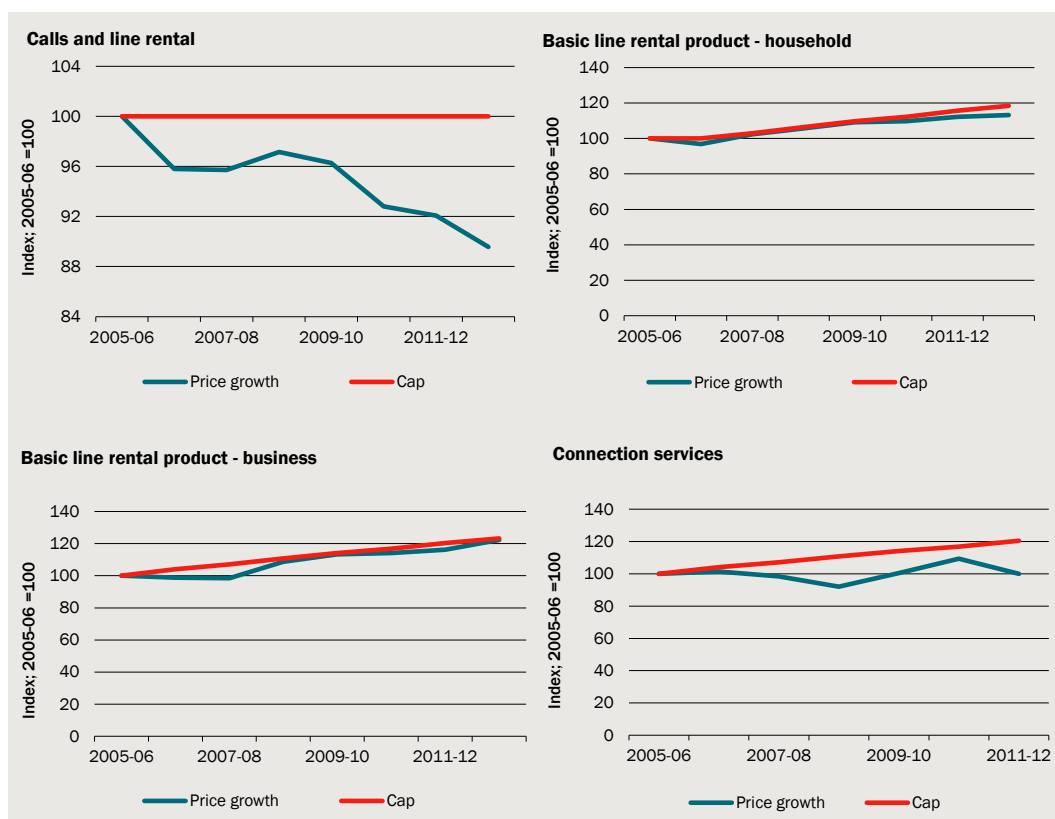
Actual prices are below the price cap

Chart 3.1 compares the actual prices charged by Telstra with the price cap. In all cases, actual prices are below the cap that Telstra is permitted to charge. In some cases, the price Telstra charges is well below the price cap. This provides strong evidence that the retail price controls have had no impact over the past few years (i.e. case 3 from chapter 2).

The largest basket of services is in basket 1, which comprises over \$3 billion worth of revenue. In comparison, basket 2 comprises \$12 million of revenue and basket 3 comprises \$5 million of revenue.⁹

⁹ Information provided by Telstra.

3.1 Comparison of regulated and actual prices



Data source: The CIE.

Within basket 1, prices for calls have rapidly reduced and prices for line rentals have gradually increased (table 3.2). Note that there is considerable complexity in seeking to allocate revenues to alternative products as most people purchase bundles of telecommunications products (and this also often includes a broadband bundle). This matches the finding that baskets 2 and 3 have increased at a rate more closely related to their caps than has basket 1.

3.2 Price changes in basket 1

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Local calls	-6.5	-0.2	2.6	-0.8	-28.3	-6.8	-2.5
Trunk calls	-6.2	-1.1	1.6	-0.1	-16.9	-6.3	-13.3
International calls	-8.3	-3.1	-1.4	-10.1	-13.9	-12.3	-20.7
Line rental	-1.5	-0.9	1.3	-0.7	12.5	3.7	3.0
Total	-4.2	-0.1	1.5	-0.9	-3.6	-0.8	-2.7

Source: ACCC compliance reports.

- **Price caps for each of the four baskets have had no impact on Telstra's prices over the period 2012 onwards. This is evidenced by Telstra charging prices below the allowable price caps.**

Would Telstra have charged different prices in regional areas?

The retail price controls also include a number of side constraints, outside of the price controls applying to the four identified baskets of services. The most important of these side constraints is the requirement that regional areas are charged a price equal to or below that in metropolitan areas.

The above charts suggest that overall the price caps have not constrained Telstra's pricing decisions. However, it is possible that in areas where there is less competition – such as regional areas — prices may have moved differently in the absence of price caps. This raises the possibility that prices for some services may have been higher in some areas in the absence of the price controls.

Telstra has argued that there are commercial reasons why they would charge a uniform price across the country, even in the absence of the price controls. In particular, differential regional pricing would increase the complexity of its operation and therefore impose higher administrative costs, for minimal benefit.

While it is not possible to know the counterfactual with certainty, we test this argument against evidence from a range of sources. Our view is that few telecommunications operators seek to regionally differentiate prices, either in Australia or around the world. This is despite variations in costs. Nor does Telstra differentiate where it has the ability to do so. For these reasons, we consider it reasonable that Telstra would have continued to maintain nationally consistent pricing in the absence of retail price controls.

We also note that costs of providing services are very different across different geographic areas of Australia (Attachment B, prepared by Analysys Mason). Hence if Telstra did deviate from national pricing, this would likely make prices more closely aligned to costs rather than reflecting the use of market power.

Pricing of other telecommunications services in Australia

The pricing behaviour of other telecommunications that operate in the Australian market may provide an indication of the likelihood that Telstra would have charged a uniform national price in the absence of the price controls. We examined the pricing policies of 16 telecommunications companies (as set out in table 3.3) and found that in all cases, these companies charged uniform prices for fixed line voice services within their network/coverage area (table 3.3).

All companies provide the same price for fixed line voice services. This provides support for Telstra's argument that they would apply uniform national prices even without the price controls. However, there are some caveats.

- The coverage over the companies examined varies significantly across carriers. It is not clear that we can extrapolate these findings to Telstra which operates nationwide. For example, some companies will only operate in metropolitan areas.
- There may be different discounting incentives applied in different areas depending on how competitive the local market is. We do not think that Telstra would necessarily be constrained from also doing this in different regional areas through marketing arrangements.

3.3 National uniform pricing by telecommunication carriers

Carrier	Nationally consistent pricing (yes/no)
AAPT	Yes
Club Telco	Yes
Dodo	Yes
EFTel	Yes
Engin	Yes
linet	Yes
Internode	Yes
iPrimus	Yes
One Telecom	Yes
Optus	Yes
Spin Tel	Yes
Telco Green	Yes
Telcoplus	Yes
TPG	Yes
TransACT	Yes
Westnet	Yes

Source: The CIE based on web searches of company plans.

Note that not all companies charge the same price for other services. There is regional differentiation of bundled services including broadband in some cases.

We have also examined pricing of other telecommunications services, such as mobile and Telstra services that are not required to be uniform (such as standard national calls and international calls and line rentals outside of the most basic package). These are also nationally consistent.

3.4 Nationally uniform pricing in other telecommunications markets

Service	Nationally consistent pricing and services (yes/no)
Mobile – Telstra	Yes
Mobile – Optus	Yes
Mobile – Vodafone Hutchison Australia	Yes
Telstra – standard national	Yes
Telstra – international	Yes
Telstra – voice bundles	Yes

Source: The CIE based on web searches of company plans.

Note that wholesale regulated prices are the same across Australia for wholesale line rental. This may be one reason why prices are consistent for voice services. However, Analysys Mason consider that retail costs are also likely to be different across different geographic areas (see Attachment B).

Pricing in other countries

Analysys Mason investigated the extent to which other countries have geographically differentiated prices for either wholesale or retail services in Europe and Canada.¹⁰ This work focused on cases where an operator has different prices by region for the same definition of service.

■ **Analysys Mason found that vast majority of EU markets have no geographic differentiation for retail prices for telephony services.**

There were some instances of geographically differentiated retail prices, including several instances at the retail level. These are summarised in table 3.5. Differentiation of prices at the retail level only occurs where a country has sub-national incumbents — that is prices are different because the services are provided by different companies, just as is the case in Australia for electricity.

There are countries (apart from Australia) with a national incumbent and geographically differentiated wholesale pricing, but these are for next-generation network services.

3.5 Examples of geographically-differentiated prices for telephony services

Country	Service	Description
Retail		
Finland	Voice and broadband services	Prices vary by region under Finnet, since the company is structured as more than twenty locally owned telephone companies (each with their own prices) with a national long-distance carrier . Sonera also has de-averaged copper unbundling charges.
Brazil	Voice call services per minute	Prices for several fixed voice call services are price-regulated and are set differently by sector, of which there are 31 in Brazil .
Canada	Business access services	The local carriers (ILECs) operate in specified parts of Canada, whose communities are subdivided into several Bands based on the number of active lines in that community. ILECs can request that the regulator permit de-averaging of prices for services in different bands. For example, in 2013 NorthWestel was permitted to de-average its prices between two Bands in its network footprint for several baskets of services . They can also request de-averaging of their cost bases between bands for the purposes of the government subsidy calculation .

¹⁰ Analysys Mason, *A consideration of geographically differentiated costs of telecoms services*, Report for the CIE, 31 March 2014, pp. 8-9.

Country	Service	Description
Russia	Voice services	The Ministry of Communications (the regulator) is responsible for policy development. However, The Federal Tariff Agency of Russia is the organisation actually responsible for price regulation. It regulates the price ceiling for both business and residential services. The ceiling can be determined separately for a region as well as for an operator. For example, the tariffs are published for several services and regions . These can then be amended over time.
Wholesale prices		
Netherlands	Fibre unbundling (ODF Access)	Charges on the Reggefiber network varied by area, but since the start of 2013 have been national prices.
Sweden	Unbundled access to fibre networks	Price of this service is set differently for five geotypes.
Canada	Ethernet access	In 2013, NorthWestel were permitted to de-average their prices for Ethernet access in two bands in their network footprint.

Source: Analysys Mason.

CIE assessment

On balance, based on the available evidence it seems likely that Telstra would have maintained uniform pricing across the country, even without the price controls. Nevertheless, there is some possibility that Telstra may have charged higher prices in regional and rural markets in the absence of the price controls.

Even if Telstra would have charged different prices in regional areas, compared with metropolitan areas, this could lead to a more efficient outcome if the differential prices reflected differences in the cost of supply. In this case, the impact of the price controls would have been to introduce cross-subsidies from metropolitan to regional users. This would have resulted in a net cost to the community.

On the other hand, if in the absence of the price controls, Telstra would have been able to raise prices in regional areas to a level that allowed it to earn above-normal profits from those users, then price regulation may have delivered a net benefit to the community.

Other side constraints

Other side constraints contained within the Determination include:

- the price of untimed local calls must not exceed 22 cents (GST inclusive);
- Telstra must offer a line rental to schools and charities at a price at or below the standard line rental offered to residential customers;
- calls in and between adjacent extended zones are required to be charged as untimed local calls; and
- the price of untimed local calls from public payphones must not exceed 50 cents.

In general, commercial constraints and other regulatory arrangements are likely to have ensured that these price controls had little impact on Telstra's pricing behaviour.

Constraints on untimed local calls

The price controls prevent Telstra increasing the price of untimed local call above 22 cents (GST inclusive) for each call (other than a local call made from a public payphone, or a local call made using a calling card).

This constraint does not apply to plans where Telstra offer a discount on standard line rental (where standard line rental for residential and charity customers is the rental paid by the largest number of residential customers at any time). This allows Telstra to offer products that trade-off the prices of the line rental and untimed local calls. The price of untimed local calls varies significantly in plans offered by Telstra. In its discount plan, the price is 30 cents per local call, while in other plans currently offered the price is zero.

The price constraint on local calls does not appear to be binding on Telstra's behaviour, as it charges well below the 22 cents where this cap applies. This indicates there are sufficient constraints on Telstra to prevent it from raising the price of untimed local calls without some offsetting reduction in the line rental. Note that the arrangement where calls are not timed is also unlikely to change and the trend is for national calls also to be included as free within plans.

Prices offered to schools and charities

It has not been possible to verify whether Telstra would have provided line rentals at a higher price to schools and charities in the absence of the price controls. However, as above, we consider it likely that there were sufficient constraints on Telstra to ensure that Telstra does not charge schools and charities a price that exceeds the cost of supply, at least in most urban areas. We also consider it likely that Telstra would have maintained nationally consistent pricing, even in the absence of price controls. Furthermore, schools typically have access to the rates available under commercial contracts negotiated by either State and Territory governments, or religious organisations e.g, the Catholic Church.

If subsidised pricing arrangements for particular groups such as schools and charities is a desirable objective then this would be better implemented as a direct subsidy from Government, rather than forcing a private company to subsidise some customers.

Extended zone call charges

Calls in and between adjacent extended zones are required to be charged as untimed local calls by Telstra. This arrangement is mirrored in a contract between Telstra and the Telecommunications Universal Service Management Agency (TUSMA), which contracts with Telstra to provide untimed local calls in (and to adjacent) extended zones. This contract costs in the order of \$1.7 million per year.¹¹

It is possible that Telstra would charge a different price for untimed local calls in extended zones as for other areas in the absence of retail price controls. However, we previously argued that Telstra is likely to have charged a nationally consistent price, even

¹¹ See TUSMA website, http://www.tusma.gov.au/registers?result_148510_result_page=2.

in the absence of price controls. It is very unlikely Telstra would seek to put in place a differential pricing arrangement for local calls in extended zones, which cover a small amount of Telstra's revenue.

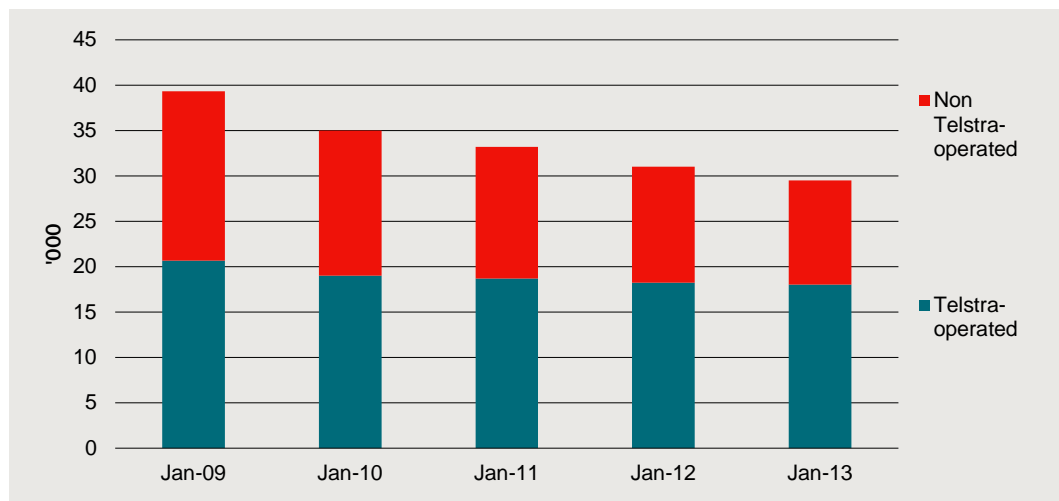
The presence of bundles that offer unlimited national calls also makes arrangements specific to extended zones redundant, as customers in these areas can choose a bundle that limits costs in any case.

Payphones

The price controls prevent Telstra from charging a price of more than 50 cents for each untimed local call made from a public payphone.

The number of public payphones has decreased by around 25 per cent over the past five years (chart 3.6). Over this period, the number of Telstra-operated public payphones has declined by around 13 per cent, while the number of non Telstra-operated public payphones has declined by around 38 per cent. This is likely to reflect competition from mobile phones.

3.6 Number of public payphones



Data source: ACMA, Communications report 2012-13, p. 63.

The declining number of public payphones — particularly for non-Telstra operators — indicates that payphones are becoming less viable. Nevertheless, Telstra has a contractual obligation to supply, install and maintain public payphones and supply payphone carriage services so that payphones are reasonably accessible to all people in Australia on an equitable basis.¹² This contract costs in the order of \$44 million per year. However, the contract does not specify what price Telstra may charge.

Retail price controls restrict payphone prices for local calls but do not appear to determine prices for other calls.

¹² TUSMA website, http://www.tusma.gov.au/register/list_id=148510&result_148510_result_page=2, accessed 28 April 2014.

Payphones operate (often) in conjunction with competition from mobile phones. The declining viability of public payphones suggests that there is no need to regulate prices — if anything, price regulation may further reduce the viability of payphones. More likely, pricing of payphones would have remained similar with or without retail price controls.

Assessment of costs and benefits of price controls

The costs and benefits of price control include:

- the welfare impacts — this reflects changes in retail prices as a result of retail price controls and how this compares to the underlying costs of providing services;
- the administrative costs of complying with retail price controls; and
- other impacts, such as changes in the way that Telstra makes decisions about pricing.

Welfare impacts

Since the amendment in June 2012 and projecting to June 2014, retail price controls are unlikely to have had any discernible impact on Telstra's retail prices. That is, the current price controls fit into case 3 in chapter 2.

The ACCC estimated in 2012-13 that Telstra was below the price caps for the three baskets by 10.2 per cent, 4.3 per cent and 0.4 per cent and did not increase the price for connection services, despite being allowed to increase these by 2.3 per cent.¹³

Our assessment is also that over this period Telstra would have maintained nationally consistent prices.

Note that constraints on prices charged to charities and schools may have affected Telstra's pricing. This is not able to be verified and is not a material part of retail price controls. (The ACCC has previously recommended that requirements for schools be discontinued.¹⁴)

Our assessment is that there have therefore been no welfare impacts from retail price controls.

Note that there could have been significant welfare impacts if retail price controls had constrained Telstra's prices. In this case, price controls may:

- restrict competition in retail markets for fixed line telecommunications; and
- distort usage and investment decisions in competing services, such as mobile telephony.

The ACCC has noted these issues previously.¹⁵

¹³ ACCC 2012, *Telstra's compliance with the retail price control arrangements — 1 July 2012 to 30 June 2013*, Table 1 and Table 2.

¹⁴ ACCC 2010, *Review of Telstra's retail price control arrangements*, March.

¹⁵ ACCC 2011, Submission to DBCDE's review of the retail price control arrangements, December.

While these impacts have not occurred over the most recent two years, it is possible that retail price controls could have these impacts in the future.

Administration costs

Telstra and the ACCC have provided their administrative costs related to retail price controls.

- The ACCC have indicated that the Telstra retail price controls compliance takes 59 hours per year plus \$1000 to \$1300 in printing costs
- Telstra have indicated compliance costs of \$246 000 per year (as set out in table 3.7)

The significant costs for Telstra reflect that compliance requires a process for breaking up bundled services and allocating revenue between regulated and unregulated products. The ACCC requirements for the compliance methodology require a series of adjustments to Telstra's standard internal accounts.

The total administrative costs are therefore in the order of \$250 00 per year or \$500 000 over two years.

3.7 Telstra's administrative costs

Item	Methodology	Approx Expense
		\$
Monitoring of Price Control movements	100% of 1 FTE	124 215
Management overhead of ensuring Price Control targets are met	5% of 1 FTE	6 211
Corporate account to re-allocate subscription plan revenue to line access	1 FTE for 7 days	3 344
Ernst & Young Audit Expense	FY13 Audit Invoice	50 000
Regulatory Affairs - Advising on Price Control Issues	50% of 1 FTE	62 108
Total		245 878

Source: Telstra.

Other impacts

There may be other less tangible impacts of retail price controls, including:

- delays in product release;
- shifting product focus to meet retail price controls rather than to provide a product that customers would like — for example for changes to line rental Telstra must consult with the Low Income Measures Assessment Committee, report this to ACCC and await confirmation from ACCC that consultation has been appropriate; and
- reducing product innovation by Telstra.

Summary of costs and benefits of the amending determination

The retail price control arrangement put in place in 2012 has had no discernible impact on retail prices. Instead it has imposed net costs through additional administration.

The net costs of the regulations are estimated at \$0.5 million over two years (undiscounted).

Note that though the regulation has *ex post* had a small net cost this outcome may not have occurred. As discussed in further detail in subsequent chapters, if the retail price controls had significantly constrained Telstra's behaviour then this may well have led to much larger net costs than actually occurred.

Assessment of achievement of objectives

In table 3.8 we provide an assessment against the following questions.

- Were the price controls necessary to achieve the objectives of the regulation (i.e. would the objectives have been achieved even without the price controls)?
- If the price controls were considered necessary, were they effective in meeting the objectives?
- Were the price controls likely to be the most efficient approach to achieving the objectives (i.e. could the objectives have been achieved using a lower cost approach)?

Overall, we consider it unlikely that the price controls were necessary to achieve the objectives.

While unlikely, it is possible that Telstra may have charged a higher price in regional and rural areas as costs are higher in these areas. It is therefore possible that the price controls promoted nationally consistent prices. The promotion of nationally consistent prices is not closely related to any well-defined definition of social equity. As discussed in greater detail in subsequent chapters, the level of social disadvantage is not closely related to geography.

3.8 Assessment against objectives

Objective	Assessment
Addressed a lack of competitive tension in Telstra's fixed-line service pricing	<p>The fact that prices are below caps indicates that there has been competition to Telstra's fixed line voice services, either through provision of fixed line voice services over Telstra's infrastructure or through competition from mobile and Voice over Internet Protocol (VoIP).</p> <p>In regional and rural areas, there probably is a lack of competitive tension. However, maintenance of nationally consistent prices appears to be standard practice for services and this means that competition in urban markets is sufficient to constrain behaviour in regional markets.</p>
Promoted greater social equity in ensuring affordability of access to services	<p>It is likely that uniform national prices for fixed line services would have occurred in the absence of retail price controls.</p> <p>Uniform national pricing for fixed line voice service is a very broad measure for achieving social equity, as discussed in greater detail in later chapters.</p>
Ensured that efficiency benefits are passed on to customers	<p>Since the actual prices charged by Telstra were below the regulated price cap for all bundles, the price controls were not necessary to ensure that efficiency benefits are passed onto consumers.</p>
Safeguarded low-income consumers	<p>Since the prices charged by Telstra are below the regulated price cap, the price controls were not necessary to keep the price of fixed line services affordable.</p> <p>Price controls are also unlikely to be the most efficient approach to safeguarding low-income consumers. More targeted approaches – such as specific subsidies – are likely to be much more efficient.</p>

Source: The CIE.

Have retail price controls acted as a barrier to competition?

Retail price controls have had no discernible impact on retail prices. In this case they have not acted as a barrier to competition.

Potentially retail price controls could have acted as a barrier to competition. For example, if regulated wholesale prices had increased then retail price controls may have made competition commercially unviable. This did not eventuate from 2012 to 2014.

Retail price controls also potentially act as a barrier to competition in regional areas, because prices are nationally consistent, wholesale line rental is nationally consistent but retail prices are different. Again, we consider that this is only a potential barrier and Telstra would have maintained nationally consistent pricing regardless of the presence of retail price controls from 2012 to 2014.

4 *Current state of competition for retail telecommunications voice services*

Price regulation is typically required only in markets where there is insufficient competition to ensure an efficient price. A key element of this review is therefore establishing the level of competitive constraints on Telstra's behaviour to ensure that Telstra cannot exploit market power and charge prices that exceed the efficient cost of supply, including a reasonable rate of return on its capital.

Defining the market

Telstra's retail price controls relate specifically to fixed line voice services. Defining a market can be a complex and contested exercise. The framework used by the ACCC when deciding whether to approve mergers provides useful guidance on identifying the markets that are relevant to retail price controls (see box 4.1).

Based on the ACCC's approach, the markets relevant to the retail price controls could include the following.

- The market for fixed line voice services
- The market for bundled services that include fixed line voice services
- The markets for close substitutes — this could include:
 - mobile voice services
 - Voice over Internet Protocols
 - services over satellite.

In assessing the level of competition in these markets, it will also be necessary to consider the geographic dimensions of these markets. In its recent Declaration Inquiry into fixed line service declarations, the ACCC adopted a national market definition. One of the reasons for this was that Telstra (and other retailers) set prices that are uniform across Australia. To the extent that we considered it possible — albeit unlikely — that Telstra would charge a different price for regional and rural customers in the absence of the price controls, this would weaken the ACCC's argument for a national market definition. We therefore consider that it is relevant to consider the geographic dimensions of the market.

4.1 The ACCC approach to defining a market¹⁶

Under the Competition and Consumer Act 2010, a market includes goods or services that are substitutable for, or otherwise competitive with, the goods and services under analysis. The ACCC focuses on both the product and geographic dimensions of substitution in characterising a market.

Substitution can be either:

- Demand side substitution — this is a customer's ability to switch to an alternative product in response to an increase in the price, or decrease in the service quality of the product. For mergers, the likelihood that a product will be considered a demand-side substitute, the ACCC considers:
 - The characteristics or functions of the product (the product dimension of a market)
 - The availability of the product for purchase, and use, at the relevant location (the geographic dimension of the market).
- Supply side substitution — a product may be considered a supply-side substitute if in response to an increase in the price of the product under consideration:
 - The production facilities and marketing efforts used for that product can be switched quickly and without significant investment to supply a demand-side substitute for the product under consideration (the product dimension of the market)
 - The distribution network used by the product can be modified quickly and without significant investment to supply users of the product at their present location or within a distance they would likely travel (the geographic dimension of the market)
 - It would be profitable for the current suppliers of the product to make these changes — that is, the profits earned on the assets in their current use would be less than if they were switched to supply a demand-side substitute for the product under analysis.

Characterising the market

In this section, we assess the level of competition in markets relevant to the retail price controls.

The market for fixed line voice services

The price controls directly relate to the market for fixed line voice services. While it would not be viable for operators to rollout their own fixed line network to provide voice only services, Service Providers can compete with Telstra in this market, by reselling Telstra's services using the Public Switched Telephone network (PSTN). Wholesale services required include:

¹⁶ ACCC, *Merger Guidelines*, November 2008, pp. 15-19.

- Wholesale Line Rental (WLR) services — these services allow a telecommunication company to rent an active copper line from a service provider, such as Telstra, and on-sell the rented line to retail customers as part of its retail plans. The line is rented with:
 - the ability to make and receive standard voice calls (such as local, national, international, fixed-to-mobile and mobile-to-fixed calls), and
 - a telephone number.
- Local Carriage Services (LCS) — these services allow other telecommunications providers to provide local calls to retail customers without having to invest in their own exchange equipment. Instead, they use Telstra's network and switching equipment to connect their customer's phone calls.
- Public Switched Telephone network originating access (PSTN OA) service — this is made up of two services, the originating and terminating service.
 - The originating service — allows a telephone call to be connected from the caller to a point of interconnection with another network.
 - The terminating service — allows a telephone call to be carried from the point of interconnection to the party being called on another network

Voice resellers typically combine PSTN OA with other wholesale services, such as Telstra's wholesale line rental (WLR) and local carriage service (LCS) to provide customers with a package of local, long distance, international and fixed-to-mobile calls. Some examples of voice resellers include AAPT, TPG and many other smaller retail service providers. These three services are typically purchased in a bundle from Telstra.

The second largest telecommunications company operating in Australia, Optus, has exited the consumer fixed resale market — that is reselling Telstra's services — because it was not profitable.¹⁷ (Optus continues to offer fixed voice services over their own infrastructure and using the unbundled local loop.)

In the absence of Telstra's retail price controls, the pricing of these wholesale services is expected to continue being regulated by the ACCC. Such regulation is expected to continue until the National Broadband Network is rolled out to a sufficient level.

The price of all three services have decreased over time (table 4.2). In particular:

- The price for local carriage service has dropped by around 50 per cent over recent years from 17.92 cents in 2007 to 8.9 cents in 2014.
- Wholesale line rental prices have been restructured to have one nationally averaged price, replacing the previous home line and business line arrangement. After increasing from 2007 to 2010, the price is now lower than what it was in 2007.
- Prices for originating access are charged per call at a rate in cents per minute. The nominal price has decreased from 1 cent per minute in 2007/08 through to 2010/11 to 0.95 cents per minute in 2014, following no change in nominal terms since 2007/08.

¹⁷ IBISWorld 2013, *Wired network telecommunications operations in Australia*, Industry Report J5801, p. 26.

4.2 Prices for fixed line wholesale inputs

Services	2007/08	July 2008 to July 2009	August 2009 to December 2010	Jan 2011 to July 2011	1 July 2011 to 30 June 2014
Local Carriage Service (cents/call)	17.92	17.36	17.36	9.1	8.9
Wholesale Line Rental (\$/month)	23.12 (HL) 25.84 (BL)	25.57 (HL) 26.93 (BL)	25.57 (HL) 26.93 (BL)	22.10 ^a	22.84 ^a
Public Switched Telephone Network Originating Access (cents/minute)	1.0	1.0	1.0	1.0	0.95

^a National average.

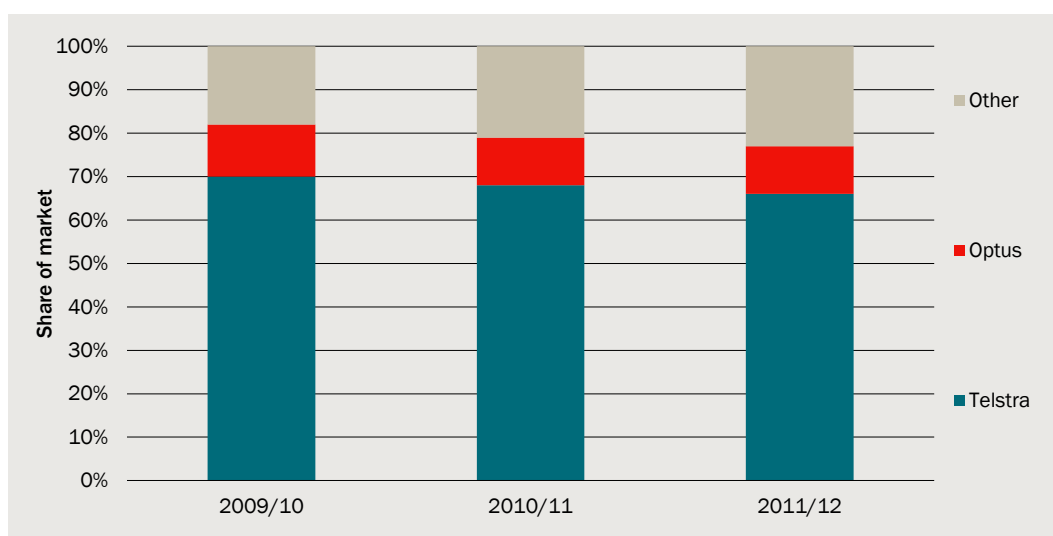
Note: HL = home line and BL = business line.

Source: ACCC fixed line declaration price reviews.

One indicator of the level of competition is market share. This is an imperfect indicator, as potential competition may constrain prices even when a company has a substantial market share. For example, Optus's decision to exit providing retail services through resale of Telstra's wholesale services because it was not profitable suggests that there is potential for entry should Telstra seek to widen the gap between wholesale and retail prices. The AEMC has also noted that one of the risks of regulating prices in a potentially competitive market is that it can become self-perpetuating; price regulation can lead to a lack of competition, which drives the need for continuing price regulation.¹⁸

Telstra remains the dominant player in the retail fixed voice market, with around 66 per cent of the market, as at June 2013 (chart 4.3). Nevertheless, this share has gradually declined over recent years, with 'other retailers' increasing their market share. Other retailers include iinet, TPG and AAPT.

4.3 Retail fixed voice services – market share



Data source: ACCC, Telecommunications reports 2011-12, p. 15.

¹⁸ Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales*, Final Report, 3 October 2013, pp. 59-60.

Based on the number of lines, Telstra shows a decreasing dominance in the provision of phone lines. The retail market is more competitive than the wholesale market, with the percentage of retail lines being provided by Telstra dropping by 10 per cent over the five years, while the wholesale market dropped 5 per cent. Since 2009, the number of phone lines in the overall wholesale market has increased, suggesting other service providers are supplying resale services to third parties. At the same time lines in the overall retail market have decreased. Overall fixed line numbers have dropped from 10.67 million in June 2009 to 10.32 million in June 2013.

4.4 Number of fixed line voice services in operation

	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13
Retail					
All CSPs (million)	9.17	9.12	9.15	9.01	8.79
Telstra (million)	7.73	7.41	7.16	6.88	6.53
Telstra share (per cent)	84	81	78	76	74
Wholesale^a					
All CSPs (million)	1.5	1.47	1.39	1.43	1.53
Telstra (million)	1.29	1.25	1.21	1.18	1.24
Telstra share (per cent)	86	85	87	83	81

^a Wholesale relates to resell products.

Source: ACMA communications 2012-13 report.

Despite declines in the number of fixed lines, fixed line services remain profitable for Telstra compared with other products such as mobile and fixed broadband. PSTN profitability increased by 3 percentage points from 2011/12 to 2012/13 (table 4.5). The levels of capital employed in providing different services differs, so this may not be a reflection of returns above economic returns.

4.5 Profitability of Telstra products – Earnings before interest, tax, depreciation and amortisation (EBITDA)

	2012/13	2011/12	Change
	Per cent	Per cent	Percentage points
Mobile	38	36	+ 2
Fixed Broadband	42	38	+ 4
Public Switched Telephone Network	63	60	+3
Data + IP	65	64	+1
Sensis	44	50	-6
Telstra Group	42	41	+1

Source: Telstra Annual Report 2013, p. 15.

Pre-selection and over-ride service providers

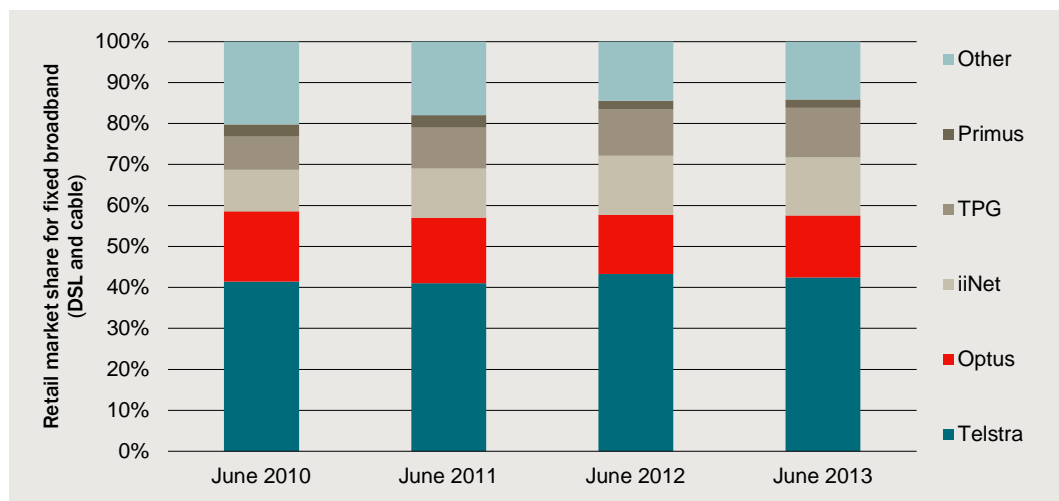
Pre-selection or over-ride service providers give an option to retail customers to have a different service provider for long distance and international calls from the line and local call provider.

These services are now decreasing as more service providers invest in their own fixed line equipment. They have had a direct influence in making the market for national and international calls more competitive, in light of retail price controls.

Other wholesale fixed line services (data based products)

Telstra's share of the market for fixed line broadband is significantly lower than its share of the fixed line voice services market. As at June 2013, Telstra holds 42 per cent of the market, with service providers Optus, iinet, TPG and Primus the next largest players with roughly similar market shares (chart 4.6).

4.6 Retail market share for fixed broadband (DSL and cable)



Note: Market share calculations are based on the number of subscribers. Totals do not add to 100 per cent in all years due to rounding.

Data source: ACCC Division 12 RKR Reports & ABS, Internet Activity Australia, June 2013 (8153.0)

This suggests a greater level of competitive tension in this market. Increasingly, service providers are using wholesale broadband equipment, in conjunction with their own equipment to offer retail customers data service in conjunction with voice services.

Fixed voice and data services can be supplied to the retail customer directly from Telstra or through other providers that purchase wholesale inputs from Telstra or others to supply the service. Unlike voice only services, providers of data services have an option to install their own equipment in the exchange called a Digital Subscriber Line Access Multiplexer (DSLAM).¹⁹ The DSLAM enables broadband services to be provided over

Digital subscriber line access multiplexers (DSLAMs) are pieces of switching equipment that aggregate voice and data traffic sent from connected consumers' (or end-users') modem ports before sending the traffic to its destination.

the copper line. The DSLAM links copper wires to a core IP network via a backhaul system.

In addition to installing DSLAMs in the exchange, service providers still require access to the copper line between the exchanges and their retail customer premises from Telstra. The wholesale services related to this are:

- the unconditioned local loop (ULL)
- line sharing service (LSS)

Unconditioned Local Loop Service

By purchasing the ULL service from Telstra, service providers are able to provide both voice and broadband services to retail customers using their own DSLAM. In terms of the voice service, the service provider has two options for supplying a voice service:

- install a voice-enabled DSLAMs and their own telephone switching equipment in the exchange; or
- use a non-voice-enabled DSLAM and relevant switching and adaptive equipment in their Internet Protocol Core. This allows them to offer end-users an IP-based voice service.

A service provider can also use the ULL to supply a naked DSL service, which is standalone broadband service, not bundled with a fixed voice service. Retail customers purchasing a naked DSL service then use a VoIP service to make voice calls.

Line Sharing Service

The LSS gives a service provider access to the data services part of the copper line. A service provider would use the LSS to supply a broadband service to a retail customer with an already activated voice service (using the voice services part of the copper line). This gives the retail customer an opportunity to purchase voice and broadband services from different providers.

Like ULL, the LSS service is unconditioned so the service provider is required to deploy equipment, such as DSLAMs, to connect to the copper wire.

Additional inputs

In some circumstances, service providers buying wholesale broadband inputs and using their own DSLAM, also buy fixed line voice inputs (WLR, LCS, PSTN OTA) instead of investing in their own voice related equipment.²⁰

The ACCC regulates prices for fixed line broadband wholesale inputs. Overall, the prices for regulated wholesale inputs have declined in real terms (table 4.7). More specifically:

²⁰ ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014.

- charges for the ULL based on geographic bands — in the recent draft declaration, the ACCC has proposed to have one price for bands 1 to 3 and reinstate a price for band 4;
- the price for band 1 has essentially increased while prices for band 2 and more significantly band 3 have decreased; and
- the prices for LSS are set in conjunction with the ULL have also reduced.

4.7 ULL and LSS prices (nominal)

	2006/07	2007/08	2008/09 ^a	August 2009 to December 2010	January 2011 to 30 June 2011	July 2011 to June 2014
	\$	\$	\$	\$	\$	\$
ULLS prices						
Monthly charge						
CBD (Band 1)	6.00	6.20	6.60	6.60	16.00	16.14
Metropolitan (Band 2)	13.70	14.30	16.00	16.00	16.00	16.14
Regional (Band 3)	27.30	28.50	31.30	31.30	16.00	16.14
Rural (Band 4)	-	-	-	-	48.00	48.19
Single connection						
1	44.00	50.10	50.40	50.40		
2	47.80	52.80	53.10	53.10		
3	54.10	57.40	57.70	57.70		
LSS prices						
Monthly charge	2.50	2.50	2.50	2.50	1.80	1.80
Connection	39.30	41.40	43.10	43.10		
Per exchange charge	704.20	752.50	784.10	784.10		

^a 1 July 2008 to 31 July 2009.

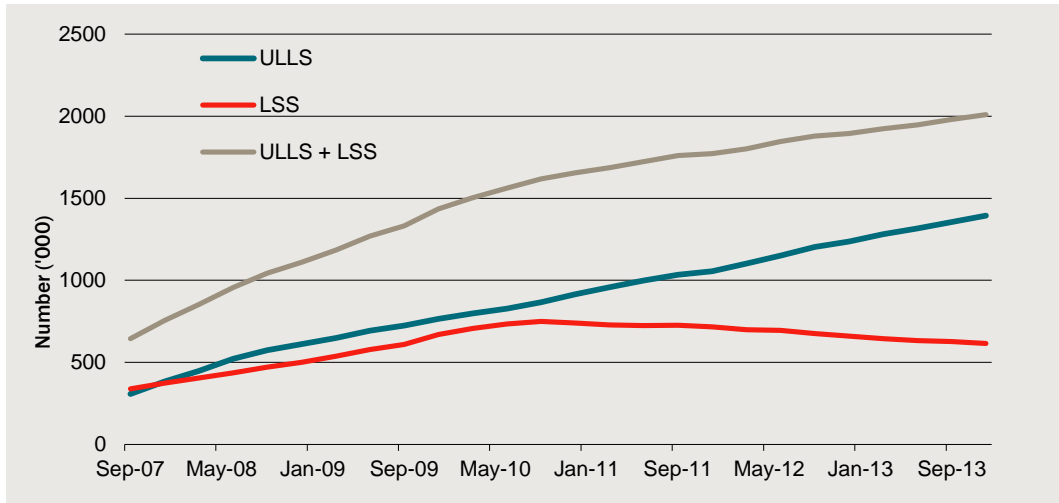
Source: ACCC, *Fixed Services Review – Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014

Chart 4.8 shows that the number of services in operation using the ULL has consistently grown, since 2007, while the use of LSS has declined since mid-2010. According to the ACCC, this is because cost effective VoIP based technology is offering high quality voice services, without the need to invest in telephone switches.²¹

The growth in the number of ULL services also demonstrates the increased investment service providers, apart from Telstra are making in fixed line infrastructure.

²¹ ACCC fixed line services inquiry- Final Report April 2014.

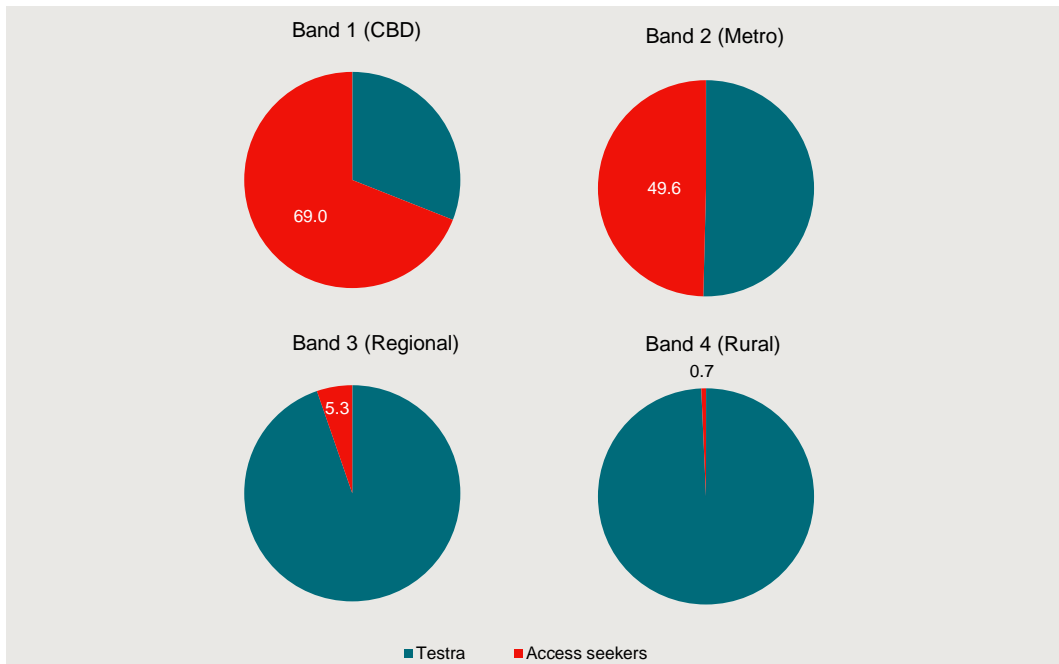
4.8 Number of ULLS and LSS services in operation (SIOs)



Data source: ACCC, CAN RKR Reports.

This investment though, is not uniform across the country. Most of the investment in ULL services by service providers other than Telstra has been in metropolitan areas (chart 4.9). In band 1 (CBD) the majority of ULL services are from service providers other than Telstra and band 2 (metropolitan areas) are split half and half between Telstra and other service providers. The situation in the regional and rural bands 3 and 4 is a very different situation. Telstra operates around 95 per cent of regional services and 99 per cent of rural services. This indicates a greater level of competition for fixed line broadband services in metropolitan areas, compared to country areas. Telstra's very high market share in regional and rural areas could also suggest that Telstra could have some degree of market power in fixed line services in regional and rural areas.

4.9 Number of ULL services in operation – Telstra v other service providers



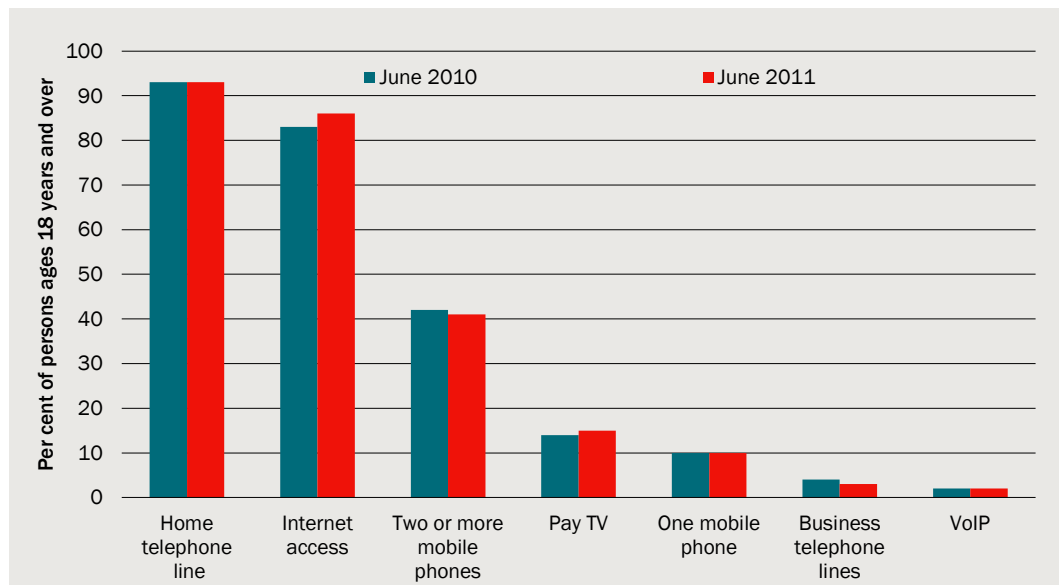
Data source: ACCC CAN RKR Reports.

Retail bundling for fixed line services

Often fixed line products are sold as part of a bundle. For instance, inet only offer their home fixed line service in a bundle with broadband, mobile broadband or dialup plans. It cannot be bought individually²².

A significant number of households bundle fixed line voice services with a fixed line broadband service (chart 4.10). The line rental monthly cost is calculated across the two products offering cheaper prices than purchasing services individually. Bundles often include free calls and data allowances included in a monthly package. Other services such as mobile phones and pay TV can be added to a bundle.

4.10 Services included in bundling arrangements



Data source: Roy Morgan Single Source, June 2012, as cited in ACMA Communications Report 2011-12, p. 39.

Competition from mobile services

The ACCC argues that some pricing features of the fixed line service are unlikely to be replicated by mobile service providers and this will limit the extent of fixed to mobile substitution.²³ However, a range of indicators suggest that mobile services are providing increasingly strong competition to fixed line services. This suggests that mobile services are a close substitute for fixed line services, albeit not a perfect substitute.

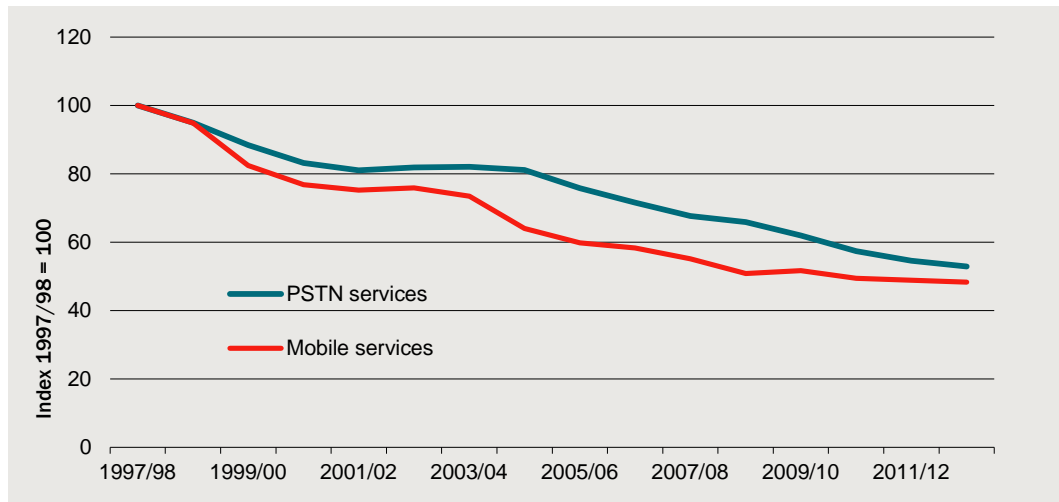
A key factor in the increased competitiveness of mobile services has been falling prices. The prices paid for mobile services directly affect the prices and volumes in the fixed line service market. Since 1997/98, the price of mobile calls has declined at a greater rate than fixed line services, although since 2009/10, the price of fixed line services has declined by more than mobiles (chart 4.11). Mobile prices adjusted for the amount of outputs

²² Inet website.

²³ ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014, p. 15.

purchased have decreased more rapidly, with the CIE finding price decreases of 8.4 per cent per year from 2006 to 2013.²⁴

4.11 Telecommunication services price index



Data source: ACCC, Changes in the prices paid for telecommunications services in Australia 2012-13, February 2014, p. 121.

The ACCC considered that the untimed local call has a pricing advantage over a mobile service, which is charged in increments²⁵. However, the structure of some mobile phone plans mean that up to a specified limit, the marginal cost of an additional phone is effectively zero.

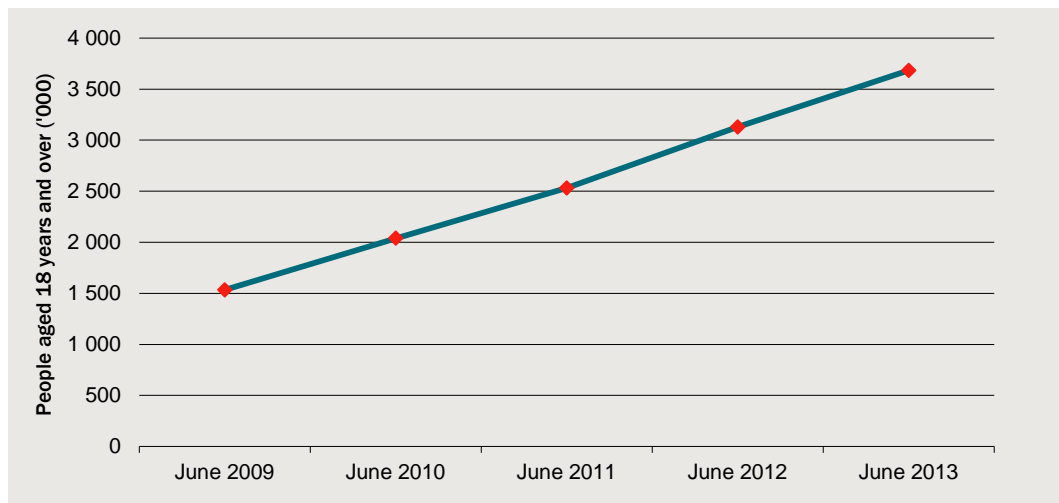
According to IBISWorld, the price competition in the mobile market means it is now cheaper for some households and business consumers to disconnect their landlines and rely on mobile services.²⁶ This is reflected in the growth in the number of mobile only households. From June 2012 to June 2013, the number of people without a fixed line phone increased from 18 per cent to 21 per cent (3.68 million) of the total adult population. Most of this group are a younger demographic being 18-34 year olds (chart 4.12).

²⁴ The CIE and Analysys Mason 2014, *The economic impacts of mobile broadband: 2006 to 2013*, prepared for the Australian Communications and Media Authority.

²⁵ ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014.

²⁶ IBISWorld 2013, *Wired network telecommunications operations in Australia*, Industry Report J5801, p. 6.

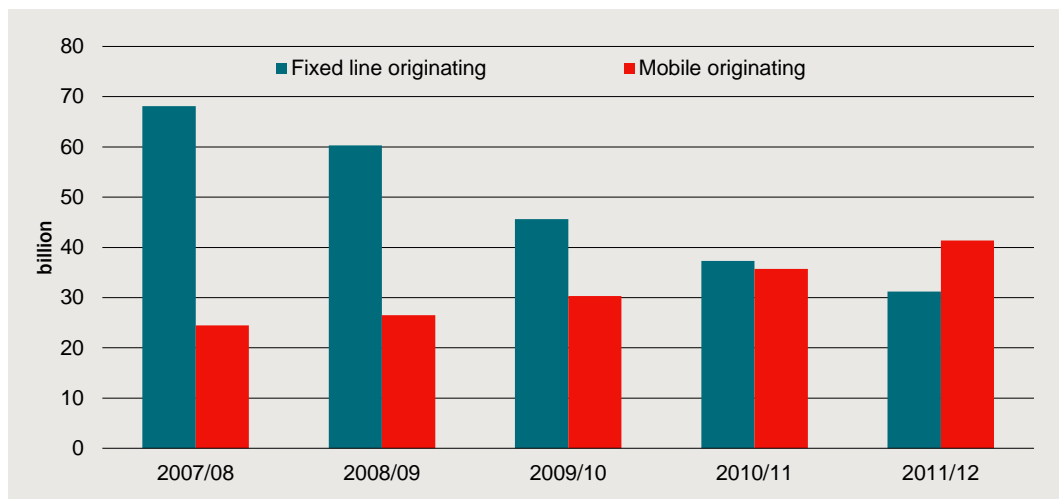
4.12 Number of people (aged 18 years and over) with a mobile only



Data source: ACMA Communications report 2012-13 (Roy Morgan Single Source)

Over recent years, there has been a decline in the overall number of voice call minutes, as well as a significant shift in the composition. In 2007/08, voice call minutes originating from a fixed lines was more than 2.5 times higher than voice call minutes originating from mobiles. By 2011/12, the number of voice call minutes originating from mobiles exceeded those originating from fixed lines for the first time (chart 4.6). This also suggests stronger competition between mobile and voice services than considered by the ACCC.

4.13 Voice call minutes



Data source: ACCC, Telecommunications reports 2011-12, p. 13.

The ACMA Communications report also shows that mobiles were the most used communication service in Australia. While the home fixed line phone still plays a role in making calls, it is less significant than it was, decreasing by 6 percentage points from 2012 to 2013.

4.14 Most used communication service – share of population

	May 2012	May 2013	Percentage point change
	Per cent	Per cent	Percentage point
Mobile phone voice calls	26	26	+3
Texting from a mobile phone	22	24	+2
Home fixed-line telephone	22	16	-6

Source: ACMA Communications report 2012-13

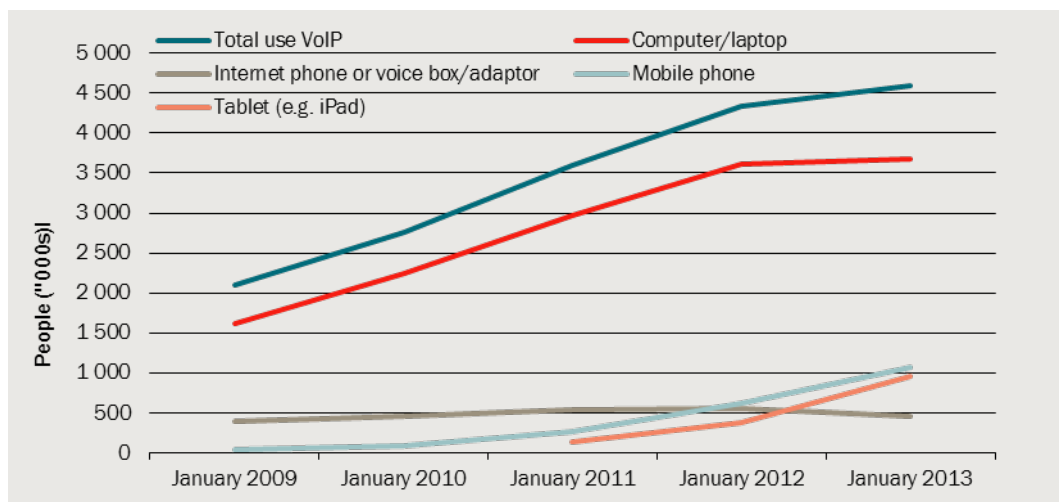
Competition from Voice over Internet Protocol (VoIP) using broadband

Voice over Internet Protocol (VoIP) is a data based product that requires a broadband speed service to operate. The use of (VoIP) is a potential substitute for fixed line voice services. The main ways to access a VoIP service are via:

- an internet phone
- computer or laptop
- mobile handset
- other mobile devices such as tablets.

VoIP services have grown significantly over recent years, suggesting increasing competition for fixed line voice services. The ways in which VoIP services are accessed is also changing. The use of an internet phone or voice box, which could be viewed as the most direct VoIP substitute to traditional voice line services, has reduced over the past year, while the VoIP over mobile networks via handsets and tablets has grown (chart 4.15).

4.15 Take-up of VoIP services by household consumers



Data source: ACMA Communications Report 2012-13 (Roy Morgan Single Source).

For households who purchase a naked DSL product, access to VoIP via an internet phone or a computer/laptop device, will be a substitute for PSTN voice services, otherwise a bundle including fixed and data services would have been purchased. The

question is how closely the two services are substitutable (see table 4.16 for a summary of the characteristics of VoIP services).

The ACCC argues that because of the low quality offered by application layer VoIP, it is a weak substitute for fixed line voice services.²⁷ Nevertheless, the increasing use of VoIP is likely to limit the ability of Telstra to increase the price of fixed line voice services to some extent.

4.16 Characteristics of Voice over Internet Protocol services

Element	Comments
Equipment	VoIP can be accessed through a number of electronic devices that provide access to the internet and a speaker. VoIP phones allow customers are akin to a traditional fixed line phone, depending on the set up means there is now little difference between using the traditional fixed line phone and VoIP for the retail customer
Charge for calls	Calls can be completely free if calling another online VoIP user Charge for calls to mobiles and fixed line phones
Call quality	VoIP services have developed from a best effort service to an availability of services that have quality of service assurances. (ACCC Dec 2013 report).
Issues	VoIP services using certain computers are not available during power outages. There are also limitations on calling emergency services ²⁸ .
ACCC draft finding	VoIP services are currently not a substitute for traditional fixed line voice calls, given the costs associated with and technological requirements to operate a VoIP service. It was noted that for high volume users there may be a cost advantage to using a VoIP service. The ACCC concluded that carrier-grade VoIP services are likely to be substitutable for traditional voice- only services for consumers that have high call volumes, due to the cost of broadband.

Source: The CIE.

VoIP over the fibre network

More recently, VoIP services using a fibre network (National Broadband network or others such as TransAct in the ACT) have been introduced. Phone calls are claimed to be as high quality as the current PSTN calls but with lower prices including untimed calls to all fixed lines in Australia²⁹. The customers uses a Fibre Phone (UNI-V) port on the NBN Network Termination Unit, which is a built-in analog telephone adapter, with battery backup, to allow the delivery of traditional PSTN-type phone services after the copper line telephone network is decommissioned³⁰.

²⁷ ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014.

²⁸ See Telecommunications (Emergency Call Service) Obligations

²⁹ Internode website <http://www.internode.on.net/news/2012/11/297.php>

³⁰ Ibid

Does Telstra have market power in the retail component of delivery of fixed line voice services?

The key question when considering the need to continue retail price controls is whether Telstra has market power in retail markets. When considering the state of competition in relevant markets in its recent Declaration Inquiry into fixed line services, the ACCC's approach was based on the concept of effective competition. According to the ACCC, effective competition:

- is more than the mere threat of competition — it requires competitors to be active in the market, holding a reasonably sustained market position;
- requires that, over the long run, prices are determined by underlying costs rather than the existence of market power;
- requires that barriers to entry are sufficiently low and that any degree of market power will be competed away in the long-run, so that that any degree of market power is only transitory;
- requires that there be independent rivalry in all dimensions of price, product and service; and
- does not preclude on party holding a degree of market power from time to time, but that power should pose no significant risk to present and future competition.³¹

This provides a useful framework for considering whether Telstra has market power in the relevant markets. As discussed above, we consider metropolitan and regional and rural markets separately even though the ACCC considered these markets as a national market. Part of the ACCC's rationale was that Telstra and other telecommunication companies charged a uniform national price. However, we consider it possible, albeit unlikely, that Telstra could charge a different price in regional and rural areas in the absence of the price controls.

Metropolitan markets

While Telstra maintains significant market share in metropolitan markets, there are nevertheless significant levels of competition in metropolitan areas. Effective regulation at the wholesale level gives potential entrants access to these services at a fair price. Competition from existing competitors, as well as the threat from potential new entrants means that the scope for Telstra to raise its retail prices in metropolitan areas is limited. Increasing competition from close substitutes such as mobile and to a lesser extent VoIP services in metropolitan areas further limits Telstra's ability to raise the retail price for fixed voice services. One indicator that Telstra does not have significant market power to raise prices to a level that would allow it to earn above-normal profits is the fact that the prices it charges are below the retail price caps.

The ACCC argues that there are barriers to effective competition in the retail market for fixed voice services.³² According to the ACCC, these barriers include: the costs to

³¹ ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Draft Report, December 2013, pp. 31-32;

end-users of switching between retail suppliers and information asymmetries about the range and prices of competitors products. These failures are evident in many markets and do not necessarily justify regulation. In addition, the ACCC argues that economies of scale and scope also give Telstra a competitive advantage over competitors.

The economies of scale and scope are a significant issues in the provision of fixed line voice services. This supports the view that there is a rationale for regulation of wholesale markets. Once wholesale regulation is in place, the ACCC has previously considered that there is not sufficient justification for retaining price controls for Basket 1 and Basket 4 services.³³

Regional and rural markets

There is less retail competition in the market for fixed line voice services in regional and rural areas. Furthermore, broadband services and mobile access can be patchy in some areas and Telstra has a higher share of the mobile market, which means that the scope for consumers to substitute away from fixed line voice services to alternative services not provided by Telstra may be limited. This means that it is possible that Telstra could increase prices in regional areas and that this would increase profitability.

It is not clear that the ability to increase prices in regional areas is an issue of market power. As set out in Attachment B, the costs of providing services are likely to be substantially higher in regional areas. Hence we would anticipate that there would be little competition from other providers if retail prices are the same across all areas. To take a simple example, suppose that wholesale regulated costs are the same for two areas at \$20 per month and retail/other costs are \$10 in one area and \$20 in a second area.³⁴ If a single price of \$35 is set by/for Telstra then other companies would find it profitable to operate in the first area but not in the second. This is a standard problem with postage stamp pricing.

As set out in chapter 3, a nationally consistent price is in our view likely regardless of the presence of retail price controls. This likelihood is strengthened by uniform pricing at the wholesale level. Regardless of whether a nationally consistent price is set by Telstra or by retail price controls³⁵, the outcome would be the same — a higher level of entry and

³² ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Draft Report, December 2013, p. 33; ACCC, *Fixed Services Review — Declaration Inquiry*, Public inquiry into the fixed line services declaration, Final Report, April 2014, p. 18.

³³ ACCC 2011, Submission to DBCDE's review of the retail price control arrangements, December.

³⁴ Retail/other costs might vary because of unregulated wholesale costs. Retail/other costs may also vary if there is a requirement for local presence to install equipment.

³⁵ The AEMC has noted that one of the risks of regulating prices in a potentially competitive market is that it can become self-perpetuating; price regulation can lead to a lack of competition, which drives the need for continuing price regulation. (Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales*, Final Report, 3 October 2013, pp. 59-60.)

competition would be anticipated in low cost metropolitan areas versus higher cost regional areas.

If prices were increased to a level consistent with costs then entry could occur at the wholesale access level. As long as this mechanism is effective, this would somewhat constrain Telstra from charging above costs. There would be less of a constraint from mobile services in regional areas, although, as previously noted, regional customers are likely to benefit from de facto competition in regional areas as a result of uniform national pricing. Alternatively, there may be mechanisms for targeting discounts or offers at areas where costs are lower within a national pricing framework.³⁶

Hence there are therefore a number of different possibilities for pricing outcomes in the absence of retail price controls.

- Telstra may maintain nationally consistent pricing; or
- Telstra may seek to increase prices to match costs in higher cost areas. Potentially, at least in the short term it might seek to raise prices above costs because of insufficient competition from mobile services and/or a lack of entry into wholesale markets.³⁷

Of these, we consider that the first is most likely, given the evidence presented in chapter 3, but that the second cannot be discounted entirely. In terms of economic costs, the second outcome may lead to improved economic outcomes if it more closely aligns prices to costs but may lead to poorer economic outcomes if prices are pushed above costs.

Key points

- **The competitive constraints around Telstra have led to price controls being redundant over the past two years, as competition has pushed prices down below the maximum prices allowed.**
- **Competitive constraints on Telstra's fixed line voice services include competitors accessing infrastructure owned by Telstra through wholesale regulatory arrangements, mobile voice services and services offered through Voice over Internet Protocol. These constraints are becoming more effective over time — for example, mobile telephony is now a larger part of the voice services market than fixed line services (based on voice minutes).**
- **There are less competitive constraints on Telstra in regional markets. However, it is likely that the market is a national market and Telstra would maintain a single set of prices across Australia. If this is not the case, price increases in regional areas may actually lead to prices better reflecting costs. There would be no reason why the Government couldn't reintroduce more limited price controls if prices in regional areas diverged from those in metropolitan areas and this was considered to be an undesirable outcome.**

³⁶ For example, customers in some areas may be targeted with marketing of discounts or offered free devices.

³⁷ The extent to which other companies will seek to compete on the copper network is not clear given the roll-out of the NBN.

- **There are sufficient competitive constraints around Telstra's future retail pricing such that there is no rationale for the government to maintain retail price controls.**

5 *Future regulatory options to meet objectives*

Rationale for Government intervention

Regulation should be based around identification of a problem that would occur in the absence of government intervention. The OBPR notes that such problems could include:

- market failure (such as a lack of or misleading information, presence of externalities or public goods, or use of excessive market power)
- social goals or equity issues (such as individuals or groups being unable to access available market information, goods or services).³⁸

Market failures in the provision of services

The primary rationale for Government intervention in telecommunications would be that there is some form of 'market failure'.

Market failure refers to certain situations in which markets may fail to allocate resources efficiently and can provide a strong rationale for government intervention.³⁹

Market failures that could be relevant for voice services include the presence and use of market power and externalities. If Telstra had market power then it would be able to charge a price higher than the competitive price. This would lead to less use of voice services than would be efficient. There may also be a market failure in telecommunications because of network externalities — the value of accessing the network depends on the number of others also accessing the service. This is not considered further as there is ubiquitous access to telecommunications networks for Australian households and businesses, even if this is not always through fixed line voice services.

Based on our findings in chapter 4, Telstra would likely be able to raise prices in regional areas. It is not clear that this is an issue of market failure but rather of prices moving to better reflect costs. It is not likely that this outcome would eventuate, given Australian and international evidence for consistent national pricing of telecommunications services.

- **There are sufficient competitive constraints around Telstra's future retail pricing such that there is no rationale for the government to maintain retail price controls.**

³⁸ Australian Office of Best Practice Regulation, Best Practice Regulation Handbook, Box 7.1. The CIE has included problems relevant for telecommunications retail price controls only.

³⁹ Australian Office of Best Practice Regulation, Best Practice Regulation Handbook, Box 7.2.

Other objectives of regulation

Another potential reason for Government intervention in the telecommunications market would be the pursuit of a social goal or addressing an equity issue. A potential social goal in relation to the provision of telephone services is to ensure all members of the community, wherever they are located and whatever their income level, have affordable access to telecommunications services.

This goal may reflect the belief that telecommunications service is an essential service that promotes social inclusion.

In the absence of government regulation, some members of the community may not have access or be able to afford a telecommunications service. In particular, telephone service carriers may:

- not have an economic incentive to provide a services to all members of the community, particularly those that live in remote areas
- supply services to some areas but at a price that is unaffordable to some households
- charge a price for telephone services that is not be affordable to some low-income households.

It is important to closely define the concept of social equity so that it cannot encompass any form of policy intervention. Our preferred definition is that social equity would be achieved in so far as the cost of telecommunications services required to achieve social inclusion did not take any household below an acceptable minimum standard of living. This can be broken into a number of parts.

- 1 Does the required consumption of telecommunications services differ across households to achieve social inclusion?
- 2 Are there differences in costs of telecommunications services across households?
- 3 Which households would be likely to move below an acceptable standard of living because of the higher level of consumption required and/or because of the higher prices for services?

The implications of this definition are that:

- social equity objectives would only ever require targeted assistance to specific households, rather than overarching price caps or requirements for uniform national pricing — as shown in table 5.1 and 5.2, prices for other essential goods and services vary systematically across geographic areas;
- there is no requirement that telecommunications services be provided over a fixed line or by Telstra — mobile telephony could be an alternative to achieving this objective; and
- nationally consistent pricing would imply that point 2 above is largely irrelevant.

In terms of understanding variation in household telecommunications consumption required in order to be included in society, this would likely mean that remote households would have a higher level of required consumption than households in towns or cities. However, very few remote households would face a standard of living below acceptable levels because of their telecommunications requirements.

The acceptable minimum standard of living is best considered as what the welfare system would deliver, as the welfare system is the main feature of ensuring social equity in Australia. An alternative, which may differ from the welfare system, would be to use budget standards — these could allow for greater differentiation of costs of goods and services than reflected in welfare payments.⁴⁰

5.1 Remoteness adjustments for budgets

Remoteness	Food	Alcohol	Clothing	Housing	Services	Health	Transport	Recreation	Financial
Major urban	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inner regional	106.0	99.0	98.0	87.0	98.0	100.0	98.0	99.0	96.0
Outer regional	104.0	100.0	100.0	100.0	99.0	101.0	99.0	101.0	98.0
Remote	106.2	103.7	88.8	97.3	102.8	102.1	104.4	107.4	96.2
Very remote	106.0	104.0	114.0	63.0	107.0	102.0	107.0	102.0	97.0

Source: Reported in Waite G., P. Henman, C. Banks and C. Curtis 2010, The dynamics of financial hardship and housing need: A longitudinal analysis using budget standards, presented at the 4th Australasian Housing Researchers Conference.

5.2 Housing costs by remoteness class 2006

	Mean weekly mortgage repayments	Mean weekly rents
	\$/week	\$/week
Major cities	375	256
Inner regional	290	193
Outer regional	263	185
Remote	274	168
Very remote	232	102
Australia	348	236

Source: ABS Census of Population and Housing 2006.

Government failure versus market failure

The presence of market failures or desirable social equity objectives is a necessary condition for consideration of Government intervention. However, it is not a sufficient condition — even where there are market failures it is possible that Government intervention will have net costs. This reflects Government failure — intervention may lead to a less efficient outcome even though the outcome without regulation was not itself efficient. This can occur because of the costs of developing and administering regulation, constraints on the information available to regulators and difficulties structuring regulation to obtain an efficient outcome.

The cost of government failure can be high, particularly where the regulator sets the regulated price for the relevant services at a level below the cost of supply. This would

⁴⁰ Saunders P, *Development of Indicative Budget Standards for Australia*, 1998

result in inefficient cross-subsidies from users of non-regulated services. In extreme circumstances, regulated prices that are lower than the cost of supply could cause the retailer to become insolvent. This has the potential to be highly disruptive and therefore costly to suppliers, customers, shareholders and the government, as was the case during the Californian electricity crisis (see box 2.6 for details).

While the Telstra retail price controls have not imposed significant costs on the community to date, there nevertheless remains a risk that they could do so in the future. This risk is higher given the methodology currently used to set the regulated priced does not involve a detailed analysis of the costs of supply.

Defining objectives of Government intervention in telecommunications prices

Based on the above rationale outlined above, the objectives of government intervention are as follows.

- To prevent Telstra from exploiting any market power that it may have in relation to retail fixed line voice services.
- To ensure that all Australians are reasonably able to access telecommunications services they required to be socially included, while maintaining a minimum standard of living.

Options for meeting objectives

A key element of the regulatory impact assessment process is to consider a range of options for achieving the Government's objectives. Here we consider the options for achieving each of the objectives above separately.

Market power

The analysis in chapter 4 suggests that the likelihood that Telstra holds market power in retail voice services is low in metropolitan areas but cannot be dismissed entirely in regional areas.

Options for addressing market power could include:

- maintenance of wholesale regulation and cessation of retail price controls;
- retaining retail price controls in the current form (i.e. maintaining the status quo);
- different level of retail price controls or mechanisms for determination; or
- price monitoring and ex-post remedy.

Social equity

Options to address social equity could include:

- the use of the general welfare system and cessation of retail price controls and;

- continuing retail price controls;
- amending the Principal Determination to establish a 5-year requirement for pricing parity between metro and regional areas;
- using contractual arrangements through the Telecommunications Universal Service Management Agency (TUSMA) to achieve particular social equity objectives; and
- targeted subsidies for customers, such as vouchers or rebates.

6 *Assessment of future regulatory options against objectives*

Market power

One objective that the Government could have is to limit the use of market power held by Telstra in providing telecommunications services. The achievement of this objective would be expected to lead to prices that are more closely aligned to costs. Note that intervention to achieve this objective would likely not have a major impact on efficiency, as Telstra has sufficient incentives to be more efficient in any case. It may lead to efficiency gains being passed on to consumers more than would otherwise be the case.

The key basis of market power for Telstra rests on its control of infrastructure and particularly the last mile copper between the exchange and households/businesses.

An assessment of the alternative options against limiting the use of market power objective is set out in table 6.1.

- Wholesale regulation is the key government intervention required to limit the use of market power. This is because the significant barrier to entry into providing telecommunications voice services is infrastructure-related. Once access is gained at the wholesale level of natural monopoly infrastructure then there barriers to entry are low.
- Retail regulation can provide limits on market power above and beyond wholesale only if wholesale regulation is ineffective or there is market power for providing the retail component of services. There are no natural monopoly features to provision of the retail component. (In other similar Australian markets, retail prices are typically deregulated while regulation is maintained for network infrastructure.)⁴¹

6.1 Assessment of options in limiting use of market power

Option	Achievement of objective
Cease retail price controls (and maintain wholesale regulation)	Addresses market power issues at the relevant barrier to entry by providing access to natural monopoly infrastructure.
Retain retail price controls in current format (and maintain wholesale regulation)	In addition to first option, may provide a limit on the use of retail market power
Revise retail price controls (and maintain wholesale regulation)	In addition to first option, may provide a limit on the use of retail market power

⁴¹ For example, retail electricity pricing in Victoria and South Australia and soon to be deregulated in NSW and Queensland and retail gas pricing in Victoria. The distribution networks continue to be regulated by the Australian Energy Regulator.

Option	Achievement of objective
Monitoring of retail prices with potential remedy for abuse of market power (and maintain wholesale regulation)	Similar to first option – the presence of price monitoring is unlikely to provide any significant additional deterrent to the use of market power, as discussed further in chapter 7.

Source: The CIE.

Social equity

The social equity policy objective that is most relevant to price controls is:

Ensuring that people are reasonably able to afford the fixed line telecommunications services that they need to be socially included, while maintaining a minimum standard of living.

An assessment of the options identified against this objective is set out in table 6.2.

6.2 Assessment of options in meeting social equity objectives

Option	Achievement of objective
Cease retail price controls (and use general welfare system)	<p>Achieves social equity objective if prices for fixed line services remain nationally consistent in the absence of price controls.</p> <p>There may be some differences in social equity because mobile services, which are preferred by some low income households, are not available in all locations</p>
Continue retail price controls in their current form	<p>Regulatory intervention extends well beyond achieving social equity objectives. For example, it may entail cross-subsidies from low-income metropolitan households to high-income regional households.</p> <p>This option may restrict competition if prices for fixed line services would not remain nationally consistent in the absence of price controls or if prices are generally constrained by retail price controls.</p>
5-year requirement for pricing parity between metro and regional areas	<p>Regulatory intervention extends well beyond achieving social equity objectives. For example, it may entail cross-subsidies from low-income metropolitan households to high-income regional households.</p> <p>This option may restrict competition if prices for fixed line services would not remain nationally consistent in the absence of price controls</p>
Contractual arrangements through TUSMA	<p>TUSMA currently maintains contracts with Telstra to provide payphone services (approx. \$44 million/year, GST inclusive), to provide standard telephone services (approx. \$253 million/year GST –inclusive) and to provide untimed local calls in the extended zone (approx. \$1.7 million/year GST inclusive).</p> <p>The contractual arrangements do not include explicit prices of services offered. The contractual arrangements could be extended to cover prices, in addition to their current focus on accessibility. This would be a more transparent mechanism to achieve social equity objectives.</p> <p>However, it is not clear that there would be a need to extend arrangements to cover pricing. This reflects that</p>

Option	Achievement of objective
	Telstra would be unlikely to change its existing pricing of payphones or local calls in extended zones.
Targeted assistance such as vouchers or rebates, directly funded by Government	<p>This may achieve social equity objectives at lower cost and is a more transparent mechanism for achieving objectives than requiring implicit subsidies between different customer types.</p> <p>This may enable social equity obligations to be fulfilled using whichever options are most suited to customer's needs and could include mobile telephony, for example.</p>

Source: The CIE.

In the sections below we evaluate the policy options identified in the previous chapter in detail against three criteria.

- 1 Does the policy measure achieve the objective above?
- 2 Does the policy measure achieve the objective without compromising other objectives (e.g. efficiency, market competition, safety etc.)?
- 3 Does the policy measure achieve the objective at least cost by specifically targeting the needs of individuals and households that are not able to achieve the fixed line services they require to be socially included?

But before this, there is one key issue that will determine the impact of alternative options — would prices for fixed line services be nationally consistent in the absence of retail price controls?

As discussed in detail in previous chapters, there is strong evidence that the costs of providing services differ substantially across different regions. Regulated arrangements at the wholesale level also differ regionally, although less so than for costs.⁴² It would then be anticipated that there would be an economic justification for charging differential prices across regions, as occurs for other essential services such as electricity, gas and water. We would not consider that this outcome is a negative outcome from an economic perspective.

However, we do not consider that it is likely that Telstra will seek to charge regionally different prices for fixed line voice services. To reiterate from previous chapters, Australian telecommunications providers and overseas telecommunications providers generally maintain the same prices across all areas that they service, even when this is not required.

Cessation of retail price controls

If retail price controls are not continued, then there may be social equity concerns for low-income households affording a minimum level of telecommunications services.

Currently, low-income households (those on social security) receive a Telephone Allowance to assist in covering the costs of maintaining a home telephone line through

⁴² Potentially the ACCC has been constrained from regionally differentiating wholesale prices because of a nationally uniform retail price arrangement.

the Department of Human Services.⁴³ This allowance is outside the scope of this review. The Australian Government also requires Telstra to have a package of products and arrangements for low-income consumers as part of its Carrier's licence conditions (box 6.3). This is also outside the scope of this review.

6.3 Telstra's carrier conditions

Telstra's carrier conditions specify that a range of assistance measures need to be provided to low income and disadvantaged households to improve the affordability of telecommunication services. Examples of the assistance measures included in the *Access for Everyone* program are shown below.

Telstra Bill Assistance Program

The Telstra Bill Assistance Program is aimed at assisting people who are experiencing financial difficulty and are having a problem paying their Telstra bill. Households in this position may be able to receive Telstra Bill Assistance Certificates from community agencies such as the Salvation Army, The Smith Family, Anglicare and St Vincent de Paul Society.

InContact Service

The InContact Service allows eligible customers to receive all incoming calls and limit calls that can be made.

Financial Hardship Policy

Telstra has a Financial Hardship Policy to assist individuals and households that face extenuating circumstances that impact their ability to meet their financial commitments.

Pensioner Discount

The Telstra Pensioner Discount provides a discount on the price of phone calls for eligible pensioner customers, free access to Call Control⁴⁴ and a discount on connection charges for a new home telephone service.

Centre Pay

Eligible customers can nominate an amount to be regularly deducted from their Centrelink payment (minimum \$10 a fortnight) to go towards the cost of telecommunications services.

⁴³ <http://www.humanservices.gov.au/customer/services/centrelink/telephone-allowance>

⁴⁴ Call control allows you to restrict the type of calls made on your phone using a Personal Identification Number (PIN) and can assist with budgeting.

We consider that there is no need to specifically subsidise low-income households for telecommunications services outside of the broader welfare system, if costs are similar across all low-income households. Costs could be different if low-income households in different areas have access to different prices for telecommunications services — in this case social security payments would not lead to the same minimum standard of living and there might be a rationale for differentiated assistance.

As discussed above, we do not anticipate that prices for Telstra's services would likely differ across Australia. If regional pricing did eventuate, then the Government could respond with targeted subsidies to low-income households in regional areas where prices were high.

There may be some differences for low-income households telecommunications prices because of the ability to substitute to mobile. Consultations have suggested that some mobile only customers are low-income households — mobile offers a cheaper option for some households (particularly in receiving calls) and can be combined with pay-as-you-go to control expenditure. The mobile only impact is likely to be limited and expenditure data suggests that fixed line use is more similar across households income levels than is mobile use (table 6.4).

6.4 Differences in telecommunication use by household income

	Household income quintile					
	Lowest	Second	Third	Fourth	Highest	All
	\$/week	\$/week	\$/week	\$/week	\$/week	\$/week
Fixed telephone account	13.29	13.10	14.47	14.90	17.58	14.67
Mobile telephone account	4.17	7.42	13.23	16.27	19.80	12.17
Public telephone call (not	0.04	0.15	0.16	0.11	0.19	0.13
Mobile phone charges (not	1.74	3.07	3.64	3.76	3.55	3.15
Telephone and facsimile charges	0.06	0.14	0.59	1.96	6.46	1.84
Total	19.29	23.87	32.09	37.00	47.58	31.96

Source: ABS, *Household Expenditure Survey*, 2009-10

The use of the general welfare system then would slightly disadvantage low-income households that could not substitute to mobile only services and low-income households that faced higher than average telecommunications prices. Otherwise, it would achieve social equity objectives as long as fixed line services would be accessible at similar prices across Australia.

Retail price controls in their current form

The continuation of current retail price control arrangements would, in terms of social equity entail:

- a guarantee of regional prices for some line rental products (Home-line Budget and Business-line plans) and local calls that are equal to or lower in regional areas versus metropolitan areas; and

- availability of a budget line rental product. (This would be available in any case through the Low Income Program.)

The social equity policy objective does not link closely to providing equal or lower prices in regional areas than in metropolitan areas. As set out in table 6.5, there are similar numbers of households that would be considered as being below or close to minimum standards of living across different regional classifications. Hence, were regional equalisation to have any effect, this would imply subsidies from metropolitan to regional areas rather than subsidies from higher income to lower income groups.

6.5 Differences in welfare by regions of Australia

	Major cities	Inner regional	Outer regional	Remote	Australia
Given your current needs and financial responsibilities, you and your family are:					
Prosperous	17	15	14	17	16
Reasonable comfortable	53	53	50	55	53
Just getting along	28	29	32	25	28
Poor/very poor	3	3	3	4	3
Due to a shortage of money you are recently:					
Asked for financial help from friends/family	11	11	9	13	11
Asked for help	3	3	3	2	3
Went without meals	3	3	3	2	3

Source: Department of Infrastructure, Transport, Regional Development and Local Government, *About Australia's Regions*, 2008

From a social equity point of view, policy measures should aim to specifically target households in both metropolitan and non-metropolitan areas that cannot afford telecommunication services as opposed to ensuring price parity.

This assessment is consistent with the Regional Telecommunications Inquiry (2002) view, which noted that:

The reality is that in telecommunications factors such as geographic isolation, the high cost of delivery in some areas, limitations of particular technologies (including where they are affected by climate or topography), and lack of commercial viability in some areas, mean that not all consumers across the country can expect access to exactly the same suite of services, at exactly the same price, and in exactly the same time frames.

In the Inquiry's view, the essential issue is whether all consumers across the country have access to a level of service, and a price of service, across the key service areas that allows broad take-up, effective use of services and comparable consumer benefits.⁴⁵

Retail price controls implemented to achieve social equity also have the potential to compromise the efficiency of the fixed line telecommunication market to the extent that the price controls are not in line with the market prices that would eventuate in the absence of the controls. For example, if price controls were below cost in some areas then this would act as a barrier to competition. As discussed earlier, we do not consider that it

⁴⁵ Regional Telecommunications Inquiry 2002, *Connecting Regional Australia*, p. 21.

is likely that regionally differentiated pricing would occur in the absence of retail price controls.

Hence we would consider that, if the retail price controls had any impact on social equity through achieving regionally consistent prices, this should be viewed as a negative outcome. It would imply an inefficient subsidisation of households that are not low-income in regional areas.

5-year requirement for regional and metropolitan pricing parity

It would be possible to remove retail price controls except for specific aspects related to social equity, such as uniform national pricing or low-income measures. One option could be to maintain requirements for regional and metropolitan pricing parity for a period of time, such as five years, on products where this is currently required (the most basic residential and business line rental products and local calls).

As discussed above, there is a very weak alignment between geographically oriented policies and social equity. Advantaged and disadvantaged households are not concentrated in particular regions. Nor are prices of other essential goods and services such as food, water, housing and electricity constrained to be identical across different geographic areas. Hence we would not anticipate that such a policy would be aligned to the objective of achieving social equity.

This policy may also lead to substantial economic costs should this lead to prices not reflecting costs and then in turn change decisions made by consumers about their telecommunications services and use.

Use TUSMA contractual arrangements

There are a number of areas where retail price controls overlap with contractual arrangements with TUSMA. In particular, contractual arrangements require availability of payphones, the standard telephone service and availability of untimed locals calls within (and to adjacent) extended zones. The retail price controls determine some aspects of the price of services supported by these contracts. In the absence of retail price controls, pricing for these services could instead be incorporated into contracts, although this would require renegotiation between TUSMA and Telstra.

There does not appear to be a substantive case for price regulating untimed local calls in extended zones or payphones.

- For the price controls in extended zones, it is unlikely that Telstra would seek to charge a different amount for these customers than other customers, particularly given the small amount of revenue at stake and that local call arrangements are also addressed through contracts with TUSMA. Hence any price control would likely be redundant.
- For payphones, any price control would at best have no impact and at worst constrain the viability of a service that is likely to be borderline commercially viable.

We recommend not putting in place price controls for specific contracted services through TUSMA contractual arrangements.

Targeted subsidies

In addition to existing welfare payments, the Government could subsidise the use of telecommunication services by low-income households and households that live in rural and remote regions of Australia that may face higher telecommunication prices. This is similar to arrangements used in electricity and water, such as those detailed in box 6.6 for the NSW electricity market.

A targeted scheme could potentially be administered through Centrelink through adjusting welfare payments for households in high price telecommunications areas, for example.

6.6 Targeted arrangements for NSW electricity consumers⁴⁶

One example of arrangements for targeted assistance is for NSW energy customers. Government schemes include:

- The Low Income Household Rebate — this is a rebate administered through electricity retailers to customers on eligible social security schemes
- Energy Accounts Payment Assistance Scheme — this is a voucher scheme administered by community welfare organisations. Electricity vouchers are provided by the NSW Government to welfare organisations, who then distribute them according to customers they consider at most financially vulnerable
- Programs to assist low-income households to minimise their consumption of electricity.

Compared to the use of the general welfare system, targeted subsidies or vouchers offer the following advantages and disadvantages:

- subsidies can account for variation in telecommunications prices or needs across households; and
- subsidies are likely to impose additional administrative costs.

Targeted subsidies are consistent with the Productivity Commissions review of the consumer policy framework in which it stated:

Ensuring that disadvantaged consumers continue to have sufficient access to utility services at affordable prices should be pursued through transparent community service obligations, supplier-provided hardship programs, or other targeted mechanisms that are monitored regularly for effectiveness.⁴⁷

⁴⁶ Independent Pricing and Regulatory Tribunal of NSW, Changes in regulated electricity retail prices from 2011, Final report.

⁴⁷ The Productivity Commission, *Review of Australia's Consumer Policy Framework*, 2008

We would consider that targeted assistance could improve social equity outcomes only where significant differences in pricing of telecommunications services emerged across regions, or where significant differences in need could be identified. In the future, this is partly dependent on arrangements for the regulation of the NBN. If national pricing of telecommunications services remains the standard practice of industry, there would be limited reason to introduce targeted subsidies. If such a policy were to be considered, the differential costs associated with other services (such as housing) across different regional areas should also be taken into account.

Summary of social equity options

Social equity options have not been considered against a cost benefit analysis framework. All of the social equity options would have some level of cost, even if this was only administrative. Social equity does not have a value attached to it in cost benefit analysis. The extent of the costs will depend on the details of the policies. The cost effectiveness of the options against achieving social equity objectives would be as follows.

- 1 The use of the general welfare system (without change) to provide appropriate standards of living would be the most cost effective. This would involve no additional administrative costs. It would achieve social equity as long as prices for telecommunications services were relatively similar around Australia
- 2 Using TUSMA contracts for specific services such as payphones, the standard telephone service or local calls in and between adjacent extended zones. This would involve minimal cost (and would likely have minimal impact). At worst it would reduce the commercial viability of payphones.
- 3 Targeted subsidies would be a relatively cost effective mechanism to achieve social equity. This could better address social equity than the general welfare system if regional differentiation of telecommunications occurred and regional costs of living were systematically different. Such subsidies could be directed through the welfare system or through a specific program. The latter option would involve greater cost.
- 4 Retail price control arrangement to require uniform national pricing would have little relationship to social equity objectives. They would have little cost if Telstra were to maintain nationally consistent prices in any case. However, they could impose substantial costs were they to lead to cross-subsidies between geographic areas.
- 5 Continuation of current retail price controls has little relationship to social equity objectives. As with the previous option, the costs would depend on what would otherwise have occurred and the level of retail price controls. This could be small (similar to the net costs of retail price controls from 2012 to 2014) or much larger were retail price controls to distort an otherwise competitive market.

7 *Assessment of costs and benefits of future regulatory options for addressing market power*

The likelihood that Telstra holds market power in providing voice services, in the absence of any form of government involvement, means that there is a case to look at options for the Government to intervene in this market.

Our conclusion is that market power in providing voice services is a result of Telstra's ownership of network infrastructure. In this case, the preferred option is effective regulation of natural monopoly infrastructure at the wholesale level. The ACCC regulates wholesale prices for relevant telecommunications services and as such we consider that there are net costs from imposing price controls at the retail level.

Options assessed and types of costs and benefits

The Government could intervene to limit market power through:

- wholesale regulation of prices, such as wholesale line rental prices determined by the ACCC — this is used as the baseline and implies a cessation of retail price controls
- price monitoring (such as used for airport regulation) in addition to wholesale regulation of prices;
- a form of retail price controls, either similar to a continuation of the current arrangements or a revised set of retail price controls — this would also be in addition to wholesale regulation of prices.

The types of costs and benefits of these options is set out in table 7.1. Essentially, any form of government involvement would involve additional administrative costs. Then there would be economic costs and benefits from any changes to the prices that would occur in the absence of retail price measures.

7.1 Types of costs and benefits

Option	Types of costs	Types of benefits
Cease retail price controls (and maintain wholesale regulation)	Considered to be the baseline	
Retain retail price controls in current format (and maintain wholesale regulation)	Administrative costs for the ACCC and Telstra Potential for prices to deviate from costs, acting as a barrier to competition at the retail level	Potential for price controls to push prices down closer to costs, if market power would otherwise lead to prices above costs

Option	Types of costs	Types of benefits
Revise retail price controls (and maintain wholesale regulation)	Administrative costs for the ACCC and Telstra Potential for retail prices to be below costs, acting as a barrier to competition at the retail level	Potential for price controls to push prices down closer to costs
Monitoring of retail prices with potential remedy for abuse of market power (and maintain wholesale regulation)	Administrative costs for the ACCC and Telstra to monitor prices	Potential to constrain Telstra where Telstra has market power at the retail level and wholesale regulation is ineffective

Source: The CIE.

Administrative costs would be incurred by Government (through the ACCC) and Telstra. Economic costs from price distortions would depend on whether the retail price controls were below what Telstra would otherwise have charged. If they were, then economic costs would reflect the following.

- A cost to Telstra from providing services at a lower price.
- A benefit to customers from obtaining services at lower prices.

A large part of this effect is simply a transfer from Telstra to customers. The exception is for customers that change their use of services because of the retail price controls. In this case, the net of these effects will depend on whether Telstra has market power at the retail level, as set out in chapter 4. If Telstra holds no or limited market power at the retail level, then the net effective is negative. That is, the benefits that customers obtain from changing their service demand are lower than the costs to Telstra of providing these services. A practical example of this is set out in

7.2 Example of net impacts of a binding retail price control

Suppose that Telstra was going to charge \$30 per month for retail line rental (we ignore costs of making calls for simplicity). This reflected a \$20 per month component for wholesale costs (which is regulated) and \$10 per month to cover retail costs. These costs include covering any capital used in providing services. At this price, John would not take up a fixed line voice service.

Now suppose that retail price controls were set at \$20 per month. John now decides to take up the service.

John values the service at somewhere between \$20 and \$30 per month.

The ACCC has determined that an appropriate amount to cover wholesale costs is \$20 per month. Telstra's retail costs of \$10 per month bring the total costs to \$30 per month, which is higher than John's value for the service.

This then means that the net costs of providing this service to John are in the order of \$0 to \$10. On average, the general assumption made in this case is that there is a net cost of \$5 to provide this service to John.

Note that if the cost to Telstra was \$5 but because of market power *at the retail level* it could charge \$10, then the net costs are different. In this case, the net impact could range from a net benefit of \$5 to a net cost of \$5.

As the discussion above highlights, the net costs and benefits (outside of administrative costs) reflect two factors.

- Does Telstra hold market power for the retail component of providing services?
- What is the price level that is determined by retail price regulation?

Administrative costs

The estimated administrative costs of each of the options is set out in table 7.3, on the basis of the following assumptions.

- The annual costs for compliance for retail price controls is likely to be similar to that historically, of \$250 000 per year. The largest part of this would be incurred by Telstra.
- Retail price monitoring would have similar costs for the ACCC but lower costs for Telstra, depending on the form of retail price monitoring. We assume that price monitoring has half the overall level of administrative costs and has no cost for implementation. No cost has been included for remedying abuse of market power if identified through price monitoring.
- A regulatory review to revise retail price controls would cost in the order of \$500 000, based on the CIE's experience with such reviews.

In total, the costs over five years, discounted to today, are slightly over \$1 million for continuing current retail price controls, slightly over \$1.5 million for revising controls and slightly over \$0.5 million for monitoring retail prices.

7.3 Administrative costs (Government and Telstra)

Option	Annual cost	Initial implementation cost	Present value of costs over 5 years
	\$000/year	\$000 (once-off)	\$000
Cease retail price controls (and maintain wholesale regulation)	0	0	0
Retain retail price controls in current format (and maintain wholesale regulation)	250	0	1 097
Revise retail price controls (and maintain wholesale regulation)	250	500	1 597
Monitoring of retail prices with potential remedy for abuse of market power (and maintain wholesale regulation)	125	0	548

Note: A discount rate (real) of 7 per cent has been used for the numbers in the last column.

Source: The CIE.

Economic distortions from price controls

As set out above, price controls may lead to costs and benefits (outside of administrative costs) where they result in prices that are different to what would otherwise have been set. Historically, retail price controls have not impacted on prices and have had no costs and benefits outside of administrative costs. Whether or not this is true in the future will reflect:

- the prices that are set through retail price controls;
- the costs of providing services and the extent to which these differ from prices;
- future wholesale price regulation; and
- future market conditions, such as mobile telephony services and VoIP services.

We do not know what sorts of regulatory and market conditions are likely for the future, so instead we map out indicate impacts from retail price control settings.

- Table 7.4 sets out the impacts of retail price controls that push prices down from the level they would otherwise be, where the retail market is competitive. In this case:
 - net welfare impacts are always negative;
 - are more negative where people respond to lower prices more (i.e. the demand curve is more elastic);
 - are more negative the larger the impact of retail price controls on prices — for example, a 1 per cent price reduction from controls would have a net social cost of \$0.1 million per year, while a 10 per cent reduction would have a net social cost of \$8.1 to \$16.2 million per year; and

- are positive for consumers (such as households and businesses purchasing services) and negative for producers (particularly Telstra).
- Table 7.5 sets out the impacts of retail price controls that push prices down from the level they would otherwise be, where the retail market is not competitive. For this table, we assume that Telstra has sufficient market power to be able to charge a 10 per cent retail cost premium, and retail costs comprise 25 per cent of the costs of providing services. In this case:
 - retail price controls that have a small impact on prices can have positive or zero welfare impacts, while larger impacts have negative welfare impacts;
 - the impacts are more likely to be negative the more than price controls push prices below the margins assumed in Telstra's prices; and
 - a large part of the impact of price controls is a transfer of money from producers to consumers.

7.4 Impact of price controls – competitive retail market

Price control reduction in prices	Price elasticity of -0.5			Price elasticity of -1.0		
	Net welfare impact	Consumer welfare impact	Producer welfare impact	Net welfare impact	Consumer welfare impact	Producer welfare impact
	\$m/year	\$m/year	\$m/year	\$m/year	\$m/year	\$m/year
1 per cent	-0.1	32.6	32.6	-0.2	32.6	32.8
5 per cent	-2.0	164.5	166.5	-4.1	166.5	170.6
10 per cent	-8.1	333.0	341.1	-16.2	341.1	357.3
20 per cent	-32.5	682.2	714.7	-65.0	714.7	779.7

Note: The net welfare impact is equal to the consumer welfare impact plus the producer welfare impact. The calculations are based on revenue from basket 1 services of \$3.2 billion per year.

Source: The CIE.

7.5 Impact of price controls – uncompetitive retail market

Price control reduction in prices	Price elasticity of -0.5			Price elasticity of -1.0		
	Net cost	Consumer welfare impact	Producer welfare impact	Net cost	Consumer welfare impact	Producer welfare impact
	\$m/year	\$m/year	\$m/year	\$m/year	\$m/year	\$m/year
1 per cent	0.3	32.6	32.2	0.6	32.6	32.0
5 per cent	0.0	164.5	164.5	0.0	166.5	166.5
10 per cent	-4.1	333.0	337.0	-8.1	341.1	349.2
20 per cent	-24.4	682.2	706.6	-48.7	714.7	763.4

Note: The net welfare impact is equal to the consumer welfare impact plus the producer welfare impact. The calculations are based on revenue from basket 1 services of \$3.2 billion per year.

Source: The CIE.

Note that the impact of price controls is estimated on the basis that Telstra could continue to supply services and would continue to supply services. The costs of setting retail price controls below cost would be far larger if Telstra were to reduce the quality of

its services or become insolvent (such as in the California energy crisis). We would anticipate that the former is possible but the latter is unlikely, given that a part of the costs (incorporated into wholesale regulation) reflects a return on and of sunk capital.

Is the retail market competitive?

As the figures in table 7.4 and 7.5 show, the impact of price controls depends on what the price controls do relative to counterfactual prices and whether the retail market is competitive.

- **Unless the retail market is not competitive then any binding price control will impose net costs.**

As set out in previous chapters, Telstra holds the majority of market share in most Australian telecommunications markets. Its market share has gradually declined for fixed line services, as others use regulation at the wholesale level to access Telstra's infrastructure. Despite the substantial market shares that Telstra holds, the key issue at the retail level is the *potential* for competition and the extent to which this constrains Telstra's behaviour. The main barrier to entry into the retail telecommunications market is access to infrastructure that has natural monopoly characteristics, such as the cooper network between exchanges and households/businesses. We consider that wholesale regulation is the appropriate mechanism to address these issues, and outside of this there is the potential for competition.

Our view that there are competitive constraints on Telstra's behaviour has strong empirical support in that Telstra has not charged as high a price for services as it has historically been allowed to. This reflects the effects of competition from the alternative options for providing services.

Note that it is plausible that Telstra, despite having prices below the allowed caps, can charge somewhat higher than other providers. A comparison of Telstra's home phone plans with those of Optus is set out in table 7.6. The amount that a household or business would pay will depend on usage, for most plans. In general, Telstra's home phone plans are more expensive than those of Optus, but have more favourable terms and conditions (such as no minimum terms, cancellation fees and billing charges). It is not clear whether this reflects the brand Telstra has developed or some level of market power. Given the other evidence presented in this report, and the regulation of the natural monopoly infrastructure, we would not expect Telstra to be able to charge above other operators without either providing higher quality service or losing customers.

7.6 Comparison of Telstra and Optus pricing for home phone bundles

	Optus1	Optus2	Optus3	Telstra1	Telstra2	Telstra3
Home line (\$/month)	22	45	60	22.95	40	50
Local calls (\$/call)	0.3	0	0	0.3	0	0
Standard national calls	20c per min + 45c connection fee (\$2.00 cap for calls up to 1 hour)	0	0	25c per min + 49c connection fee (\$3.00 cap for calls up to 3 hours, 7pm to midnight)	49c + 30c per minute (\$2 cap for up to 3 hours)	0
1300 calls	0.35	0.35	0	0.35	0.35	0.35
Own brand mobile (i.e. Optus or Telstra)	20c per min + 45c connection fee (\$2.00 cap for calls up to 1 hour)	0	0	36c per min + 49c connection fee, capped at \$3 for the first 20 minutes per call, 7.00 pm to midnight	49c + 30c per minute (\$2 cap for up to 20 minutes)	49c + 30c per minute (\$2 cap for up to 20 minutes)
Other mobiles	20c per min + 45c connection fee (\$2.00 cap for calls up to 1 hour)	20c per min + 45c connection fee (\$2.00 cap for calls up to 1 hour)	0	36c per min + 49c connection fee	49c + 30c per minute (\$2 cap for up to 20 minutes)	49c + 30c per minute (\$2 cap for up to 20 minutes)
Minimum term	6 months minimum	6 months minimum	6 months minimum	No minimum	No minimum	No minimum
Non-direct debit	2.2	2.2	2.2	No	No	No
Paper invoicing	2.2	2.2	2.2	No	No	No
Cancellation fee	Yes	Yes	Yes	No	No	No

Source: Telstra and Optus websites.

We are also aware that Telstra has substantial market share of NBN customers, despite having no infrastructure advantage. Hence Telstra's market share does not necessarily reflect market power, but may reflect brand advantages and marketing.

- **We consider that there is the potential for competition to constrain Telstra's behaviour in the absence of retail price controls. This is most strongly in evidence from the reduction in Telstra's prices for basket 1, well below the levels allowed by retail price controls.**
- **The barrier to entering the market is access to infrastructure. Effective wholesale regulation removes this barrier and would therefore constrain Telstra from using market power in retail telecommunications markets.**

Risks of retail price controls

As discussed above, the possibility that Telstra could be able to charge above the prices of other competitors because of market power cannot be discounted completely. In this case, the relevant question is whether retail price controls are likely to provide a better outcome than in the absence of retail price controls.

The determination of retail price controls in a potentially competitive market offers many possible risks. As the ACCC noted in 2005:

...in markets experiencing significant changes, the risks and consequences that price control arrangements do not achieve efficiency objectives may be greater.⁴⁸

The most significant risk is that price controls are set at a level at which retail competition is not commercially feasible. For example, suppose that line rental cost \$15 at a wholesale level per month and the costs of providing retail services varied from \$5 to \$15 per month depending on the location/customer type. In this case, a retail price control of \$20 would mean the entire market was not feasible for an entrant seeking to purchase wholesale services from Telstra. Any retail price control up to \$30 would have some impact in terms of constraining competition.

In our view, the risks of poorly designed retail price controls are large and it has been good luck that retail price controls have not in the past inhibited competition. The current retail price controls do not align to good regulatory practice in the following ways.

- The annual change in price allowed in retail price controls has been unchanged from 2006 to 2014. This is despite the ACCC recommending that this arrangement be kept in place for 3 years⁴⁹ and despite the significant changes to the telecommunications market over this period.
- The form of price controls decided on differed significantly to that proposed by the ACCC and does not meet good regulatory practice. For example, the ACCC recommended a price control of CPI – 4 per cent for basket 1.⁵⁰ The price cap

⁴⁸ ACCC 2005, *Review of Telstra's retail price control arrangements*, February, p. 14.

⁴⁹ ACCC 2005, *Review of Telstra's retail price control arrangements*, February.

⁵⁰ ACCC 2005, *Review of Telstra's retail price control arrangements*, February.

decided on was instead zero per cent (nominal). This would mean that the effective price cap is dependent on the level of inflation — if inflation had been much higher than actually occurred then the price cap would have constrained Telstra more than it actually did.

The magnitude of costs that could arise from poorly specified retail price controls are set out in tables 7.4 and 7.5. A poorly designed price control could have easily have net costs of several million dollars each year. The longer term effects could be larger still, if price controls ruled out competition and led to declining service quality.

To some extent, a more frequent revision in retail price controls could mitigate these issues, but at a higher administrative cost.

Price monitoring

Price monitoring is a mechanism to allow ongoing consideration of prices without undue intrusion into the market. Potentially:

- continual review and reporting of prices, plus the threat of re-regulation, could deter a business with market power from using this market power;
- price monitoring can give consumers assurance during deregulation.⁵¹

Examples of price regulation in the Australian context are set out in table 7.7.

7.7 Examples of price monitoring in Australia

Industry	Details
Airports	The ACCC monitors prices and outcomes for Brisbane, Melbourne, Perth and Sydney airports, including car parking prices. This arrangement aims to assist in identifying abuses of monopoly power.
Electricity – Victoria	The ESC of Victoria provides information on retail standing offers and market offers provided in different parts of Victoria. This arrangement was put in place when Victoria deregulated retail prices for electricity and gas.
Fuel	The ACCC monitors retail fuel prices for unleaded petrol, diesel and LPG around Australia. On the basis of this information, the ACCC may seek to investigate misleading and anti-competitive conduct.

Source: ACCC 2013, *Airport monitoring report 2012/13*; ACCC website <https://www.accc.gov.au/regulated-infrastructure/fuel/acccs-fuel-monitoring-role>; Essential Services Commission of Victoria, *Electricity price update*, February 2013.

Price monitoring may provide comfort to consumers but it does not actually restrict market power. As the ACCC notes:

However, monitoring of itself does not restrict airports from using their monopoly position to increase prices and/or lower service standards. Importantly, monitoring does not directly restrict the airports from increasing prices and/or lowering service standards and does not provide the ACCC with a general power to intervene in the airports' conduct in setting of terms and conditions of access.⁵²

⁵¹ NERA Economic Consulting 2007, *Assessment of price monitoring in Australia: a briefing note for the AEMC*, prepared for the Australian Energy Market Commission, December.

⁵² ACCC 2013, *Airport monitoring report 2012/13*, p. xiii.

If there was retail market power in telecommunications, we would not anticipate price monitoring to be an effective form of government intervention to correct for market failure. Once regulation has been removed from a market it is unlikely that it will be re-regulated. As the Productivity Commission has noted:

Price monitoring aims to constrain airports from inappropriately exercising any inherent market power. But neither the regulator nor Governments have acted when the regulator has raised the possibility that some airports might potentially be exercising market power.⁵³

We do not include any costs or benefits outside of administrative costs for this option, because of this. Note that price monitoring may also be relevant if there are social equity goals that the Government is seeking to meet. This is discussed in the next chapter.

Summary of costs and benefits

The costs and benefits of each of the options assessed, relative to cessation of retail price controls, is set out in table 7.8. These numbers assume that retail price controls continue to be set above the market determined level, in which case the only cost is administrative costs for Telstra and the ACCC. An alternative possibility, and one that would likely have larger net costs, is that retail price controls become binding and act as a restriction on competition. In this case, net costs could easily be \$10 million higher over the five year period than report in table 7.8.

Our key finding is that cessation of retail price controls is the option with the highest net benefits.

7.8 Costs and benefits of options to address market power

Option	Costs	Benefits	Net benefit
	NPV, \$000	NPV, \$000	NPV, \$000
Cease retail price controls (and maintain wholesale regulation)	0	0	0
Retain retail price controls in current format (and maintain wholesale regulation)	-1 097	0	-1 097
Revise retail price controls (and maintain wholesale regulation)	-1 597	0	-1 597
Monitoring of retail prices with potential remedy for abuse of market power (and maintain wholesale regulation)	-548	0	-548

Note: Numbers are presented for a five year period using a 7 per cent (real) discount rate.

Source: The CIE.

⁵³ Productivity Commission 2011, *Economic regulation of airport services*, Inquiry report, p. xx.

A Other Government interventions in telecommunications markets

Wholesale regulation by ACCC

Under the Competition and Consumer Act 2010 (CCA), the ACCC is able to declare and make final access determinations for listed carriage services if it considers it is in the long-term interests of end users for it to do so. The ACCC has at various stages decided to declare a number of services provided over the fixed line copper network. This has allowed other companies (known as access seekers) to use the network and provide telecommunications services to end users.

Declaration ensures access seekers have access to the inputs they need to supply competitive communications services to end-users. A list of the current telecommunication services declared by the ACCC is shown in Box A.1.

A.1 Telecommunication services declared by the ACCC

- local bitstream access service
- wholesale ADSL
- digital Set-Top Unit Service (Foxtel)
- domestic PSTN originating access
- domestic PSTN terminating access
- line sharing service
- local carriage service
- mobile terminating access service
- unconditioned local loop service
- wholesale line rental
- domestic transmission capacity service 2010
- NBN access service, ancillary services and facilities access service (NBN Co)

Competition and Consumer Act (CCA)

Telecommunications specific anti-competitive conduct provisions

The telecommunications specific anti-competitive conduct provisions are contained under Part XIB of the CCA. These provisions prohibit a carrier, carriage service provider (CSP) or content service provider from engaging in anti-competitive conduct—this

prohibition is also known as the 'competition rule.' Section 151AJ of the CCA sets out the two circumstances where a carrier, CSP or content service provider is considered to have contravened the competition rule.

- The first of these circumstances is where a carrier or CSP takes advantage of a substantial degree of market power in a telecommunications market with the effect, or likely effect, of substantially lessening competition in that or any other telecommunications market. It is not necessary to examine the purpose of the conduct under the competition rule, unlike the general section 46 misuse of market power provision (in Part IV of the CCA).
- The second circumstance is where a carrier or CSP engages in conduct relating to a telecommunications market that contravenes the general anti-competitive conduct provisions in Part IV of the CCA.

A number of other consumer protection, market power and anti-competitive conduct provisions are included in the Act which provides further regulation of the sector.

Customer Service Guarantee (CSG)

The CSG was introduced by the Telstra (Dilution of Public Ownership) Act 1996 as a safeguard for consumers (table 1.1). The CSG provisions were re-enacted in the Telecommunications (Consumer Protection and Service Standards) Act 1999 and essentially enabled the former Australian Communications Authority (ACA) to determine performance standards for carriers related to such matters as fault rectification times and the keeping of appointments with customers. If a carrier failed to meet service standards then it was liable to pay compensation to the customer in accordance with a scale determined by the ACA. Currently, customer service standards are established and monitored by the Australian Communication and Media Authority (ACMA) and outlined in the Telecommunications (Customer Service Guarantee) Standard 2011.

The Telecommunications Industry Ombudsman (TIO) scheme

The Telecommunications Industry Ombudsman (TIO) is authorised under Part 6 of the Telecommunications (Consumer Protection and Service Standards) Act 1999 to provide an independent alternative dispute resolution service for small business and residential consumers in Australia who have a complaint about their telecommunications services.

Universal service obligation (USO)

Telecommunications (Consumer Protection and Service Standards) Act 1999

Section 9 of the Telecommunications (Consumer Protection and Service Standards) Act 1999 states that:

- standard telephone services and payphones are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business.

- USO should be fulfilled as economically as possible and that any losses involved in its provision should be shared among carriers.
- the Minister has the power to designate a universal service provider with primary responsibility for delivery of the USO.

Telstra is currently the primary universal service provider for the whole of Australia.⁵⁴

TUSMA

The Telecommunications Universal Service Management Agency Act 2012 established the Telecommunications Universal Service Management Agency and provided it with the responsibility of implementing and administering the service agreements or grants that deliver public interest services. Telstra currently has a contractual arrangement with the TUSMA to provide standard telephone services and payphones in accordance with the Universal Service Obligation (USO).

The *Telecommunications Universal Service Management Agency Regulations 2012* include provisions to ensure that TUSMA enters into agreements so that people in areas outside a 'standard zone' are provided with access to untimed local calls when using a standard telephone service or a payphone.

Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997

The Carrier Licence Conditions Declaration followed the Telecommunications Act 1997 which included provisions for the licencing of carriers to supply telecommunication services to the Australia public and for the Minister to impose licence conditions on a carrier licence.

Low-income measures

Under Clause 22 of Telstra's Carrier Licence Conditions, Telstra is required to offer, or have a plan for offering, products and services to address the needs of low-income customers.

This low-income package was originally announced by Telstra in April 2002 and was called *Access for Everyone*. This package is endorsed by low-income consumer advocacy groups through the Low-income Measures Assessment Committee (LIMAC).

Network Reliability Framework (NRF)

To ensure Australia's telecommunications network continues to improve, the Network Reliability Framework (NRF) requires Telstra to repair facilities used to provide services to Telstra retail customers that have recurring faults. For individual services, the reliability requirements are for no more than three faults in 60 days and no more than four faults in 365 days. Under the NRF, Telstra is also required to report regularly to the

⁵⁴ See Telstra website, <http://www.telstra.com.au/abouttelstra/commitments/uso/> accessed 28 April 2014.

industry regulator, the Australian Communications and Media Authority (ACMA), on network faults at a number of levels—ranging from regions to individual phone services.

Priority Assistance Scheme

The purpose of this policy is to provide a specific level of service to Telstra's customers who have a diagnosed life threatening medical condition. That is; Telstra will provide Priority Customers with the highest level of service practicably available at the time on the connection and fault repair of a Priority Customer's Standard Telephone Service (STS) or equivalent service. A Priority Customer is entitled to Priority Assistance on one nominated STS per residence to maximise service continuity. Priority customers can therefore expect enhanced service reliability and faster fault rectification.

Telecommunication Consumer Protection (TCP) Code

Telecommunications Act 1997 sets out the intention of the Commonwealth Parliament that bodies and associations representing sections of the telecommunications industry develop industry codes relating to the telecommunications activities of participants in those sections of the industry. The code covers a range of areas including offers, advertising, selling practices, billing, and complaint handling.

Welfare system

The Federal Government currently offers the Telephone Allowance that aims to help households with the costs of maintaining a telephone and a home internet service. Eligibility for the allowance is linked to household's eligibility for other assistance programs such as the Newstart Allowance and Disability Support Pension.

In addition, the Government also provides a number of assistance measures to disadvantaged households such as the Pension Supplement that implicitly include financial assistance for telephone services and other utility bills.

B Costs of providing services across different regional areas of Australia

This attachment sets out Analysys Mason's findings on the geographic differentiation of the costs of selected telecommunications services in Australia, as well as price differences observable in the access market (at the wholesale level). In this section, we:

- describe some terminology and background relevant to our analysis;
- set out our findings on how costs and prices vary for selected access services in Australia; and
- outline our analysis on how the costs of transmission vary in Australia, for 'middle mile' transmission between the access network and first point of core network aggregation.

Note that this analysis uses a cost model developed by Analysys Mason in 2007 to 2009. An alternative source for cost estimates is the cost model published by the ACCC as part of the 2011 Final Access Determination for fixed services.⁵⁵

Background

The fixed network incumbent in Australia (Telstra) has operated a national copper network for decades. The ACCC, the Australian telecoms regulator, has sought to price-regulate several wholesale (so-called 'declared') services for several years. As part of that process, Analysys Mason developed an Excel-based cost model (referred to as the 'Analysys cost model', or ACM) during the years 2007 to 2009. The ACM was a one-year cost model (that could be calculated for any year in the period 2007-12) and was underpinned by detailed geographic datasets of the whole country, which were analysed extensively.

The final version of the ACM was published in June 2009 and comprised of three Excel workbooks:

- The CAN module, which calculates the asset counts required for a national fixed customer access network (CAN)
- The Core module, which calculates the asset counts for a national fixed core network to serve the assumed levels of subscribers and traffic

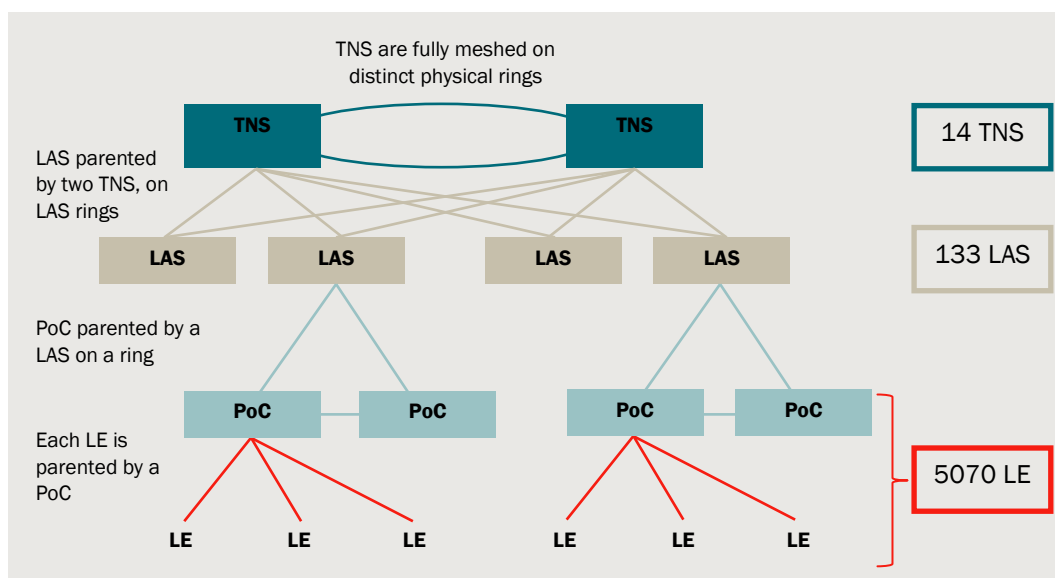
⁵⁵ This can be accessed at the ACCC website: <http://www.accc.gov.au/regulated-infrastructure/communications/fixed-line-services/fixed-line-services-final-access-determination-fad-2011/final-report>

- The Cost module, which calculates the annualised capex and opex associated with both the core and access networks and allocates these costs to the assumed demand volumes.

The CAN module assumed that the CAN was predominantly copper, with some fibre deployed to serve business sites and wireless radio/satellite used in more rural areas. No aerial cabling was assumed. The CAN also made use of large pair-gain systems (LPGS) to serve remote clusters of premises with copper to a LPGS unit that was then linked by fibre back to the local exchange. The unbundled local loop service (ULLS) was not possible on lines served by a LPGS.

The Core module assumed a TDM architecture (traditional for a public switch telephone network) by default, but could also model a partial next-generation network (NGN) core. The inter-exchange network (IEN) assumed in the Core module is summarised below in chart B.1.

B.1 Overview of IEN modelled in ACM



Data source: Analysys Mason 2014.

In particular, the ACM assumed that local exchanges (LE) were linked to parent transmission hubs called points of confluence (PoCs) using tree systems of trench and fibre. Each PoC served up to a maximum number of lines and up to a maximum number of local exchanges for resilience purposes. PoCs were then joined into resilient ring systems of trench and fibre to the local access switches (LAS) and transit network switches (TNS). The assets at each node were modelled individually.

The fundamental building block in the ACM was the exchange service area (ESA), of which there were 5070 nationwide, as in Telstra's network. These ESAs had at least one LE, with 5254 LE in total. For the purposes of the price regulation of ULLS, the ACCC had historically allocated each ESA to one ULLS "Band", as summarised below in table B.2.

B.2 Summary of ULLS Band definitions used by the ACCC

ULLS Band	Exchange service areas	Proportion of	
		premises	lines
		Per cent	Per cent
Band 1	17	0.5	2.5
Band 2	585	64.0	67.5
Band 3	750	22.5	19.5
Band 4	3718	13.0	10.5
Total	5070	100.0	100.0

Source: ACM 2009.

Even within these four Bands, the variation in line density and population density was considerable. Therefore, when undertaking the geoanalysis for the ACM, Analysys Mason defined a total of 16 geotypes, so that each contained ESAs that were more geographically similar. Geotypes 1 and 2 subdivided Band 1, whilst geotypes 3-6 subdivided Band 2. Each of the remaining ten geotypes had some members from both Bands 3 and 4, based on whether most households were clustered around the copper centre, or were spread more sparsely around the LE. Therefore the ACM can consider potential cost variations with significant granularity.

Telstra also developed its own cost model at the time called the TEA model. A third building block model ('BBM') was ultimately used by the ACCC for pricing ULLS. Nevertheless, the ACM provides the most detail in service costs by geography in the public domain and therefore we believe it is the most relevant for our analysis.

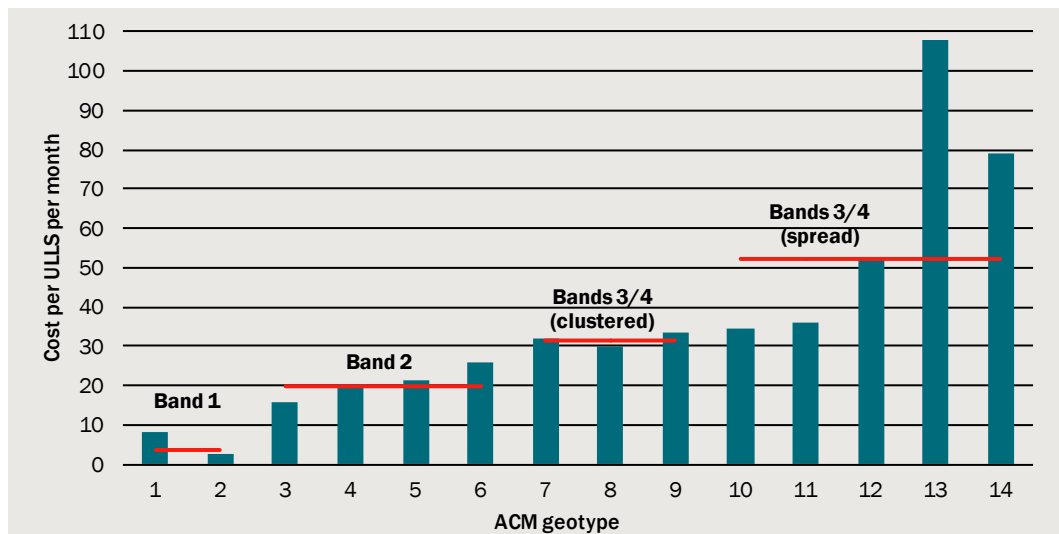
The published ACM was calculated for the year 2010. Therefore, all calculated costs are presented for that year, and fully replicable using the published model.

Cost and prices of selected access services

At the outset it is worth noting that the ACCC has now for several years decided to allow geographically differentiated pricing for the ULLS wholesale service offered by Telstra. The current price regulation of ULLS is defined for each ESA in Australia according to the ULLS Band to which it is allocated. ULLS in any ESA in Bands 1-3 currently has a monthly price of \$16.21 per line, whilst all other ESAs (in Band 4) have a monthly price of \$48.19 per line. Other ULLS charges also vary by band. Wholesale line rental (WLR) is charged as a national average, as are fixed origination and fixed termination.

This decision reflects significant variations in the underlying costs of providing the service, which the ACM calculates for geotypes 1-14, which we show below in chart B.3. It also illustrates the blended average cost for the four geotype groups (the pink lines).

B.3 Average costs of ULLS by geotype and by ULLS Band

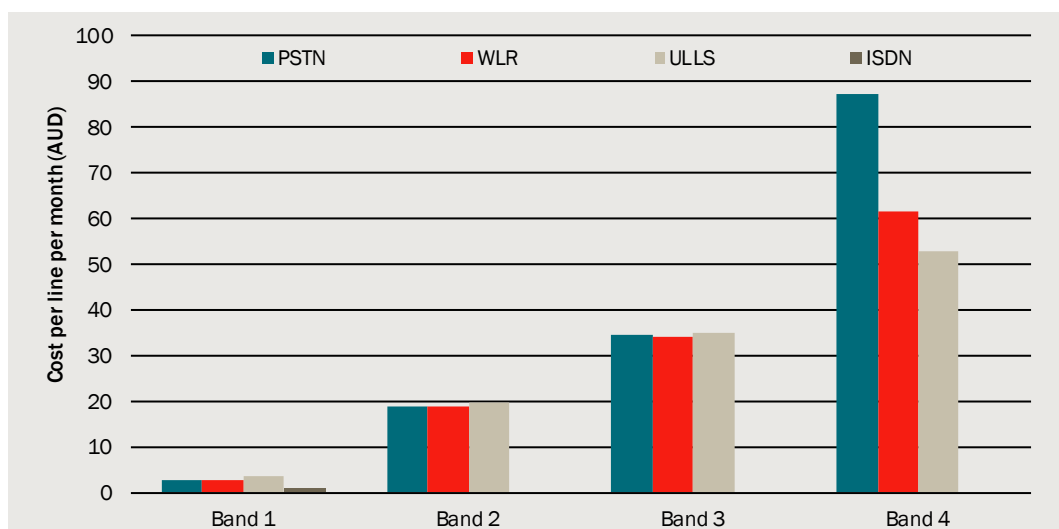


Data source: Analysys Mason 2014.

As can be seen above, the unit costs of ULLS within Band 1 and within Band 2 can vary significantly (for example, the unit costs in geotype 6 are almost double those in geotype 3). There is less variation in the three geotypes within the clustered Band 3/4 ESAs, but the unit cost of ULLS in the spread Band 3/4 ESAs is not only significantly higher than the other categories, but also significantly more varied between geotypes.

The ACM model provides additional information on the network costs of other services, such as PSTN/ISDN access lines, ULLS and WLR. This can be done by transforming average costs by geotype to average costs by band, as shown in chart B.4 below.

B.4 Comparison of average costs per line by ULLS Band for different types of access line



Data source: Analysys Mason 2014.

There is little difference in the cost of each type of access line within a Band, with the exception of Band 4 where there is considerable variation. The unit cost of a PSTN line is the highest of the four services, since these lines include contributions from all access technologies (copper, wireless radio and satellite). The unit costs of WLR are lower since they exclude satellite connections. The unit costs of ISDN are lower still since they exclude both wireless and satellite connections. The unit costs of ULLS can be higher than ISDN/WLR since they exclude not only wireless/satellite connections, but also the assets and lines associated with LPGS. Lines served by LPGS can be lower cost on average than other lines in the CAN since they use fibre cable between the LPGS and the local exchange.

We note that these costs only include network costs, and exclude retail costs. Retail costs may also be higher in areas with lower density of lines, because of the localised fixed costs involved (e.g. regional office or shops, debt collection, etc.). On this basis, we believe a focus on network costs does provide an adequate view of the variability of costs between different geographic areas (geotypes and ULLS Bands).

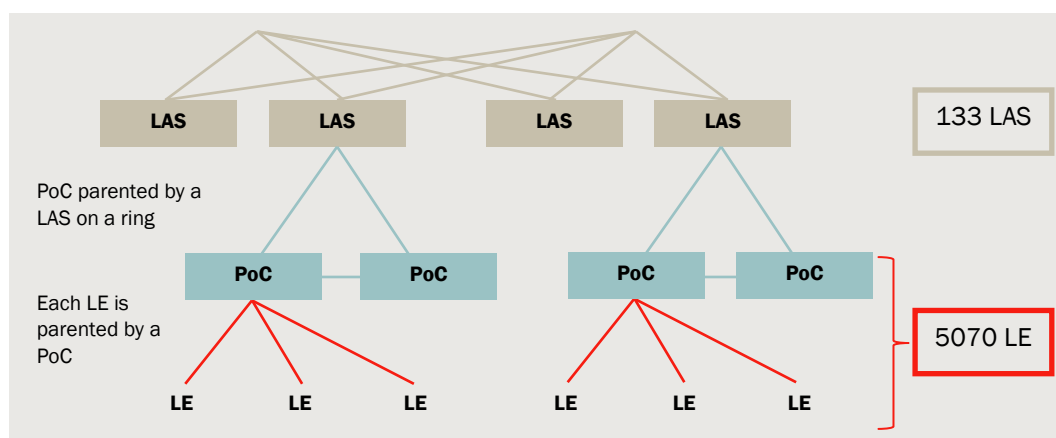
Our primary findings in this section are therefore that:

- **The ACCC price-regulates ULLS separately for the remote ESAs in Band 4 compared with elsewhere in Australia**
- **Our previous cost modelling for the ACCC indicates that the network unit costs of ULLS is significantly different between Bands, and even in different geotypes within each Bands**
- **In Band 4 ESAs, the costs of PSTN/ISDN/WLR/ULLS lines can differ significantly. The network unit costs of an access line are more consistent within the other Bands.**
- **Retail costs are also likely to be higher in areas where line density is lower, although the ACM does not attempt to quantify them.**

Cost of core transmission

We have adapted the Core module of the public version of the ACM to model the costs of the 'middle-mile' transmission in the modelled network. The two services we use to demonstrate the difference in cost are the 'PSTN local traffic (on-net traffic)' service and the 'Mbit/s in LE-LTH' transmission service. The latter is defined as the transmission of data between the local exchange and the local transmission hub (i.e. the PoC shown below in chart B.5). Therefore, both these services primarily use only the assets in the IEN between the LE and the PoC. The two services are both relevant since the latter only considers assets upstream of the LE, whereas the former also considers costs within the LE (i.e. the line card).

B.5 Overview of the LE and PoC nodes we have considered in our analysis of the ACM



Data source: Analysys Mason 2014.

We have modified the Core module so that it only considers the assets for one (selected) ULLS Band. Each LE is known to be assigned to one ULLS Band and its assets are assigned to that Band. The Core module continues to calculate the assets required at all nodes, but only those for the selected Band are sent to the Cost module. The demand used in the Cost module is also scaled by the proportion of lines that are in that Band, allowing the Cost module to generate a meaningful unit cost by modelling appropriate economies of scale and scope for the Band in question. Assets upstream of the LE-facing ports at the PoC are not included. Business overheads are also not included i.e. the unit costs generated include only some network costs. No trench sharing has been assumed between the core and access networks for our calculations (the ACM published by the ACCC did assume some trench sharing, but this has been de-activated).

Table B.6 below illustrates the resulting 'partial incremental costs' per service unit by ULLS Band, for both the services modelled, when considering only the subset of assets described above. The table also provides the blended average of these incremental costs across all bands, which can be considered a meaningful national average. Finally, also included in the far-right column is the national unit cost of the service including all assets (the long-run average incremental cost including with a mark-up for common costs, or LRAIC+), which is produced by the ACM by considering the end-to-end provision of the service.

B.6 Comparison of partial incremental unit costs by ULLS Band (AUD)

Service	Unit	Band 1	Band 2	Band 3	Band 4	Blended	LRAIC+
On-net PSTN voice	AUD cents per call	0.004	0.010	0.023	0.168	0.029	0.065
Transmission from LE to LTH	AUD per Mbit/s per month	-	1.44	65.97	1511.46	172.54	433.02

Source: Analysys Mason 2014.

As can be seen above, the variation in transmission costs is significant between Bands, with three orders of magnitude between the cost of transmission services between Bands

2 and 4. In comparison, there is only one order of magnitude difference between Bands 2 and 4 in the cost of voice services. In both cases, the network costs of providing the middle-mile transmission in Band 4 is significantly higher than the blended national average, even when considering the total LRAIC+ which included end-to-end network costs.

The ratio between the blended cost and the LRAIC+ indicates that approximately 40% of the total core network costs are being captured by our calculation. It is not trivial to allocate higher levels of network assets, due to them sitting across several Bands. For example, there are 218 ring systems used to connect the PoC to the LAS. However, only 35 per cent of these rings have nodes from only one Band (most of these are Band 2). The remainder have nodes from two (39 per cent) or even three (26 per cent) of the Bands, making any allocation of these costs to the Bands non-trivial. Therefore, we have not attempted to allocate any network costs upstream of the PoC LE-facing ports.

The zero value for LE LTH transmission in Band 1 is a result of the fact that each LE in Band 1 is its own PoC given the number of lines they serve, meaning that there is no LE PoC transmission assets required. The unit costs in Band 4 are much higher given that most LEs each serve relatively few lines and yet are remote, thus many require significant trench/fibre deployments to reach their parent PoC. By comparison, the urban LEs in Band 2 will either be their own PoC or will be relatively close to their parent PoC, thereby requiring less trench.

The ACM indicates that the cost of core network services, and transmission in the 'middle-mile' between the access network and the first point of traffic aggregation in the core network, varies very significantly by geography in Australia, more so even than the costs of access services.



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