



Submission on the final access determinations for fixed line services

**A REPORT PREPARED FOR THE COMPETITIVE CARRIERS'
COALITION**

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Executive summary

Background

Frontier Economics (Frontier) has been engaged by the Competitive Carriers Coalition to respond to the Australian Competition and Consumer Commission's (ACCC's) discussion paper on the primary price terms for fixed line services. The price terms will form part of the final access determination (FAD) for these services, which will likely commence in mid-2015.

This FAD represents the first 'reset' of Telstra's pricing under the new pricing methodology that was implemented in 2011 involving the use of a building-block model that was developed during 2009-10. Since that time, the ACCC has had several years to refine its collection of data from Telstra to reset its prices. Importantly, the ACCC has over this period invoked new record-keeping rule (RKR) powers that require Telstra to provide demand and cost forecasts, which are major inputs into the pricing model (the fixed line services model (FLSM)).

The FAD review is also taking place in the context of significant changes to the National Broadband Network (NBN). This means that there is a great deal of uncertainty about aspects of the FLSM; in particular, how will the NBN affect Telstra's expenditure and demand for services on its fixed network? Further, the arrangements between Telstra and NBN Co to lease assets and migrate customers create further modelling, costing and pricing complications.

The central issues raised in the discussion paper

The ACCC's discussion paper raises a number of matters that will have a substantive impact on prices in the next FAD. Of these, the discussion paper draws particular attention to three central issues that are likely to have significant implications for the likelihood of the FAD to best meet the long-term interests of end-users (LTIE):

- The reasonableness of Telstra's forecasts of capital expenditure (capex), operating expenditure (opex) and demand
- The allocation of shared network costs to particular services, including Telstra's new proposal to change the ACCC's existing cost allocation methodology
- The impact of the NBN on the FLSM and FAD prices.

The reasonableness of forecasts is a standard consideration that arises in any regulatory price reset. In this instance, it is imperative that the ACCC ensure Telstra's forecasts are well-documented, supported by evidence and (in the case of cost forecasts) can be shown to be efficient (or would be prudently incurred). In our view, Telstra's forecasts require further evidentiary support and documentation to meet these requirements.

The second issue relates to whether the ACCC's existing cost allocation methodology should continue to be applied in the next regulatory period. Telstra's proposed alternative approach uses a broader range of data sources than that presently used by the ACCC, and potentially generates greater transparency about asset use. However, it also results in undesirable shifting of risk and is inconsistent with the method used by the ACCC to set the existing regulatory asset base (RAB). In our view, Telstra's proposed alternative method cannot be accepted without modification.

The impact of the NBN arises as a concern for two main reasons. First, the current structure of the FLSM does not account for NBN Co's increasing usage of the assets used to supply the declared fixed line services. If left unaddressed, the current model will allow Telstra to over-recover the costs of providing services over its fixed line network and is inconsistent with achieving its legitimate business interests with regard to the declared fixed line services. Second, we believe it would be in the LTIE for the ACCC to take account of the payments between NBN Co and Telstra in the FLSM, as this could result in a simpler adjustment to the FLSM and result in lower prices for end users while still facilitating cost recovery (and thereby meeting Telstra's legitimate business interests) overall.

As well as these three substantive issues, there are a number of more minor issues (such as changes to price structures, calculating prices from revenue requirements; and the length of the new FAD) that we also comment on in this paper.

Many of the issues raised are inter-related

Our analysis of the ACCC's paper finds that there are critical inter-relationships between cost and demand forecasting, the cost allocation methodology, the NBN payments issue, and incentives for efficiency.

For example, the cost forecasts must be consistent with both the demand forecasts and the process of migration to the NBN. Further, the term of the FAD and the incentive schemes built into the FLSM should be consistent with the level of certainty around the forecasts, so that the FAD creates incentives for efficiencies rather than exposing Telstra and end users to windfall gains or losses.

Our view is that the ACCC will need to consider many of these items as a package that delivers an internally-consistent outcome. The obvious example is in relation to NBN impacts, which will affect each of demand forecasts, cost forecasts, cost allocation and the decisions around the term and other incentive properties of the FAD.

Currently, there are significant issues where this overall consistency of approach is not (yet) evident. For example (and as recognised by Telstra) the cost forecasts do not take account of NBN impacts, while the demand forecasts do. Further, Telstra's proposed cost allocation methodology would seem to present some

positive steps with regard to accounting for the NBN aspects of shared asset usage. However, this increased transparency comes at the cost of exposing end users to demand risks that were not a feature of the previous FAD. It also means abandoning the cost allocation approach that was used in 2011 to justify a higher RAB, but without a necessary reduction to the RAB to offset the change in allocation methods.

A more holistic approach to the assessment of the forecasts and of proposed changes to cost allocation would take into account the role of the NBN and the ACCC's intentions in 2011 when it established the initial RAB and other fixed principles. This may require some pragmatic adjustments to ensure that the prices resulting from the FLSM are reflective of those ACCC intentions, and are likely to promote the LTIE.

Summary of our specific comments

With those broad observations in mind, we offer the following comments and submissions on the issues raised by the ACCC:

- On **demand forecasts**, we note that Telstra has provided a considerable amount of material in support of its forecasts and has largely provided a narrative around how these forecasts have been developed, including the proposed impacts of the NBN. Nonetheless, there are complexities and unstated assumptions in the forecasts, and we (like the ACCC) have been limited in our ability to critique these forecasts as Telstra has not supplied the models themselves. Further, we also note that while the existing link between demand forecasting and cost allocation means that the prices in the FLSM are not highly sensitive to changing assumptions, any change to a 'fully allocated' cost allocation method (as proposed by Telstra) will make demand forecasting assumptions more significant: lower *total* numbers of SIOs or calls will lead to higher prices.
- On **capital expenditure** forecasts, we note that Telstra has provided a significant amount of detail about its likely capital expenditure, and proposes a suitable 'bottom up' method for linking capex to the fixed network. However, [X c-i-c material removed], and this will require further assessment when revised forecasts are submitted.
- On **operating expenditure** forecasts, there are three key issues. The first, as noted with respect to capital expenditure forecasts, is [X c-i-c material removed]. Second, there is no evidence presented that the costs to be incurred by Telstra in the 'base year' of its forecasts are likely to be efficient. Third, there seems to be far less sensitivity to costs caused by falling demand (independent of the NBN) than we consider appropriate or can be supported with respect to overseas evidence.
- On **cost allocation and declining demand**, we note that this is a complex issue. On the one hand, we accept there are some potential advantages with

Telstra's approach, including the greater transparency it offers and its ability to link usage of shared assets by non-Telstra users such as NBN Co. On the other hand, however, a change in the cost allocation methodology is highly problematic at this point given that:

- the initial RAB that was set (and included in the fixed principles) in 2011 was determined after finding that prices deriving from the ACCC's initially-developed cost allocation methodology were 'too low'. As discussed in section 3.3.4, the initial RAB was adjusted upwards to facilitate the ACCC's desired outcome of no or minimal change to prices, which was considered in the LTIE. Therefore, changing cost allocation methodologies now with the effect of increasing prices without an offsetting adjustment (downwards) to the RAB could not be in the LTIE.
- the new method would inappropriately expose access seekers to the risks of falling demand which would in part be caused by their own success in competing with Telstra's retail business, and in part caused by another of Telstra's business units (mobiles).

In case the ACCC is minded (against our recommendation) to accept Telstra's new methodology, we also offer some comments on the cost allocation methods proposed for different asset classes.

- On the **impact of the NBN**, we find that the ACCC has a number of options to deal with the payments between Telstra and NBN Co for shared assets. It would clearly not be in the LTIE for the current FLSM to roll forward without taking NBN Co's usage of assets and payments into account, as this will result in a material over-recovery of costs by Telstra (which arguably is already occurring). We find that at a minimum, the FLSM should be altered to reflect NBN Co's use of shared assets, and that there is a strong case on efficiency and practical grounds for taking into account the quantum of payments made.
- On **the approach to determining prices**, we accept that there are theoretical advantages to the introduction of 'price floors and ceilings' based on incremental and stand-alone cost concepts. However, their introduction in the current environment would be (a) impractical, as the ACCC is highly unlikely to have suitable information to allocate costs in a more efficient manner than the existing approach, (b) offers no guarantees of greater efficiency and (c) is not likely to be in the interests of those with rights to use the access services, who have made investments on the basis of current price differentials between services. We consider it would be better for the ACCC to continue to prudently apply traditional (and more practical) techniques for allocating common costs, such as usage-based allocation principles.
- On **the term of the FADs**, we note that considerations around the term of the next regulatory period involve a trade-off between providing efficiency

incentives and certainty over prices, with ensuring scope to address errors in circumstances where future demand and expenditure levels are unpredictable. It should also be considered in the broader context of the design of the FAD. The term of the regulatory period is one factor which drives incentives for efficiency; longer regulatory periods allow for stronger efficiency incentives as any gains from lower costs can be kept by Telstra for longer. That said, the current environment does not allow a great deal of forecasting certainty, with NBN arrangements subject to change and likely ongoing uncertainty around its future shape. It should also be remembered that the ACCC's forecasts from 2011 appear to have been highly inaccurate [~~c-i-c material removed~~]. One way to deal with uncertainty is to keep short FAD periods. If, however, the ACCC is minded to lock in a longer regulatory period, it should consider 'lower powered' incentive regimes which provide for uncertainty while still offering some efficiency incentives.

1 Introduction

The Australian Competition and Consumer Commission (ACCC) has previously declared a number of services that are used by access seekers to provide fixed-line telecommunications services. These include the:

- unconditioned local loop service (ULLS)
- line sharing service (LSS)
- fixed originating access service (FOAS)—previously the PSTN originating service (PSTN OA)
- fixed terminating access service (FTAS)—previously the PSTN terminating service (PSTN OA)
- wholesale line rental (WLR) service
- local carriage service (LCS)
- wholesale service (Wholesale ADSL).

Collectively, these are referred to as the “fixed line services”.

1.1 The ACCC uses a fixed line services model (FLSM) to set prices for the fixed line services

Under section 152BC of the *Competition and Consumer Act 2010* (the Act), the ACCC is able to make a determination relating to access to a declared service. The ACCC has previously issued determinations that set out the price terms and conditions upon which the fixed line services should be provided.

In order to calculate prices to include in its determinations, the ACCC developed a “fixed line services model” (FLSM). The FLSM is essentially a “building block model” (BBM). At a highly stylised level, this involves using the following broad approach:

- First, an annual revenue requirement (ARR) is estimated for each class of asset (e.g. ducts; copper wires; switches etc.) used by Telstra to provide the fixed line services. The aim of the ARR is to estimate an amount that would enable Telstra to recover the efficient costs of providing services over its network over time. The ARR for each asset class is calculated by adding together estimates of four “blocks” of cost:
 - An amount to ensure recovery of capital costs incurred in building its fixed line network (this is determined via a series of depreciation payments over time). The value of the capital stock for an asset class at any point in time is measured by the size of the regulatory asset base

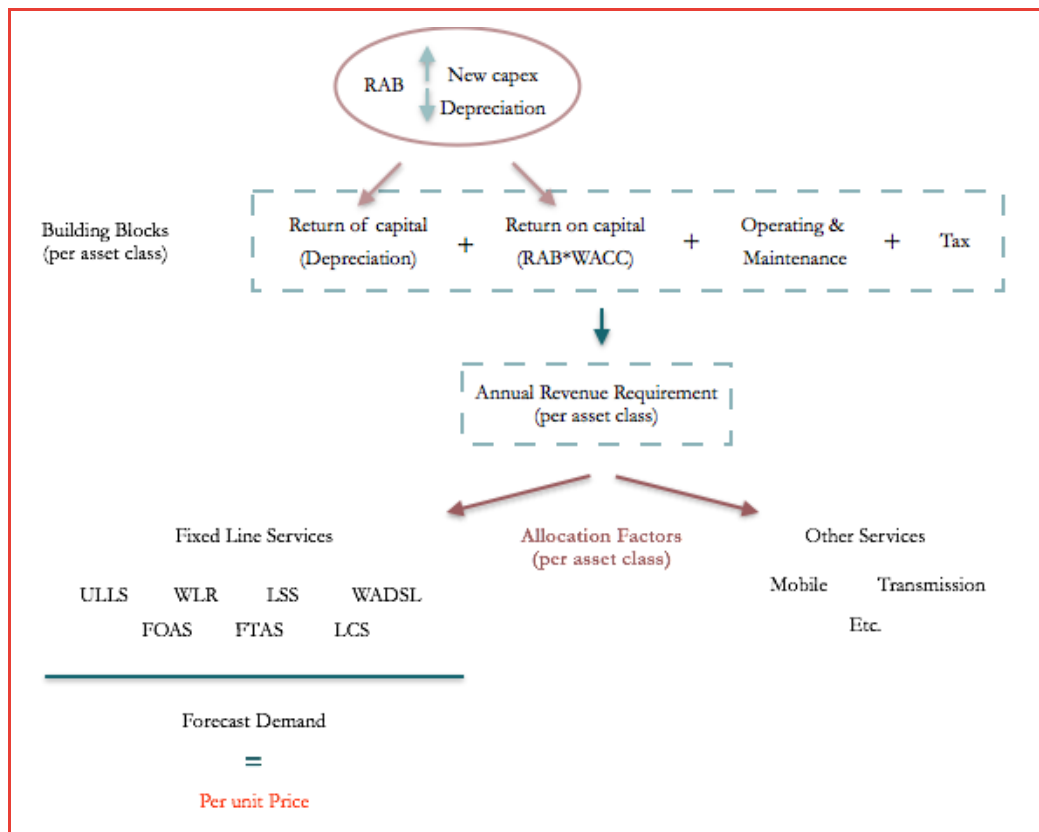
(RAB). This decreases each period by the amount of depreciation, and increases to reflect any new capital expenditure (capex) during that period

- An amount to provide for a return on the capital invested in these asset classes. This is estimated by multiplying the RAB by a weighted average cost of capital (WACC)
 - An amount to ensure recovery of efficient operating expenditure (opex) associated with the provision of services on Telstra's network
 - An amount to reflect taxation payments Telstra would have to pay on earnings from providing services on the network.
- Second, the ARR for each asset class is then allocated between each of the fixed line services and other services that share the infrastructure used to provide the regulated services. To do this, the FLSM uses a set of "allocation factors", which are heavily influenced by projected demand for the different services provided over Telstra's network.
 - Third, once an ARR for each of the regulated services is determined, this amount is divided by projected demand to determine a per unit price for the service.¹

A simplified schematic of the approach used by the ACCC is set out in Figure 1 below.

¹ We note that the ACCC has previously adopted a modified approach for the Wholesale ADSL service, where it has set a two-part tariff charging structure for this service.

Figure 1: Schematic overview of FLSM



Source: Frontier Economics

1.1.1 There are a number of fixed principles in the FLSM

In order to promote certainty over the approach it would take to setting prices for the declared fixed line services, the ACCC specified a number of fixed principles on 20 July 2011.²

The fixed principles provisions for the declared fixed line services apply until 30 June 2021. These act to 'lock in' key elements of the pricing framework (and therefore the FLSM), and provide the industry with certainty over time about how the ACCC will estimate prices for the declared fixed line services.

The fixed principle provisions:

- lock in an initial RAB
- specify a RAB roll forward mechanism

² The fixed principles made on 20 July 2011 were for the declared fixed line services other than the Wholesale ADSL service. This was because the Wholesale ADSL services was not declared until 14 February 2012. Fixed principles were made in the FAD for this service on 29 May 2013.

- specify the components of the ARR
- specify factors the ACCC will take into account in determining whether opex and capex forecasts reflect prudent and efficient costs
- specify a process for assessing demand forecasts
- specify that a vanilla WACC is to be used in calculating the WACC
- specify information relating to tax liabilities and cost allocation factors.

It is intended that these fixed principles would be just that – fixed (and therefore not subject to change from one regulatory period to the next). That said, at the time of determining its fixed principles, the ACCC noted that it:

... has included a provision allowing it to modify or remove a fixed principles provision in certain specified circumstances. These circumstances are intended to be strictly limited. In considering whether to revise the provisions, the ACCC must be satisfied that: there is manifest or material error in the provisions; information on which a provision was based was false or misleading; or an amendment is necessary to avoid an unintended consequence.³

1.1.2 The ACCC sources some inputs from a record keeping rule (RKR)

While many elements of the ACCC's approach to setting prices for the fixed line services are locked-in, other elements will still require updated information to determine access prices on an ongoing basis. This is especially relevant for future capex; opex; and demand forecasts over time.

To assist it to gather the information needed to periodically update the FLSM, the ACCC has also established the BBM record keeping rules (RKR).

To date, Telstra has already provided information under the BBM RKR. This information sets out, amongst other things, capex, opex and demand forecasts for the five year period until 2018-19.⁴ Consideration of the accuracy of these

³ ACCC, *Inquiry to make final access determinations for the declared fixed line services – Final Report*, July 2011, at p. 129.

⁴ Telstra has submitted a number of documents to the ACCC as part of its BBM RKR response, and these are referred to in this submission. The four RKR response documents are:

- the November 2013 initial response ('Initial response')
- the Additional information for BBM RKR response, February 2014 ('Additional information')
- the Extract from the Explanatory Statement, February 2014 ('Explanatory statement extract')
- the Comparison statement, comparing last period's forecasts and actuals, February 2014 ('Comparison statement')

Redacted versions of these statements are available on the ACCC's website.

forecasts will form an important part of the determination of prices for the fixed line services in the next determination.

1.2 A number of factors have delayed the determination of a new FAD beyond June 2014

The ACCC has previously made final access determinations (FADs) in relation to each of the fixed-line services. These were due to expire on 30 June 2014.

In July 2013, the ACCC commenced consultation on the methods for setting prices in FADs that would apply after the expiry of the existing FADs. On 16 April 2014, however, the ACCC indicated it was not in a position to complete a new set of FADs for these services by 30 June 2014, and extended the current FADs for fixed line services until the day before the new FADs come into force. It indicated it was not in a position to complete its inquiry by 30 June 2014 due to uncertainty over the impacts of the NBN rollout on Telstra's operations; the first time nature of some aspects of the inquiry process; and the number of complex pricing issues to be considered.

The ACCC has stated that it expects the FAD inquiry will not conclude until around mid-2015.

1.3 The ACCC's discussion paper

On 24 July 2014, the ACCC issued a discussion paper raising a number of matters relevant to the determination of price terms and conditions of access to the fixed line services. Key matters raised in the paper included:

- The pricing methodology used by the ACCC to determine prices for the fixed line services
- Expenditure and demand forecasts provided by Telstra, and the extent to which these should be relied upon by the ACCC when determining prices for the fixed line services
- A proposal made by Telstra to alter the existing method used by the ACCC to allocate common costs associated with the provision of the fixed line and other services. Telstra's new proposal also has implications for the way in which declines in the relative demand for different services over time will be reflected in access prices for the fixed line services⁵

⁵ Telstra has further submitted documents and spreadsheets in support of its new cost allocation proposals. These documents, dated July 2014, are also referred to in this submission.

- A proposal made by Telstra to enable the ACCC greater flexibility in the way it sets final prices for fixed line services. This might involve it, for example, adopting “two-part tariffs” and/or using its judgement to recover relatively more common costs from some fixed line services than others
- How payments made by NBN Co to Telstra should be taken into account when determining prices for the fixed line services. This is important given NBN Co will be seeking access to some of the same infrastructure that is used to provide the fixed line services.

1.4 The ACCC has previously emphasised the need for certainty in its regulatory arrangements

In making a determination under section 152BC of the Act, the ACCC must have regard to the following criteria specified in subsection 152BCA(1) of the Act:

- a) whether the determination will promote the LTIE of carriage services or services supplied by means of carriage services
- b) the legitimate business interests of a carrier or CSP who supplies, or is capable of supplying, the declared service, and the carrier’s or provider’s investment in facilities used to supply the declared service
- c) the interests of all persons who have rights to use the declared service
- d) the direct costs of providing access to the declared service
- e) the value to a person of extensions, or enhancement of capability, whose cost is borne by someone else
- f) the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility
- g) the economically efficient operation of a carriage service, a telecommunications network or a facility.

The ACCC has previously indicated when determining prices for the fixed line services that:

... the ACCC is of the view that the LTIE will be achieved by pricing principles with the following desirable features:

- a fair rate of return on investment (cost recovery)
- incentives for efficiency and innovation
- transparency and regulatory certainty
- competitive pricing.

In particular, it is the ACCC's view that these features promote competition in markets for the declared fixed line services, and encourage the economically efficient use of, and investment in, the infrastructure used to provide those services.⁶

The desire to provide greater transparency and regulatory certainty was a major factor behind decisions to adopt fixed principles in the FLSM.

1.5 This submission

The Competitive Carriers' Coalition has engaged Frontier Economics to provide an expert submission on aspects of the ACCC's discussion paper.

In particular, we respond to the following questions and issues raised by the ACCC:

- whether Telstra's BBM RKR capital expenditure forecasts for the period 2014–15 to 2018–19 represent only prudent and efficient investment and whether there is sufficient detail to properly assess the forecasts?
- whether Telstra's 2013–14 forecasts represent a reasonable baseline for the BBM RKR operating expenditure forecasts, and what scope exists for further efficiency gains given Telstra's views on productivity and trends for network faults?
- whether Telstra's proposed changes to cost allocation methodology would better reflect costs in the forthcoming regulatory period?
- how declining demand should be accounted for in the FLSM
- whether there is merit in moving to a greater degree of pricing flexibility?
- how payments relating to the rollout of the NBN should be accounted for.

We also note that we have not addressed all issues raised in the ACCC's discussion paper. These may be addressed at a later time in the FAD process.

⁶ ACCC, *Review of the 1997 telecommunications access pricing principles for fixed line services – Draft report*, September 2010 at pp. 13.

2 Demand and cost forecasts

2.1 Telstra's RKR response

The ACCC introduced RKRs to require Telstra to produce forecasts of costs and demand suitable for inclusion in the FLSM.

Telstra has responded to the BBM RKR request with forecasts of operating expenditure (opex), capital expenditure (capex) and demand for retail and wholesale fixed line services.

Telstra's response indicates that its forecasts were based on information accurate at June 2013, when the NBN was planned as a fibre-based network with no use of Telstra's copper network.

The forecasts will need updating due to the Government's new multi-technology mix (MTM) model. Initial indications are that NBN Co will likely make much greater use of Telstra's copper and HFC networks. Both of these changes will affect the degree to which the copper network is re-used and therefore maintained. Greater use of the copper network as in an FTTN will mean higher costs of maintenance and remediation, while greater use of HFC networks would have an unclear effect on costs. To the extent that ownership of these networks reverts to NBN Co, further changes will be required.

While Telstra's base year forecasts of opex and capex are considerably lower than for the past regulatory period, this does not obviate from the need to closely examine the trends in costs it has proposed and the relevance of capex and opex forecasts to the declared services.

2.2 Demand forecasts

2.2.1 Demand forecasting method

Our understanding of Telstra's demand forecasting methodology is that:

- Telstra has prepared the forecasts using essentially the same processes as used in its business planning processes
- The forecasts have been prepared by extrapolating past trends, which in some cases have an underlying set of drivers (e.g. retail broadband SIOs has an associated set of underlying drivers around addressable households and moves to mobile-only households)
- A single set of NBN-related demand assumptions (as explained in Annex 1 of Telstra's response) has been used across the different services

- Each of the relevant Telstra Product Managers prepared a “pre-NBN forecast” (that is, a forecast which does not apply any assumptions as to the impact that the NBN rollout will have on demand for that product).

2.2.2 Significance of the forecasts

The significance of the demand forecasts in the FLSM is somewhat unusual in a BBM. Ordinarily, demand forecasts are critical to determining prices as they are the denominator used to unitise prices in a price determination (with allowed revenue as the numerator). However, the existing structure of the FLSM is such that cost allocation between services sharing assets is closely aligned with demand forecasts, so that forecast changes in volumes have a minor impact on unit costs and prices. In other words, an increase in the forecast volume for Service A, which would tend to lower unit costs and prices, also increases the cost allocated to Service A.

The proposal by Telstra to change the cost allocation method used in the FLSM would, however, change the significance of demand forecasting if it were adopted by the ACCC. Our understanding of Telstra’s proposal is that while changing the balance of forecasts within the same overall demand will tend to have minimal price effects (for the reason described above), changing the overall forecasts for lines or calls will have the effect of raising unit costs and prices. We discuss this aspect of the new cost allocation methodology in Section 3; nonetheless we note here the greater importance of getting the overall forecasts right (across Telstra and access seekers, and taking into account the effects of the NBN).

2.2.3 The methods and forecasts for the declared fixed line services appear reasonable, but not detailed

Our review of Telstra’s demand forecasting methods broadly suggests its methods is reasonable in light of considerable uncertainty. That said:

- for some services more information could be supplied about the drivers of underlying demand.
- Telstra has not supplied its forecasting models, which limits the transparency of assumptions not related to the NBN (which have been provided).

More specifically, for the **ULLS** and **LSS** forecasts, [X c-i-c material removed].

On **WLR** forecasts, [X c-i-c material removed].

We also understand that that **LCS** forecasts [X c-i-c material removed].

On the **FOAS** and **FTAS**, [X c-i-c material removed].

On the **Wholesale ADSL** service SIOs, [X c-i-c material removed].

The estimates of **NBN impacts** are set out by Telstra, although these are now known to not be accurate given recent proposed NBN changes.

Our preliminary assessment of these forecasts leads us to conclude that:

- Total forecasts of SIOs prior to NBN effects look reasonable – i.e. [X c-i-c material removed]. This seems broadly appropriate given past data on the level of SIOs.
- [X c-i-c material removed].
- While the proposed forecasts appear reasonable in light of existing trends, and NBN-related changes, we agree with the ACCC that further transparency would be promoted by identifying some [X c-i-c material removed] factors that are used in Telstra's forecasting models
- We also do not have a full picture of Telstra's actual volumes (including retail volumes) dating back a number of years, which would be helpful to better analyse the forecasts, particularly in light of its new cost allocation proposal.

2.2.4 There is less clarity around the demand forecasts for other fixed line and non-fixed line services

Telstra notes in its cost allocation documentation that demand forecasts for the regulated fixed line wholesale services are as reported in the 2013 BBM RKR. For the remaining Fixed Line Services, it states that:

“corporate forecasts have been adopted, with adjustments made to ensure consistency with the BBM RKR forecasts and with the forecasts extended to cover the forecast period...For other services, the latest and best available information on usage has been used in the absence of corporate forecasts.”⁷

Given the importance of demand forecasting to Telstra's cost allocation proposal, it is incumbent on Telstra to produce information of a similar quality to the declared fixed line services. If this cannot be done, it calls into question the usefulness of Telstra's alternative cost allocation proposal.

2.3 Capital expenditure forecasts

2.3.1 The assessment standard

The fixed principles provisions specify that, in assessing the reasonableness of Telstra's capital expenditure forecasts, the ACCC will take into account:

- the access provider's level of capital expenditure in the previous regulatory period

⁷ Telstra, Cost allocation submission, July 2014, p. 11.

- the reasons and evidence supporting changes to capital expenditure in the next regulatory period
- whether the access provider's asset management and planning framework reflects best practice
- any relevant regulatory obligations or requirements applicable to providing the declared fixed line services, and
- any other matters relevant to whether forecast capital expenditures reflect prudent and efficient costs.

2.3.2 Telstra's forecasts

As we understand it, Telstra's methodology for setting capex forecasts under the BBM RKR is based on a different methodology to that used in the 2011 FAD.

The old method was based on a high level analysis of past expenditure on certain asset classes. For some categories where forecasts could not readily be made (indirect capital assets), forecasts were simply based on past depreciation expenses.

The new methodology is based on a bottom up analysis of FLSM asset classes. These asset classes were then linked to 'IMC codes' which are relevant projects, and separate expenditure forecasts are prepared for each IMC code.

The top ten IMC codes by expenditure are analysed in greater detail than the remainder of the codes. These top ten codes account for around [REDACTED] per cent of forecast capital expenditure.

For these ten codes, we understand that Telstra has calculated the base year of the forecast period (2014-15) by:

- Assessing the three year average prior to the base year, and adjusting the average to extrapolate to the base year depending on the trend
- [REDACTED].

In its second response to the ACCC, Telstra provides more detail on the drivers of the capital expenditure forecast, noting [REDACTED]. The top ten IMC codes are also mapped to asset codes, which gives greater transparency as to what kinds of assets are the subject of the capital expenditure.

2.3.3 Capex forecasts will be heavily influenced by the NBN

The NBN will clearly have a critical influence on the types and quantum of expenditure that Telstra will undertake over the next few years. The higher the probability that a particular set of assets will be stranded, the lower we would expect capex to be as the assets are run down while still maintaining them as serviceable.

[X c-i-c material removed] We would expect that there should be a real decline in capital expenditure caused by (a) avoiding renewal of assets; (b) migration of lines to NBN Co reducing the need for any new connections; and (c) a general reduction in the CAN footprint.

We further note that the capital expenditure forecasts should be consistent with the approach taken to cost allocation and, in turn, demand forecasting. In particular, services that are driving higher capital expenditures of shared assets (particularly data services, including for mobile services) should be allocated a higher share of the cost on the basis of the relatively higher share of asset usage. The current assumptions of falls in demand for the declared fixed line services (in part based on NBN migration) and flat real capital expenditure only seem credible if there are other sources of demand which will recover a relatively greater share of the capital expenditure.

We therefore agree with the ACCC that the next set of RKR forecasts should make clearer and more consistent these connections between capital expenditure, cost allocation and the NBN.

2.3.4 Separation of 'NBN capex' is necessary

There is one further point that can be made about NBN-related capital expenditure. This is that it would be strongly desirable to determine to what extent capital expenditure is directed at facilitating the use of assets by NBN Co use (ducts / copper etc) so that a comparison can be made between payments made by NBN Co and expenditure on capital assets.

The reason this separation is necessary is that it would be inefficient for fixed line access seekers and their customers to pay for network modifications (for example, the remediation of ducts) which would not be required in the absence of the NBN rollout. If these assets cease to become useful for access seekers once the NBN is rolled out, these costs should be seen as incremental to NBN Co's use and be appropriately recovered through charges levied by Telstra.

As an example, suppose that Telstra has to spend \$1bn remediating ducts to allow NBN Co to lay distribution fibre. These ducts are currently used for copper services and there would otherwise be little to no expectation that any capex would be spent on them in the absence of the NBN rollout. Allocating these costs between access seekers and NBN Co (and Telstra) using a fully allocated cost model based on relative usage of the ducts could facilitate a cross-subsidy if these investments result in higher average costs. In principle, this 'cost' that is attributable to NBN Co should be separated out and recovered from NBN Co and so from NBN Co users rather than Telstra's network users.

Our review of Telstra's capex forecasts suggests that Telstra has already spent significant amounts on NBN-related capex and made 'NBN exclusions', as we suggest here.⁸ We are less clear, however, to what extent this exclusion relates to expenditure on shared assets that would otherwise be avoidable in the absence of the NBN (as opposed to expenditure necessitated by the NBN and not attributable to the supply of fixed line services). It will be important that the ACCC is able to satisfy itself that the remainder of capex (included) allows for an appropriate level of contribution to cost recovery by NBN Co. We return to this matter in Section 4.

2.4 Operating expenditure forecasts

2.4.1 Assessment standard

The fixed principles specify that forecast operating expenditures should reflect prudent and efficient costs. The following matters are said to be relevant to whether forecast operating expenditures reflect prudent and efficient costs:

- the access provider's level of operating expenditure in the previous regulatory period;
- reasons for proposed changes to operating expenditure from one regulatory period to the next regulatory period;
- any relevant regulatory obligations, or changes to such obligations, applicable to providing the relevant declared fixed line services; and
- any other matters relevant to whether forecast operating expenditures reflect prudent and efficient costs.⁹

Notably, the fourth matter allows the ACCC considerable discretion about other factors that it may wish to take into account. In this light, we consider that it is relevant to take account of the findings of the Tribunal in the "line sharing" review:

46 ... whenever an access provider seeks approval of an access undertaking from the Commission which involves a consideration of a price term by comparing it with costs, it would be necessary, in order to satisfy the statutory framework, that the access provider establish that its costs are efficient costs... Put shortly, if an access provider wishes to establish before the Commission, or needs to establish before the Tribunal, that its costs are efficient, it will need to have put material to that effect before the Commission.¹⁰

⁸ Telstra, Explanatory statement extract, February 2014, p. 20

⁹ ACCC, Final Access Determination, 2011, p. 131.

¹⁰ Re Telstra Corporation Limited, ACompT 4 (2 June 2006)

Applying the Tribunal's finding to the current situation suggests that there should be some material that establishes that Telstra's expenditure is efficient. This is particularly important in a situation where there have been significant changes in methodology for determining forecasts of expenditure. We also note here the AER's comments in its expenditure assessment guidelines that:

Our general approach is to assess the efficiency of a network business and determine whether previous spending is an appropriate starting point. If a business is efficient and has been responding to our expenditure incentives measures, its past expenditure is often a good indicator of how much it will need to spend in future.¹¹

...

We will use our assessment techniques to determine whether the base year is efficient. Once the base year is set, we apply a rate of change to account for changes in prices, productivity and the outputs the business is required to deliver.

If our assessment shows that the base year expenditure is not efficient, we may adjust it or substitute an appropriate amount.¹²

We therefore take from the fixed principles, and from good regulatory practice, that it is critically important that Telstra's forecasts:

- are determined from the right baseline level of costs; so opex should reflect efficient costs at the current year
- should change at a trend rate that is reasonable in light of both macro factors (relating to the economy) as well as micro factors relating to the performance of the industry and the firm.

2.4.2 Our understanding of the forecasts

Our understanding is that Telstra has determined its opex forecasts by using a two-step approach:

- The determination of the baseline year (2013-14) using a bottom up approach
- Applying a trend to the 'out' years 2014-15 to 2018-19.

[✂ c-i-c material removed].

2.4.3 The ACCC should consider broader tools to ensure that the base level of expenditure is efficient

As we note earlier, the fixed principles specify that forecast operating expenditures should reflect prudent and efficient costs, and that the ACCC

¹¹ AER, *Better Regulation: Expenditure forecast assessment guideline*, factsheet, November 2013.

¹² *Ibid.*

should satisfy itself that Telstra's base level of operating expenditure is efficient before accepting the trend forecasts.

The material produced by Telstra on operating expenditure for the base year level forecasts (2013-14) appear to be based on current actual expenditure.¹³ There is therefore a presumption that this represents an efficient level of expenditure.

In our view, the ACCC will need to undertake further investigation as to the efficiency of Telstra's base year level forecasts.

As an example of the kinds of analysis that might be undertaken, we note the AER's statements on how it will assess the efficiency of electricity distribution and transmission businesses in Box 1.

Box 1: AER statement on assessing the efficiency of expenditure

We use our assessment techniques to test the efficiency of a network business's expenditure. These techniques include:

- economic benchmarking—productivity measures used to assess a business's efficiency overall
- category level analysis—comparing how well a business delivers services for a range of individual activities and functions, including over time and with its peers
- predictive modelling—statistical analysis to predict future spending needs, currently used to assess the need for upgrades or replacement as demand changes (augmentation capex, or augex) and expenditure needed to replace aging assets (replacement capex, or repex)
- trend analysis—forecasting future expenditure based on historical information, particularly useful for opex where spending is largely recurrent and predictable
- cost benefit analysis—assessing whether the business has chosen spending options that reflect the best value for money
- project review—a detailed engineering examination of specific proposed projects or programs
- methodology review—examining processes, assumptions, inputs and models that the business used to develop its proposal
- governance and policy review—examining the business's strategic planning, risk management, asset management and prioritisation.

Source: AER Better Regulation factsheet – expenditure forecast assessment guideline, November 2013

The use of economic benchmarking and category analysis are significant tools which look at the efficiency of the base level of input costs, and whether there is any 'catch up' in efficiency required.

¹³ Telstra, 2013 Initial response, p. 5.

We recognise the difficulty in conducting such analyses; that said, we believe it is incumbent on the ACCC to consider relevant comparisons if it can obtain the relevant information.

[X c-i-c material removed]

Without these kinds of analyses, it is difficult for access seekers and end users to have confidence that Telstra's expenditure is efficiently incurred and that end users are paying the minimum amount necessary.

2.4.4 There is scope to reduce the opex forecasts

At the outset, we recognise that the actual cost and demand numbers forecast produced by Telstra are preliminary and subject to change.

That said, there are several concerning features about the existing opex forecasts which suggest that Telstra is either understating the scope for future reductions in costs or not taking seriously the threat of significant declines in fixed line demand.

We first discuss the scope for future efficiency gains, and then turn to the relationship between costs and demand / volumes.

The scope for efficiency gains is understated

Understanding the real scope for cost reductions is inevitably a difficult assessment, requiring the ACCC to use some judgement in its assessment of Telstra's forecasts. We consider it is incumbent on the ACCC to investigate the key sources of efficiency gains which could result in opex reductions (or reductions in opex growth) over time:

- Labour productivity - If a member of staff produces more services in a given amount of time, this raises efficiency.
- Real unit input cost reductions - If the input costs per unit can be reduced, efficiency increases.
- Fault reductions - If fault rates decrease, this improves efficiency by reducing the costs of addressing these faults.
- Technology changes - If a new, less costly technology can be used to perform a given task, efficiency increases.

[X c-i-c material removed]

These should be explored further by the ACCC; we note, for example, the analysis recently undertaken by Ofcom when setting charge controls for (BT) Openreach in the UK. This is further described in Box 2.

Box 2: Ofcom's assessment of efficiency gains by Openreach

Ofcom regulates (BT) Openreach supply of LLU and WLR services using a price control. This price control takes the form of a 'CPI – X' control, where X represents the efficiency gains that Ofcom considers is reasonable estimate for the charge control period.

Ofcom's basis for setting the X drew heavily on its review of achievable efficiencies. This review sought to identify the achievable efficiency gain applicable to both opex and capex (cash costs) and independent of changes in volumes.

In doing so, it relied on the following data sources:

- Historical trend analysis, based on both regulatory financial statements and management accounts
- BT planning documents
- BT public statements
- Analyst reports
- A benchmarking report which compared BT against a group of seven international operators over the period 2005 to 2011
- European price trends
- 'Other benchmarking' (confidential)

Ofcom concluded that:

Taken in the round, the evidence we have been able to consider suggests that a net efficiency target of between 4% and 6% per annum (on all cash costs) is reasonable. We propose to adopt a base case efficiency of 5% which will be applied in our cost modelling to both operating costs (excluding depreciation) and capital expenditure.

...Our efficiency estimate includes both "catch up" and "frontier shift". Catch up is the change in costs required to bring Openreach in line with an efficient operator. Frontier shift is the movement in efficiency expected by an efficient operator over time. We have not separately estimated how much is frontier shift and how much is catch-up efficiency.

Source: Ofcom fixed access market reviews, July 2014 statement annexe 16

Our preliminary analysis of the evidence is that there are five points which suggest that a real decline in opex costs should form some part of a future opex forecast:

- [X c-i-c material removed]
- Historically, Telstra has shown the ability to reduce its input volumes by more than its output volumes – resulting in TFP increases – and (likely) falls in costs
- Telstra has maintained its EBITDA margins for its fixed network, even with falling demand for lines and calls over the past few years
- The NBN will start to reduce the lines and call volumes over the next few years, due to the reducing footprint of the CAN

- Telstra is proposing ‘out of sample’ falls in demand, which are likely to require far more significant reductions in costs than have occurred previously if large price increases (which might be self-defeating) are to be avoided.

Forecast wage increases do not appear to be conservative

As noted above, Telstra has assumed [§ c-i-c material removed]¹⁴ This is said to be a highly conservative assumption.

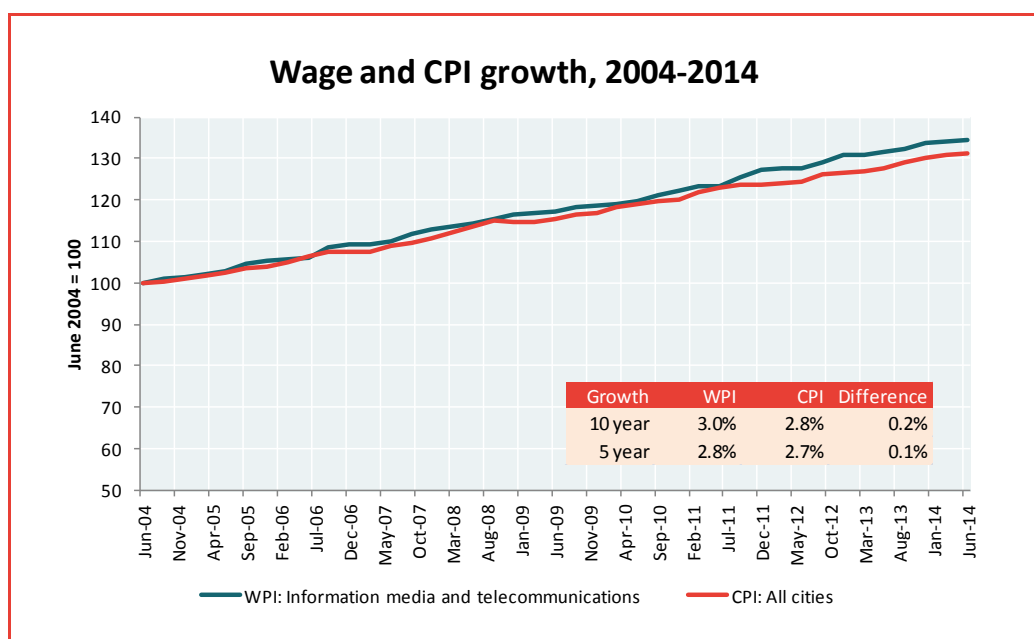
Telstra’s forecasts of its own wage index and the ABS wage index are provided in its November 2013 submission (page 24), which indicates forecast growth in Telstra wages of [§ c-i-c material removed] and between [§ c-i-c material removed] for the ABS wage price index. This compares to forecast CPI growth of between 2.6% and 3.0% over the period to 2018-19.

We are uncertain of how Telstra has forecasted both its own wage index and that of the ABS, as this is not spelled out in its response. [§ c-i-c material removed]¹⁵ However, our assessment of the ABS wage index data is that wages in the telecommunications sector have not been rising significantly faster than CPI over the last 5 to 10 years. In the following chart, we show that the gap between the “Information media and telecommunications” index and CPI is between 0.1% and 0.2% over these periods. This smaller gap suggests that Telstra’s forecast is not as conservative as claimed.

¹⁴ Telstra, Additional information statement, February 2014, p. 16.

¹⁵ Telstra, 2013 Initial response, p. 24.

Figure 2: CPI and wage price indices, 2004-2014



Source: ABS series IDs A2325846C and A2638859X

We also note that the 2014-15 Commonwealth Budget forecasts included forecasts for wage price index growth of three per cent per year for years 2014-15 and 2015-16, [c-i-c material removed].¹⁶

The history of increases in productivity and stable profitability imply cost reductions can be found

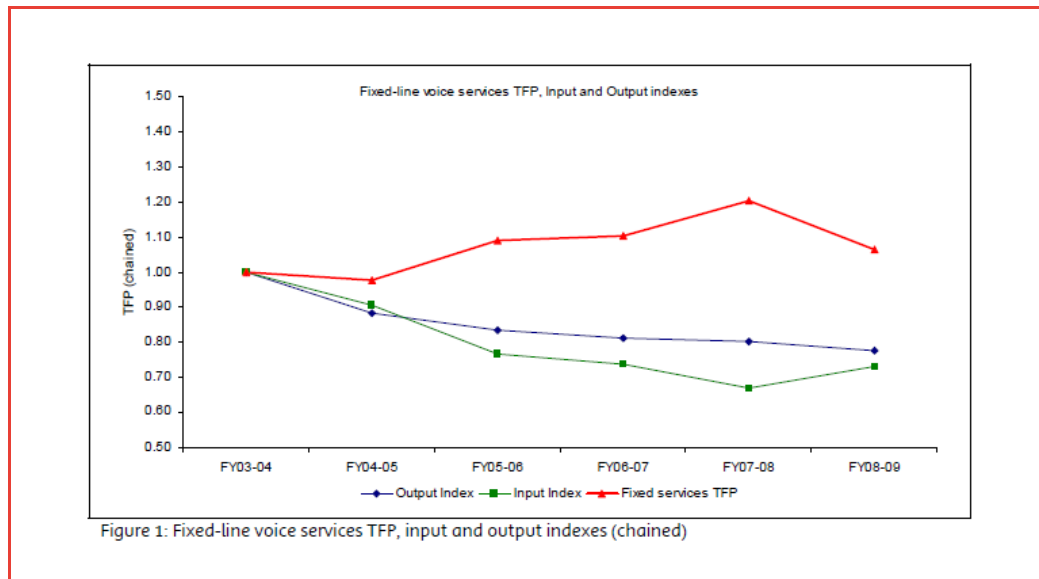
Historically, Telstra has made significant improvements in the productivity of its fixed network. As an example, there have been several studies of Telstra's TFP that have found it is using less inputs for its produced output for the fixed network, even through periods in which demand has been declining.¹⁷ In Figure 3, we replicate a chart from Telstra's submission to the ACCC's review of retail price control arrangements in 2010, in which Telstra produced its own analysis of TFP.¹⁸

¹⁶ Commonwealth budget papers 2014-15, p. 2-5, available at: http://www.budget.gov.au/2014-15/content/bp1/download/BP1_BS2.pdf

¹⁷ See for example the ACCC's review of Telstra's retail price control arrangements in 2005, available at: [http://www.accc.gov.au/system/files/Final%20report%20E2%80%94942004%20review%20of%20Telstra%20price%20control%20arrangements%20\(Feb%202005\).pdf](http://www.accc.gov.au/system/files/Final%20report%20E2%80%94942004%20review%20of%20Telstra%20price%20control%20arrangements%20(Feb%202005).pdf)

¹⁸ Telstra, *Submission to ACCC review of Retail Price Controls*, 2010, p. 30.

Figure 3: Telstra's TFP performance for fixed line voice

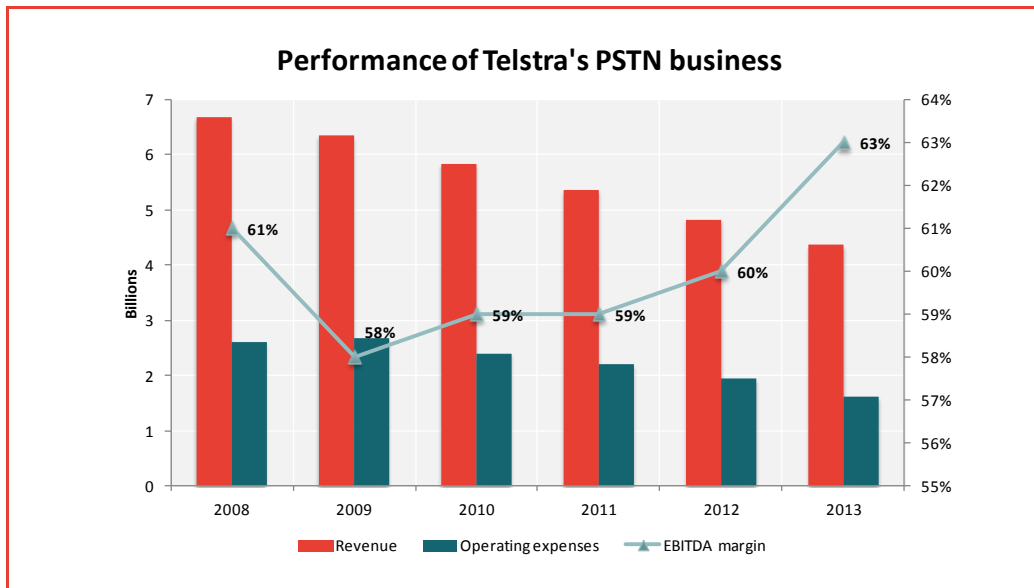


Source: Telstra

This chart shows that while outputs have been falling, inputs (i.e. quantities of labour and capital) have been falling at a faster rate. Even if this is offset to a degree by increasing costs of inputs, it seems improbable that they would offset these gains (at least over this period, as inputs fell by more than 6 per cent per year).

Another source of evidence on the ability of Telstra to find efficiencies is its profitability performance of the PSTN. Telstra's recent annual reports show a pattern of falling revenues and stable to increasing EBITDA margins. This does not appear compatible with the view that there are few efficiencies to be found, or that most costs associated with the PSTN are fixed. If prices have been stable, then with costs fixed we would expect to see falling EBITDA margins. In contrast, Figure 4 shows stable-to-increasing margins.

Figure 4: Telstra's PSTN EBITDA performance



Source: Telstra annual reports

The ACCC will need to assess whether there is any potential for over-recovery of relevant opex costs

We note that there has been a distinct change in methodology with respect to the treatment of direct and indirect operating costs. As we understand it:

- In the ACCC's 2011 FAD approach, total opex was estimated using estimates of direct operating expenditure (from the RAF) and an [X c-i-c material removed] per cent markup for indirect expenditure (again based on historic RAF data). No specific markup was made for further 'overhead' type costs.
- In Telstra's proposed approach, direct and indirect opex are estimated directly (based on internal budgets) and both have a [X c-i-c material removed] per cent markup for unattributable costs including "a contribution towards corporate overheads".¹⁹

While it should be a positive step to identify costs (for indirect costs) to a more granular level, the changing structure of the forecasts suggests that some care will need to be taken to avoid that only relevant costs are recovered. In particular, we are concerned about the change in markup approach and the potential for inconsistency between the data sources used for the unattributable cost markup (the TEM) and the previously used RAF data.

¹⁹ Telstra, Comparison statement, February 2014, p. 35

The NBN will have an impact in the next few years

There is undoubtedly a significant amount of uncertainty about the format and roll out of the NBN, and Telstra's role in it. However, it is clear that Telstra's fixed line access network will reduce in size over time, and this will reduce costs attributable to the declared fixed network services. This must be accounted for in the cost forecasts.

There must be a new emphasis on cost reductions given demand forecasts

The final point is that if Telstra's demand forecasts are accurate, and there will be continued material declines in fixed call volumes, then there must be a serious attempt to reduce costs to avoid a 'death spiral'. This spiral occurs where prices are increased to recover costs, but this induces a significant demand response (including substitution to other mediums, such as mobiles or VOIP) that lowers revenues and profits. In a world of falling volumes and fixed costs, higher prices would seemingly be required for Telstra to earn a commercial return but there must be some doubt as to whether this is a viable strategy.

2.4.5 The relationship between costs and demand embedded in the current forecasts is implausible

[X c-i-c material removed]

This is for three main reasons:

- As discussed above, it is inconsistent with historic data which shows that Telstra has been able to maintain and even increase EBITDA margins for its PSTN business, even though volumes have been falling. If prices have not been rising, then this could only be explained by falling costs.
- It does not appear to recognise that there is a difference between what is achievable in the very short run (when costs are more likely to be fixed) with the medium term (say a five year regulatory period).
- It appears inconsistent with available evidence from overseas, with Ofcom using cost-volume elasticities of close to one for many cost categories in its charge control modelling for ULLS and WLR services (see box 3.)

Box 3: Cost-volume elasticities in the UK price control modelling

Ofcom's charge control modelling for WLR and ULLS services in the UK involves the use of a top-down LRIC model. This model uses base year estimates of costs from regulatory accounts. Once the base year costs are determined, Ofcom forecasts costs forwards using asset volume elasticities (AVEs) and cost volume elasticities (CVEs) applied to the forecast of service volumes.

- CVEs are used to determine the level of operating costs needed in response to changes in demand (the percentage change in operating costs for a 1% change in

volumes).

- AVEs are used to determine the change in the asset base in response to changes in demand (the percentage change in capex for a 1% change in volumes).

When determining AVEs and CVEs, Ofcom looks to understand the long run relationship between operating costs and the underlying cost volume drivers. These are applied over a 5-year regulatory period.

For the CVEs, BT allocates costs to 30 components and estimates CVEs for each. These include categories such as maintenance of exchange and distribution side capital, which tend to be the largest cost components. The full list of CVEs is available in the Ofcom paper, and we present here the range of these CVEs in the table below.

Statistic measured across cost categories	CVE
Average	0.86
Median	0.90
Low	0.52

Source: Ofcom

It is notable that the measures of central distribution are above 0.85 and all of these CVEs are above 0.5 – implying that a 1 per cent change in volumes give rise to a change in costs that is at least 0.5 per cent. While noting arguments about the the relevance of CVEs in a declining volume market, Ofcom also found that allowing an adjustment to the CVEs sourced from BT's LRIC model in the case of a situation of declining volumes would be “difficult to justify”.

Source: Ofcom

We infer from the approach of Ofcom that there are significantly greater opportunities provided for cost reductions than forecast by Telstra solely as a reduction of falling volumes.

3 Cost allocation and declining demand

3.1 Introduction

Telstra has proposed to replace the ACCC's existing cost allocation method with a new allocation approach, based on costs being 'fully allocated' to all regulated and non-regulated services. This represents a substantial change from the ACCC's 2011 FAD approach – one which appears highly likely to raise unit costs and access prices. Ultimately, this is highly likely to lead to higher prices for end users.

We recognise that, in general, some of the principles of Telstra's approach appear sound and in line with the fixed principles. At one level, this could constitute an improvement on the ACCC's previous approach because it is potentially more transparent and uses more relevant data than the ACCC's previous approach. It also results in clearer allocations to non-fixed line services. This is particularly important when thinking about the NBN Co – Telstra payments, and properly accounting for NBN Co's use of assets.

There are, however, a number of potential concerns we have with the proposed change in approach suggested by Telstra. Importantly, it appears that it will lead to an initial increase in the allocation of costs to access seekers, and may lead to further increases over time (as it exposes access seekers and end-users to further demand risk over time)). Further, the proposed changes cannot be considered in isolation from the broader context around demand forecasts and the NBN, and the approach taken to setting the RAB in 2011.

In this section of our response, we outline our understanding of the proposal, comment on some specific allocation factors, discuss the potential outcomes of Telstra's proposal and suggest a way forward.

3.2 Our understanding of Telstra's cost allocation proposal

Our understanding of Telstra's proposal is that:

- Telstra proposes to account for the use of non-regulated services in the FLSM, to account for their use of assets also used by the declared fixed line services.
- In developing the cost allocation framework (CAF), Telstra has focused on the practical application of the Fixed Principles, adopted and re-used existing modelling frameworks (where feasible) and ensured a consistent approach with the similar BBM-based access pricing regimes used by the ACCC, the AER and other Australian regulators.

- To the greatest extent possible, direct usage allocators have been used, and where this is not feasible, the ACCC's previously-used 'revenue share' approach is used.
- Forecast allocators are based on the demand forecasts reported elsewhere by Telstra for consistency.

The new cost allocation framework also uses a range of new data sources, based on actual data from Telstra's internal records.

3.2.1 Assessment framework

The fixed principles provisions specify that:

- The allocation of the costs of operating the PSTN should reflect the relative usage of the network by various services.
- Direct costs should be attributed to the service.
- The cost allocation factors for shared costs should reflect causal relationships between supplying services and incurring costs.
- No cost should be allocated more than once to any service.
- The determination of cost allocation factors should reflect the principles above except where reliable information is not available to support the application of the principles.

Only the first of these principles seems to raise questions with respect to the intent of the provision. The question is whether this requires the ACCC to use a methodology which account for the relative usage of all services using the assets that are also used to supply the declared fixed line services.

In our view, the lack of clarity here about what is meant by 'various services' gives the ACCC some flexibility to determine the most appropriate approach, and whether it would need to consider changes in network usage across 'all' services.

3.2.2 Specific comments on the cost allocation factors

Given that there are only a small number of significant asset categories, we restrict our comments at this time to the most significant categories:

- Ducts and pipes
- Network land and buildings
- Inter-exchange cables

We also briefly comment on the use of the 'revenue share' method for other assets classes.

Ducts and pipes

Duct and pipes are used by Telstra to supply the fixed line access services, as well as other services (e.g. transmission capacity) and to third parties. Telstra allocates costs using a two part process:

- First, by allocating the share of duct kilometres in each band 1 to 4 to the declared fixed line services and other uses. This is obtained from actual Telstra data.
- Second, by allocating between Telstra's retail, wholesale and network services using SIOs

We understand that the first allocation step works in the following manner: suppose there are three users (two third party users plus Telstra) of a particular kilometre of duct and one user (Telstra) of the remaining kilometre of duct. This would count as four total duct kilometres. The cost allocation would be 50:50 to Telstra and to access seekers.

The key concern with the allocation proposed by Telstra is how the 'use' of duct kilometres has been measured, and what data is provided to the ACCC as assurance about the accuracy of this measurement.

We note that in Europe, where there has been significant consultation on duct access, there has been a preference for allocating costs according to share of duct capacity used.²⁰ So, for example, if there were four sub-ducts in a duct, and Telstra used 1 duct for fixed line services, and 3 ducts for other services, then the cost allocation would be 0.25 to Telstra's fixed line services. This kind of approach would more accurately reflect the usage of the duct network than Telstra's current approach which assumes that all uses of the duct impose the same (capacity) costs.

We understand that this approach is not as measurable as Telstra's existing allocation approach. The use of sampling techniques may enable the provision of these data at relatively low cost, however.

Network land and buildings

As for ducts and pipes, a two stage allocation is used:

- First, allocation between Telstra's fixed line services and other users, on the basis of racks in exchanges

²⁰ See e.g. Ofcom, *Review of the wholesale local access market Statement on market definition, market power determinations and remedies*, Statement, 7 October 2010, para 7.15.

- Second, allocation between Telstra's fixed line wholesale services based on the share of cost proportions for costs allocated using usage-based allocators ('revenue share' approach)

Adopting the rack shares as a usage based allocator is one of several possible methods of cost allocation. There are two issues we have identified with Telstra's proposed allocator:

The first issue is that we are not certain whether Telstra's allocator of 'Telstra racks' adequately separates out Telstra's fixed network use from other uses of racks in its exchanges. For example, does this include racks used for ISDN or SHDSL services?

The second issue is that a more obvious method to allocate costs would be on the basis of the fixed network's share of land and building space. This allocator best reflects the causal relationship between the service and the cost, and would follow the ACCC's prior practice.²¹ The reason is that if more racks are installed then more space is needed in the exchange. There will also be increased requirements for air conditioning. This suggests that a reasonable allocator of exchange land and building costs would be to calculate the share of space taken by Telstra's fixed network in each exchange.

That is, an alternative calculation might be:

$$\text{cost allocation factor} = \frac{\text{m}^2 \text{ of rack space used by Telstra's fixed network}}{\text{total usable exchange m}^2}$$

The 'total usable exchange' space here would be space that is available for either Telstra's or access seekers' equipment, and would include some allowance for access to the equipment and for common areas between different platforms.

That being said, Telstra's method of using relative shares of racks across the different bands has the advantage of being simpler to calculate, as it has access to installed rack data but may not have access to data on exchange space.

We are unclear how Telstra's proposed value adjustments (reflecting higher valuation of band 2 land and buildings) is applied, as this detail does not appear in Telstra's cost allocation spreadsheets (the factor is hardcoded in the model).

We comment further on the use of the 'revenue share' method below.

Inter-exchange cables

We understand that the inter-exchange cables assets are used to provide a range of declared and non-declared fixed line services, as well as a number of other non-fixed-line services (including mobile and non-ADSL data).

²¹ See ACCC, *op.cit.*, June 2011, p. 258

The declared services which use this asset class are LCS, FOAS and FTAS and wholesale ADSL. Non-declared services using inter-exchange cables are retail PSTN voice services (includes local, national, international and fixed-to-mobile calls), ISDN voice services and retail ADSL services.

The allocation method proposed by Telstra is two stage:

- The proportion of total fibre km used by respective inter-exchange traffic streams (ADSL, PSTN voice, transmission, and mobiles and non-ADSL data) is first obtained from a combination of Telstra's internal databases.
- Further allocations are then made for ADSL (allocated between retail and wholesale ADSL using SIO forecasts), PSTN (allocated between FOAS/FTAS, LCS and retail PSTN voice services using minutes of use, which are weighted using routing factors to reflect that inter-exchange cables are used in different ways for PSTN voice services), and transmission (allocations are based on the allocation factors for CO05: transmission equipment).

The second stage allocation appears broadly in line with the allocation factors used for other asset classes.

The first stage allocation of costs raises two new issues, which we suggest the ACCC should investigate further.

The first issue is whether or how Telstra has allocated the costs of dark fibre sold to NBN Co (or other users, if relevant). This is clearly a use of the cables to which costs should be allocated, and this use is likely to become more important over time during the NBN migration.

The second issue is whether Telstra's proposed allocation method is the best available method of allocating costs according to asset usage. We understand that the approach proposed is relatively simple to implement, and that this may have been a factor in Telstra's choice of it. However, a better measure of usage would seem to be not just the fibre km used by different services, but also by how many cables are used by each service. An alternative 'weighted' allocation could be derived where, for example, multiple fibres were used by one service and single fibres by another. While we do not have information to suggest that this approach would lead to a markedly different allocation, this approach should be explored further to determine whether it is feasible and would lead to a materially better (usage based) allocation.

Asset classes allocated using the 'revenue share' or 'general allocator' method

There are a number of assets, such as indirect capital assets, which are allocated using a 'revenue share' method. This method essentially relies on allocating costs

in the same proportion as the revenue generated by the direct cost allocations. In doing so, the method does not rely on any particular usage information.

This method largely mirrors the method used by the ACCC in the 2011 FAD for certain asset classes.

As a point of principle, this allocation method is undesirable for two reasons. The first is that it amplifies any problems with the existing methodologies used for the direct allocation of costs, as the revenue method ‘marks up’ the existing allocation. The second is that the connection with between the asset cost allocation and network usage may be very tenuous, so that any likely efficiency benefits from connecting network usage and cost allocation are minimal for these assets.

Notwithstanding these comments, it is apparent that the ‘revenue method’ may be a second- or third-best alternative if there is no other means to connect a usage-based allocator to the service. The alternative of using a demand-based allocator, as we later discuss in section 6 in relation to price setting, could lead to further complexity and instability, and reduce the transparency and objectivity of cost allocation.

3.3 The outcomes of Telstra’s proposed cost allocation model

3.3.1 The model will result in higher prices for access services

Telstra’s new cost allocation approach is likely to result in much higher cost allocation factors than would be likely to occur that if the ACCC’s model for 2014-15 was simply updated. In turn, this will lead to higher prices for end users.

The reason that there will be higher cost allocation to access services is due to changes in total volumes relative to volumes for access services; for example, [X c-i-c material removed].

3.3.2 Should prices rise from declining demand?

Telstra’s approach effectively reverses the assumption made by the ACCC about cost allocation and the allocation of risk between Telstra and access seekers. This raises the question about whether the risk of falling demand is allocated correctly in the model.

The ACCC’s prior view, at the time of the 2011 FAD, was that Telstra should not be compensated for increasing competition and the resulting fall in the usage of its fixed line network:

The ACCC noted that Telstra's proposed approach would mean that as total demand fell, the costs of the network would be recouped from a smaller number of remaining services. Adopting this approach would increase the unit costs of providing all remaining services...The ACCC considered that it was not appropriate to compensate Telstra for a loss of market share or for reductions in the size of the market. The ACCC considered that Telstra has been appropriately compensated for these business risks through the risk premium included in the commercial rate of return provided by the WACC.

As further noted by the ACCC, there are three sources of declining demand:

- competition from fixed line access seekers, based on ULLS inputs. This reduces volumes of WLR, LSS, PSTN OA and LCS.
- competition from mobiles – reflected in higher numbers of mobile only homes
- migration towards the NBN.

Telstra should not be compensated for loss of demand caused by fixed network access seekers

In our view, Telstra should not be compensated for a loss of volumes caused by the first kind of competition, for the reasons that ACCC has already identified. Indeed, it would be a perverse outcome of policy if service declaration for the ULLS which has encouraged vigorous investment and competition were to lead to (compensating) higher prices for wholesale call services.

Such reasoning would also appear inconsistent with the judgement of the High Court of Australia, which found that:

Telstra has never owned or operated any of the assets that now comprise the PSTN except under and in accordance with legislative provisions that were directed to "promoting ... competition in the telecommunications industry generally and among carriers".²²

Compensating Telstra for a loss of profits caused by access-based competition would therefore seem to be granting Telstra rights that it has never in fact held. The consequent higher prices would therefore seem unnecessary to protect Telstra's legitimate business interests and against the LTIE.

Telstra receives offsetting benefits from substitution towards mobiles

It is more difficult to assess whether all users of the fixed network should bear the risk of falling demand for fixed calls and lines as a result of mobile competition. While we recognise that there is an equity argument that all users of

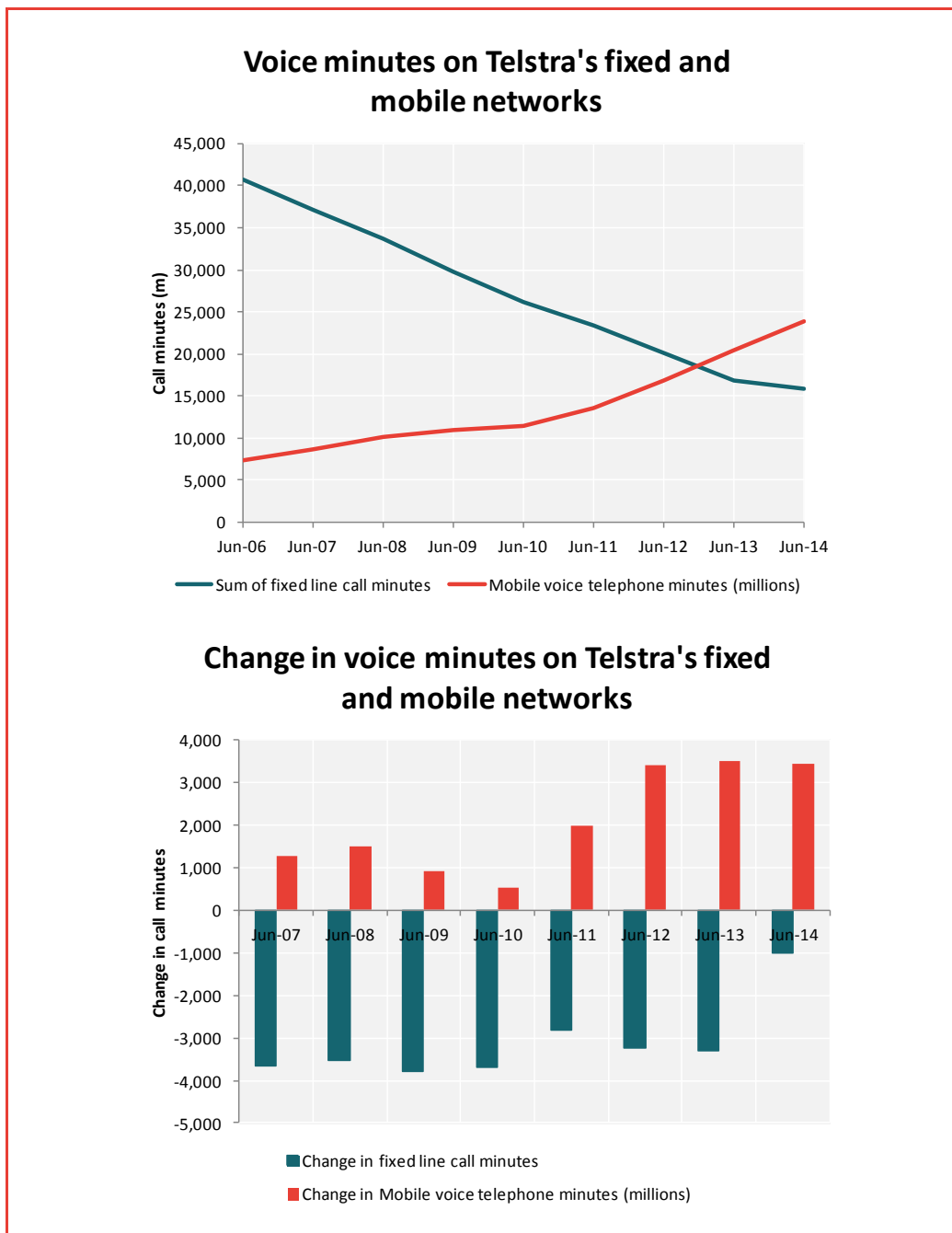
²² *Telstra Corporation Limited v The Commonwealth* [2008] HCA 7 (6 March 2008), at 51.

the fixed network should bear the cost of lower volumes on the fixed network, it is also evident that:

- Telstra is a major beneficiary of substitution between fixed and mobile networks, and so losses of volume are offset to a degree
- Telstra is vertically-integrated, and so does not face the higher access prices that competitors do

Some evidence on the scope of gains from substitution towards mobile calling is available from Telstra's own data. In Figure 5, changes in call volumes on fixed and mobile networks are plotted.

Figure 5: Changes in fixed and mobile calling volumes, Telstra's networks



Source: Telstra annual reports. Local calls are assumed to be four minutes on average.

Demand risk caused by the NBN should be addressed in other ways

We agree with the ACCC that the change in demand and migration towards the NBN should be accounted for through the NBN deal between Telstra and NBN Co – so access seekers and end users should not independently face the risk of higher unit costs and prices as a result of the migration.

The difficult task is to disentangle these sources of declining demand

Even if we are able to put to one side the effect of the NBN (as it is currently quite small), if the ACCC is minded to share the risk of declining fixed demand due to competition from mobile networks, it will face the difficult task of how to separate the loss of volumes from mobile networks from the loss of volume from access-based competition.

We note that it may be possible to some degree to attribute falls in lines to mobile competition, as access seekers need to continue to access lines to provide voice services. However, attributing falls in call demand is much more difficult, particularly where access seekers may be using VoIP rather than PSTN calls as the substitute.

3.3.3 Higher prices resulting from cost re-allocation will not necessarily promote more efficient use of infrastructure or competition

It is important to highlight one further point about the changes to cost allocation. This is that changes to cost allocation methods are not necessarily producing better incentives or signals about cost recovery (and therefore efficiency). Primarily, we are assessing the fairness of re-allocation of the recovery of sunk network costs, which constitute more than 50 per cent of the revenue requirement.

Further, when competing with access seekers in retail markets, Telstra faces its own marginal costs of supplying network services, not the rates set using the FLSM. This means that there will be little pro-competitive benefit from re-allocating costs using Telstra's method.

3.3.4 The model cannot be considered in isolation from the RAB and the previous methodology for setting prices

The ACCC notes in its discussion paper that the fixed principles provisions require that the RAB to be rolled forward according to a formula. This can only be over-ridden under certain circumstances:

The six FADs contained in this document must not be varied so as to alter or remove any of the fixed principles provisions in this clause 6 except when the ACCC is satisfied that:

- (a) there is a manifest and material error in these fixed principles provisions;
- (b) any information on which these fixed principles provisions was based was false or misleading in a material respect; or

(c) such amendment or adjustment is necessary or desirable to avoid an unintended consequence of these fixed principles provisions.²³

With this noted, it is worth remembering that the ACCC engineered a RAB last time to give a set of prices consistent with prices at that time. This was based on a set of cost allocation factors in the Analysys-Mason model. That is, the ACCC:

- Determined a RAB using a DAC methodology
- Determined the revenue requirement
- Applied cost allocation and routing factors from the A-M model to allocate the revenue requirement to assets and to services
- Determined prices from the service revenue requirements (dividing by demand)
- Increased the RAB until the prices, when re-calculated, produced a ULLS consistent with a \$16 per month per SIO average cost in bands 1-3.

Because the RAB calculation took the cost allocation factors as an input, it is apparent that any later change to the cost allocation factors (and more particularly, the method of their calculation) should also have an influence on the RAB.

In other words, if the cost allocation method proposed by Telstra now was used in 2011, there may have been no need to increase the RAB, or to increase it by as much. That is because Telstra's model would have resulted in *higher* cost allocation factors than the A-M model; we know that the ACCC held demand fixed at the peaks for calls and lines and so did not reflect falling demand for these services that was already evident at that time.

Making the adjustment to cost allocation without re-opening the RAB would constitute a 'double whammy' for end users. In our view, it would be inconsistent to argue that we cannot adjust the RAB due to the fixed principles provisions, but we can adjust the cost allocation approach (as opposed to the *forecasts* which change the allocations).

3.3.5 The cost allocation model cannot be considered in isolation from the cost and demand forecasts

An implication of the new cost allocation model is that it will impose demand risk on access seekers; that is, if total volumes on Telstra's network falls then the cost allocation factors to access services will rise (unless volumes for these services fall even faster than other services.)

²³ ACCC, 2011 FAD,

This effect emphasises the critical importance of:

- Cost forecasts: it is even more important that Telstra takes appropriate actions to minimise costs if it is concerned that demand is forecast to decrease.
- Demand forecasts: for Telstra's other services which use its fixed network assets, such as use by NBN Co. Under the current approach these changes would be of lesser significance. We note that as yet Telstra has not provided forecasts of these other uses of the fixed network assets.

3.4 Comparing the ACCC's 2011 approach with Telstra's proposal

The ACCC's discussion paper seeks feedback on a number of issues covered in this section, including:

- Whether the ACCC's partially allocated approach or Telstra's fully allocated approach is likely to best reflect the cost of declared services
- How should the impacts of declining demand be shared between Telstra and access seekers?
- Should different sources of declining demand be accounted for in different ways?

Drawing some of our earlier conclusions together, we find that:

- There is no overwhelming case that the ACCC has to change the cost allocation method in the FLSM. It appears possible to simply update the existing method using new forecast data.
- While the new cost allocation method has some advantages over the existing ACCC method, including its ability to make more transparent NBN Co's use of Telstra's assets, the proposal to move to a fully allocated model creates some challenges with respect to risk allocation, and broader requirements for data transparency
- Telstra clearly should not be compensated for increasing competition from fixed line access seekers, and there is some doubt whether it should be compensated for increasing mobile competition from which it is a major beneficiary
- The ACCC cannot consider changing the cost allocation methodology without also considering the impact of changing the cost allocation methodology on the setting of the initial RAB. This initial RAB was inflated based on the prices given by ACCC's partial allocation method being too low.
- Higher prices caused by lower fixed line services volumes would not promote more efficient use of infrastructure.

On balance, our view is that it is not necessary to change allocation methods, and that it would clearly not be in the LTIE to change allocation methods without making subsequent adjustments in other areas. **If** the ACCC considers that the benefits of changing to Telstra's methodology outweigh the costs, and if it is possible under the terms of the fixed principles set in 2011, we consider that:

- The ACCC should avoid making relatively arbitrary adjustments to the cost allocation methodology to account for the risk of declining demand, or to correct for the 2011 RAB increase. This will accentuate existing problems with the complexity of the allocations.
- The ACCC should instead focus on developing an appropriate price path which reflects that the new cost allocation method will tend to overstate the prices that would be in the LTIE, particularly in the short term.

If the ACCC is not able to make the adjustments as a result of the fixed principles, then it would be in the LTIE to maintain the current approach.

4 The treatment of payments between NBN Co and Telstra

4.1 The ACCC's discussion paper

The ACCC's discussion paper notes that:

- The NBN will replace Telstra's fixed line network as the infrastructure used to provide fixed line telecommunications services in Australia
- Telstra and NBN Co have arrangements (and are negotiating further arrangements) to migrate customers from Telstra's network to the NBN
- These arrangements are important considerations in determining prices for declared services.

The ACCC also notes that nature and some of the specifics of the existing agreements, including that:

- There are migration payments for each end-user disconnected from Telstra's network and migration to the NBN
- NBN Co will pay Telstra ongoing lease payments for certain infrastructure – ducts, rack space, and dark fibre

The ACCC further notes that the agreements are subject to change, with Telstra and NBN Co currently in negotiations about what changes need to be made to implement the current government's NBN policy.

The ACCC's questions for consultation are primarily directed at the implications of different methodologies for accounting for the arrangements between NBN Co and Telstra, including:

- Whether the payments can be conceptualised as either non-regulated revenue or regulated revenue
- The implications of accounting for underlying use of the network or accounting for the payments directly

4.2 Frontier's early submission

Frontier provided an early submission to the ACCC on the NBN payments issue, on behalf of iiNet and TPG.

In that submission, we found that:

- There is significant linkage between the assets used by NBN Co to build the NBN and the assets used by access seekers when they acquire 'declared'

services under Part XIC. The new payments are therefore likely to increase Telstra's ability to recover shared asset costs.

- There were three states of the network at any one time, as per the following table.

Table 1 States of the fixed line network, by rollout status

Rollout status	Payment status	Risk of over-compensation
Areas where the NBN rollout has commenced, but is either not complete or has not been finished for more than 18 months (pre-compulsory migration)	Telstra receives infrastructure rental payments, plus payments from access seekers	High, as no account taken on NBN Co's usage of shared assets
Areas where the NBN rollout has commenced, and has been complete for more than 18 months	Telstra receives infrastructure rental payments, plus migration payments	High, but depends on quantum of migration payments
Areas where the NBN rollout has not commenced	Telstra receives payments from access seekers, and may receive some payments in relation to Pols or transit network services.	Moderate, may be some shared usage of Telstra's assets

Source: Frontier

- In essence, the question is whether the NBN payments facilitate the recovery of more than Telstra's efficient costs of supplying the declared fixed line services, and, if they do, whether there should be some offsetting reductions in prices to end-users who acquire the declared fixed line services (via access seekers).
- Three principles are relevant to the treatment of the NBN revenues earned by Telstra:
 - **Regulation should facilitate recovery of efficient costs, and no more:** If the payments made are not incorporated into the ACCC's fixed line services model (FLSM), then end-users could be contributing to the *over*-recovery of the efficient costs of supplying certain assets and/or services.
 - **Access seekers and end-users should not compensate Telstra for lost profits:** In considering how to adjust the FLSM for payments received from NBN Co, an important principle should be that the FLSM should compensate Telstra for its direct costs of providing access, but not for any profits that it might lose where it might currently be able to recover revenue above these direct costs.

- **Access services should bear a reasonable share of common costs, allocated on a transparent basis:** It is reasonable to expect that the declared access services should facilitate Telstra's recovery of common costs across its business, and that this division of common costs should occur using criteria such as how much relative use is made of each kind of asset used to provide the declared services.
- Applying these principles requires that the payments between NBN Co and Telstra must be reflected in the ACCC's access pricing model. In particular:
 - The regulatory asset base (RAB) in the model should be adjusted to account for the disconnection payments. Access prices that are in the long-term interests of end-users allow the recovery of sunk costs in Telstra's RAB, but no more. Disconnection payments should not facilitate a recovery of more than the RAB value associated with assets stranded by the NBN; this will lead to unnecessarily high access prices for access seekers and ultimately end-users.
 - To adjust for the infrastructure rental payments, the FLSM must re-allocate costs to reflect NBN Co's usage of assets. Currently, there is wide scope for Telstra to be earning payments for shared infrastructure assets from two sources – NBN Co and access seekers. Alternatively, and in line with other regulatory precedents on shared assets, the ACCC should explicitly allow for a proportion of unregulated revenues to reduce the revenue requirement for regulated revenues.
 - Allowing the present situation to continue, where revenue continues to roll in for Telstra for shared assets with no flow on effects, is undesirable and contrary to the interests of end-users. Equally, as the payments are scheduled to increase as the pace of the roll-out increases, we can expect that the over-recovery problem will become more significant over time.

4.3 The LTIE requires that, at a minimum, the FLSM reflects NBN Co's use of fixed line assets

In the expiring FAD, the ACCC decided not to take account of payments between NBN Co and Telstra for use of infrastructure that was shared between NBN Co's network and Telstra's fixed line copper network. This has meant that greater network usage was not reflected in costs allocated to access seekers for recovery in the FLSM. This is at odds with the fixed principle that: "The allocation of the costs of operating the PSTN should reflect the relative usage of the network by various services."²⁴

²⁴ ACCC, 2011 Final Access Determination, p. 7 of FAD Appendix

We therefore note in our early submission, and re-iterate here, that the minimum consideration is that the ACCC must take account of network usage by NBN Co in allocating costs between Telstra's fixed line services and 'other users' of the network. We note that Telstra's cost allocation proposal does take such usage into account, and, although it lacks some transparency at this stage, it presents the minimum form of adjustment required to ensure that access seekers and end users pay no more than a reasonable share of common network costs.

The second way in which the ACCC must take network usage into account is when customers are migrated off the NBN, the value of the RAB associated with those stranded network assets should be removed. The migration payments provide the necessary 'return of capital' (and potentially more) for these assets.²⁵

4.4 Taking account of revenues earned by Telstra in access prices would likely promote the LTIE

The arguments that taking account of the payments made to Telstra on the RAB and/or the annual revenue requirement are that:

- It would result in the lowest set of access prices that would be consistent with Telstra recovering its costs of providing wholesale fixed line services; and so protect Telstra's legitimate business interests as well as be in the LTIE as it would best promote the efficient use of infrastructure without compromising efficient investment in the network.
- It would be consistent with the ACCC's existing RAB roll forward model, which has asset disposals in the roll forward. Our view, which appears to be shared in the Ministers' letter, is that Telstra's migration of customers is akin to an asset disposal. Its 2011 FAD roll forward equation was expressed as follows:

$$RAB_{t+1} = RAB_t + capex_t - depreciation_t - asset\ disposals_t$$

In reference to the disposal of land assets, the ACCC said that: "when land assets are sold, their disposal value will be deducted from the RAB value."

- It would be consistent with regulatory precedents such as the AER's proposed guidelines on the treatment of shared network revenues for electricity networks. These guidelines note that: "In some circumstances, it is possible for an electricity network service provider to invest in an asset and

²⁵ We further note, as described in our earlier report, that such adjustments would not be necessary if the ACCC stays with its existing cost allocation methodology. This methodology will automatically result in falling allocations of cost to access services without separate adjustments to the RAB.

require electricity consumers to pay for the asset in full and also use that asset to earn additional revenues from other consumers. This creates the problem of potential cost over recovery.²⁶

- It would ensure that any potential competitive distortions from the NBN payments are minimised.
- It should require relatively simple adjustments to the existing FLSM and/or the resulting revenue requirement, as it would not require measurements of relative asset usage as would the approach described in Section 4.4. This may be particularly problematic where asset usage data is not currently available, for example, for NBN Co's use of dark fibre which does not appear to be accounted for in Telstra's new cost allocation framework.

An alternative approach that has been suggested is to assume that changes in the regulatory revenue requirement will be broadly proportional to changes in the volumes of services. We understand that such an approach might work by saying that, as an example, an annual revenue requirement of \$1 billion would be reduced to \$500 million at the point where 50 per cent of SIOs had migrated to the NBN.

While this has some attractiveness due its tractability, there seem to be two problems with this kind of approach.

The first problem is that it takes little account of the quantum of the payments or indeed of the shared usage of assets up until the period when customers are forcibly migrated on to NBN Co's network. This period is undefined and is potentially long – as migration only occurs 18 months after the area is declared as 'ready for service'.

The second problem is that it is unclear how the ACCC could reflect changes in the costs of supplying services over time. For example, at 50% rollout would opex be based on serving 100% of users or only 50%? If the costs were estimated based on serving 100% it could not promote LTIE criteria nor the legitimate business interests of the access provider. A further set of issues may also arise due to the loss of economies of scale from the reduced number of SIOs.

4.5 Summing up

As the ACCC observes, the problem about how to account for NBN payments is difficult, and there are few applicable precedents to draw on. We are also hindered to a degree by not having visibility of the full agreements between

²⁶ (details) AER, Better Regulation: Shared Asset Guideline explanatory statement, p. 18, November 2013.

Telstra and NBN Co – for example, how the payments are structured and how the assets rented or acquired relate to asset categories in the FLSM.

With this noted, we conclude that it would be in the LTIE for the ACCC to make adjustments to its FLSM to account for the use of assets or payments by NBN Co. Telstra's new cost allocation methodology provides one avenue to further consideration of these issues; we further conclude that there are a number of arguments that would further support taking into account the actual payments made to Telstra in setting the FAD from 2014 onwards.

5 Flexibility in pricing structures

5.1 The proposal to increase pricing flexibility

Telstra has put forward a proposal that the ACCC have much greater flexibility with respect to the pricing of individual services. In particular, Telstra suggests that the ACCC set prices for services in between the bounds of *incremental cost* and *stand alone cost*.

This reflects the notion that the allocation of fixed and common costs under a fully allocated cost model bears no particular relation to the efficient recovery of the fixed and common costs. The ACCC may be able to produce more efficient allocations of common costs – leading to higher volumes of services sold overall – by changing the pattern of cost recovery to reflect the relative elasticities of demand for each service.

5.2 Efficient prices should lie between incremental and stand-alone costs

We accept that the appropriate level for an access price should, in most circumstances, lie between the incremental cost and the stand-alone cost of providing the service.

Efficient use of infrastructure requires that the access price for a service should (in the absence of externalities) ensure recovery of the incremental and directly attributable costs of providing a service. However, if the price of each individual service is set only to recover the incremental costs of providing the service, there are a number of costs that an access provider would be unable to recover. This is because there are a number of costs that are not directly attributable to any particular service, but which instead are common to a number of services. Such common costs can come in two main forms:

- Common network costs: In the case of fixed-line services, this might include the copper wires in the customer access network, which may be common to the provision of retail line rental services, the ULLS, the LCS and wholesale ADSL services. Other examples might include the costs of switching equipment in exchanges, which could be common to the provision of both PSTN and LCS services.
- Common organisational level (or business overhead) costs: These are non-network costs that are not directly attributable to the provision of any given services, and may include the costs of retailing, marketing, human resources, finance departments etc.

Where a firm produces a number of services that share common costs, it would be unable to recover all of its costs of production if each service was only priced on the basis of the directly attributable incremental costs of providing the service and no service made a contribution towards the recovery of common costs.

When setting access prices for declared fixed-line services in the past, the ACCC has typically allowed access prices to make some recovery towards common costs. In the past, this was achieved under TSLRIC-based pricing approaches by ensuring the access price for fixed-line services are augmented above pure TSLRIC to make a contribution towards common costs. Such pricing was often referred to as “TSLRIC+”.

The challenge when determining efficient access prices is to determine how large the contribution each service makes towards recovering common costs should be – in other words, how far above incremental costs should the price of individual services be?

5.3 The theoretical properties and limitations of pricing in relation to elasticity estimates

In the absence of a “first-best” means for financing common costs, theory suggests that economic efficiency would be best served if common costs were recovered using Ramsey-Boiteaux pricing principles (or simply Ramsey pricing). In the context of pricing of mobile termination access services, the ACCC (2006b, p. 174) has previously recognised that:

... in principle, the efficiency properties of R-B [Ramsey-Boiteux] pricing for the recovery of common costs are convincing, and have been well recognised in the literature and by other regulators...

Under Ramsey pricing, the extent to which pricing of a given service makes a contribution towards the recovery of common costs is inversely proportional to measures of elasticity of demand for the service.

While Ramsey pricing is relatively straight forward in theory, it is practically difficult to implement for a regulator. This is because it requires precise knowledge of the elasticity of demand for all services that share the common costs the regulator is seeking to allow recovery of. Indeed, if implemented correctly, Ramsey pricing requires the regulator to know not just the extent to which an increase in the price of a service impacts on demand for the service itself, it must also know how increases in the prices for the service impact on the demand for other substitute and complimentary services. Only when the impact on all services is understood can the regulator seek to minimise the overall distortion from increasing prices for individual services above their incremental costs. The extent to which an increase in the price of one service impacts on demand for that and other services is measured by so-called “super-elasticities”.

Acquiring robust estimates of such super-elasticities is, however, likely to be very time consuming and costly, and any estimates generated are likely to quickly be out-of-date. Given errors in super-elasticity estimates can lead to substantial differences in prices for individual services, and consequent welfare losses, regulators have tended to avoid seeking to set prices on the basis of Ramsey pricing principles. As noted by Baumol and Sidak, (1994, pps. 38-39):

The data requirement is one reason why most regulators and consulting economists have rejected the use of Ramsey formulas even to provide approximations for the prices that the regulated firm should be permitted to charge for its products. Marginal-cost figures are difficult enough to come by, although reasonably defensible approximations have been provided by firms to regulatory bodies. But up-to-date estimates of the full set of pertinent elasticities and cross-elasticities are virtually impossible to calculate, particularly in markets where demand conditions change frequently and substantially. As a result, an attempt to provide the regulator with an extensive set of Ramsey prices is likely to be beset by inaccuracies, by obsolete demand data, and by delays that will prevent the firm from responding promptly and appropriately to evolving market conditions.

Further, while many of the fixed line regulated services shares some costs that are common, these costs are also likely to be common to other services not included in the set of fixed line services for which the ACCC is determining this FAD. For instance, some of the costs of the customer access network that may be shared by the ULLS, LSS and WLR services are also likely to be common to the production of retail fixed-line services that Telstra provides to consumers. Further, it is likely that these services also share costs that are common to other telecommunications services, such as mobile telephony services. The failure to include all services that share common costs has previously led the ACCC to raise questions about the utility of Ramsey pricing in the context of assessing mobile terminating access service (MTAS) undertakings. For instance, the ACCC (2006b, p. 192) found that:

The correct approach would be to include all services that give rise to common costs in the R-B framework. If certain relevant services are excluded from the R-B framework, those services that are included will, other things being equal, bear a greater than appropriate portion of common costs.

This concern is likely to be even further exacerbated in circumstances where the regulated firm has differing degrees of market power over the provision of other services that it provides and which share common costs with the set of regulated fixed-line services. This is because a profit maximising firm will set prices having regard to the elasticities of demand *it* faces, and not necessarily the market elasticities of demand. For those services where a firm is the monopoly provider of services, it faces the market elasticity of demand. However, for those services where it faces more competition, it will face an elasticity of demand that is greater than that of the market as a whole. For instance, in the case of a perfectly competitive market, the elasticity of demand for a service faced by any individual

firm will be perfect, while the elasticity of demand for the market as a whole is likely not to be.

The implication of this is important because the ACCC would not be setting access prices for all services that share common costs with the services the subject of the fixed-line FAD. This means that there will be some common costs that would be left to be recovered across non-regulated services, and for these services, Telstra will not face an elasticity of demand equal to that of the market as a whole. This means that attempts by the ACCC to set access prices consistent with Ramsey pricing principles will be distorted by – and be likely to distort – the pricing of other services that are not the subject of the fixed-line FAD.

5.4 Changing the approach to recover common costs could introduce significant uncertainty

A significant advantage from the move by the ACCC toward adopting fixed pricing principles during its previous consideration of appropriate prices for regulated fixed-line services is that it greatly increased certainty for all industry participants. Such certainty could be undermined, however, if the ACCC were to move to adopt more flexible pricing practices that involve setting the prices for fixed-line services on the basis of elasticities (and cross-elasticities) of demand for different services. This would especially be the case if it led to rapid and substantial changes in the access prices of different regulated fixed-line services.

Even if such price changes moved prices closer to Ramsey levels, rapid and substantial changes to access prices could be particularly damaging to the business plans of access seekers. For instance, a large and unanticipated increase in the price of the ULLS would be particularly damaging for access seekers that had already invested heavily in complementary equipment to use with the ULLS, such as DSLAMs, relative to those that relied on other means to compete in downstream markets. Problems of rapid and substantial price movements would be further exacerbated if Telstra prices were adjusted substantially from one regulatory period to the next based on the latest set of demand elasticity estimates.

Such changes could also have differing impacts on different access seekers in a way that materially effects competition in downstream retail markets given they rely on access to the fixed line services in different ways. That is, changes to the way common costs are recovered across different fixed line services could affect those access seekers relying more heavily on resale services (such as the LCS and the PSTN OA/TA services) in different ways compared to those who rely more heavily on other fixed line services (such as the ULLS and the LSS) in combination with their own infrastructure investments.

It follows, therefore, that signalling a willingness to adjust prices in response to different demand elasticity estimates could generate significant uncertainty for access seekers. In turn, this could stifle investment by access seekers in complementary infrastructure to use with various access services and is unlikely to be in the interests of persons who have rights to use the declared services. DN: not sure this is the ACCC's main concern – possibly revisit wording

5.5 The ACCC should continue to apply its existing approach to recovering common costs

We believe it would be better for the ACCC to continue to prudently apply traditional (and more practical) techniques for allocating common costs, such as usage-based allocation principles.

The appropriate way to allocate a specific type of common cost may vary depending on the nature of the cost involved. For instance, while some common costs may more easily be able to be allocated to particular services using usage factors, this may not be suitable for other types of cost. This is especially the case for organisational-level costs.

Wherever possible, the ACCC should seek to follow a cost-causality principle when deciding how to allocate common costs. Where costs are common to only a sub-set of the regulated services, it should allocate these costs only to those services. Further, if usage factors – such as relative minutes of use or routing factors – can be used to sensibly allocate common costs to various services, we believe these should be applied. This has the greatest prospect of ensuring the prices of services are related to the costs of providing them. Only where there is no usage factor that can be meaningfully applied to allocate common costs should the ACCC rely on more arbitrary measures such as its 'revenue share' approach.

Further, to ensure cost allocation is subject to as little regulatory gaming and disputation as possible, the ACCC should when allocating Telstra's common costs apply high-level principles such as objectivity, consistency and transparency. This would make it consistent with cost allocation principles used by other regulators such as Ofgem in the UK.²⁷

²⁷ See Ofgem, *Review of domestic gas and electricity competition and supply price regulation: Conclusions and final proposals*, February 2002, pp. 17-18.

6 Term of the determination and risk

6.1 ACCC considerations

The ACCC has asked for views on the term of the next regulatory period, noting that:

- shorter regulatory periods offer greater certainty around expenditure and demand forecasts, but a higher regulatory burden
- longer regulatory periods give more pricing certainty, and incentives to minimise costs, but also potential that costs would not be recovered.

6.2 The current process exposes all parties to risks of change

Considerations around the term of the next regulatory period should be considered in the broader context of the design of the FAD.

We note that, in general, risk in a regulatory regime can be used to drive efficient behaviour. That is, the risk that cost allowances may be overspent drives the regulated firm to seek out cost efficiencies. The prospect of higher profits (at least for a period of years until forecasts are reset) from spending below forecasts or from volumes above forecast can also induce efficient behaviours.

The key issue with the use of incentive regulation is that Telstra must be granted an appropriate degree of discretion; one that reflects the degree of asymmetry in information between Telstra and the ACCC but also the prevailing external environment. High powered incentive schemes require a high degree of predictability, and it is not obvious that the current environment with uncertainty around the NBN meets that requirement.

In other words:

- it is beneficial to expose the regulated firm to risks that are within its control to drive efficient performance
- where risks are not within regulated firms control 'incentive regulation' may give rise to windfall gains and losses depending on whether the external events are positive or negative for profitability.

Our understanding of the current regime (i.e. from the 2011 FAD) is that the incentive mechanisms are relatively 'high powered', as:

- recovery of opex expenses was set on the basis of forecasts (not related to actual opex)

- the RAB roll forward takes account of forecast capital expenditure and forecast depreciation expenses, not actual values
- the ACCC has specified that the closing value as at 30 June 2014 would be the opening RAB for the next regulatory period – although this is not specified in the fixed principles.²⁸

This means that Telstra was fully exposed to the risks and rewards of opex and capital expenditure higher or lower than the forecast. In principle, this risk could have been somewhat reduced in various ways, for example, by rolling forward actual capex or actual depreciation expenses (i.e. those based on actual capex).

Our review of Telstra's 'Comparison Statement' suggests that the ACCC's forecasts did indeed widely diverge from actual costs:

[X c-i-c material removed]

It is not apparent to us that any of these divergences reflected efficiencies or inefficiencies on Telstra's part. Rather, Telstra's explanations for the differences largely suggest that forecasting methodology problems were the key reason.

In that context, we view the three year term of the FAD reduced some of the risks associated with the high powered regime. The benefits of opex outperformance (lower than forecast) are only kept for a relatively short period, and similarly, new capital expenditure forecasts taking account of actual capital expenditure will now be set.

In our view, the benefits of using the latter two methods would allow a longer regulatory period to be chosen.

6.3 The ACCC needs to consider lower-powered incentive regimes for the next regulatory period

6.3.1 There is a serious risk of mis-forecasting

The current process of receiving forecasts under the BBM RKR process has revealed – not unexpectedly – that the forecasts produced by Telstra may only have a very short 'shelf life'. This is substantively due to the Government's new 'MTM' model for the NBN, which will change the requirements of NBN Co for parts of Telstra's network.

It is unclear to what degree these issues will be resolved over the next 9 months before the ACCC finalises the FAD. Even if the issues are resolved quickly, there must still be some further doubt that these forecasts will be reliable as:

²⁸ ACCC, 2011 FAD, p. 51.

- there may not be sufficient time to scrutinise forecasts
- NBN Co is already flagging that it wants to maintain flexibility about the form of its rollout and, potentially, how much of the existing copper network it uses²⁹
- NBN Co appears to be refining its rollout processes, and advancements with respect to the implementation of technology may result in further alteration of NBN Co's rollout plans.
- there could be further changes in the event of a change in government over the next few years.

6.3.2 A range of alternatives is available to lower risks while maintaining efficiency incentives

We consider there are three alternatives that the ACCC should consider in getting the balance right between encouraging efficient expenditure and protecting the interests of end-users:

- Maintaining a relatively short regulatory period. While this might dull incentives for improved efficiency, it would mitigate the impact of mis-forecasting that allowed Telstra to extract rents from consumers, and deliver gains to access seekers and consumers earlier than otherwise.
- Rolling forward the RAB from one regulatory period to the next on the basis of *actual* costs and *actual* depreciation. This impacts on risk borne by Telstra and access seekers / consumers, as the current approach has Telstra bearing all risk and gaining all benefit of capex which differs in outturn from its forecasts. As discussed in Biggar, a roll forward using actuals rather than forecasts would preserve incentives to reduce Capex, as there would be a within-period gain from having actual depreciation lower than forecast depreciation, but would not allow these gains to be rolled into the new regulatory period.³⁰
- A mixed incentive regime, such as 'sliding scale' regulation. This might allow Telstra to keep 100% of efficiency gains up to a certain level, but beyond that level, require the gains to be explicitly shared with consumers (e.g. half the efficiency gains could be given to consumers in the succeeding regulatory period). The use of these kinds of regulation reduce the emphasis on forecasts but still maintain incentive effects.

²⁹ See, for example, comments from NBN Co reported at: <http://www.zdnet.com/nbn-cos-mixture-of-technology-not-set-in-stone-morrow-7000033605/>

³⁰ D. Biggar, *Updating The Regulatory Asset Base: Revaluation, Roll Forward And Incentive Regulation*, 1 April 2004, Prepared for the DRP Forum 2 April 2004, p. 3.

7 Other pricing issues

The ACCC raises a number of other more discrete issues in section 8 of its discussion paper:

- cash flow timing and the appropriateness of the 'half WACC' adjustment for capital expenditure
- calculation of the cost of capital
- the calculation of taxation allowances
- the approach to indexing within the FLSM
- how to account for the Telstra-NBN Co arrangements in the FLSM

We offer the following brief comments on these issues in the table below.

Table 2: Comments on additional issues identified by the ACCC

Issue	Comment
Cash flow timing and the appropriateness of the 'half WACC' adjustment for capital expenditure	<p>We agree with the ACCC's assessment that the 'half WACC' adjustment for capital expenditure is difficult to justify. While there may be an independent case for it, the benefits received through the timing of the return on capital payments would seem to more than compensate Telstra for this.</p> <p>It would also be desirable to maintain consistency with the NBN Co regulatory approach.</p>
Calculation of the cost of capital	<p>At this point, we comment specifically on two aspects of the ACCC's proposed approach to WACC: gamma, and beta.</p> <p>Gamma. We note that since the 2013 FAD, the AER has published its Better Regulation Rate of Return Guideline. The Guideline proposes to use a gamma value of 0.5, which is slightly higher than the value of 0.45 used in the 2011 and 2013 FADs. Gamma is not a sector-specific parameter. Therefore it is unclear to us why the ACCC should use a gamma value of 0.45 when regulating telecommunication networks, whilst the AER uses a gamma value of 0.5 when regulating energy networks.</p> <p>Beta. The equity beta estimate of 0.7, used in the 2011 and 2013 FADs, was based on two sources of evidence: a benchmarking exercise, which investigated the estimated betas of several listed telecommunications operators; and the AER's findings on an appropriate equity beta range for regulated utilities. Given these sources of evidence, there are two major problems associated with adopting an equity beta of 0.7 for the present FAD.</p> <p>Firstly, the beta benchmarking exercise was based on a 2010 ACCC study of 23 telecommunications operators. All of these operators were diversified in the sense that their activities involved a combination (to varying degrees) fixed line and non-fixed line operations. The ACCC's benchmarking study did not seek to isolate the systematic risk associated with PSTN/fixed line operations. Instead, the benchmarking study took account of the estimated <u>overall</u> (firm-wide) betas for each of these</p>

	<p>operators, which would represent a weighted average of the betas of the operators' various activities. Regulators in other countries have recognised that the systematic risks of these activities can differ, and have taken this into account when setting regulated prices. For instance, Ofcom has recognised that the beta associated with Openreach (which provides copper fixed line services) is lower than BT's overall beta. The ACCC should recognise that the beta evidence from the benchmarking study is likely to represent an over-estimate of Telstra's fixed line beta.</p> <p>Secondly, when considering evidence on betas from the AER, the ACCC has not taken proper account of gearing. The proposed equity beta of 0.7 is identical to the equity beta that the AER has employed since 2009, and proposes in its Guideline to employ going forward, when regulating energy networks. However, the AER assumes a gearing level of 60%, whereas the ACCC proposes to use a gearing assumption of 40%. If the ACCC wishes to use evidence on beta from the AER, it should adjust for differences in the gearing assumptions. In order to do this, the ACCC should first calculate the asset beta implied within the AER's equity beta assumption of 0.7. De-levering the 0.7 equity beta using a gearing assumption of 60% results in an implied asset beta of 0.28. Then, this asset beta should be re-levered using the ACCC's gearing assumption of 40%. Doing so results in an equity beta of 0.47, which is significantly lower than the equity beta used in the 2011 and 2013 FADs.</p>
The calculation of taxation allowances	We consider that consistency with the AER's approach to energy regulation is desirable, to the extent possible. As the ACCC notes, this implies an approach that estimates the tax asset value based on the actual tax position of assets that constitute the RAB.
The approach to indexing within the FLSM	We understand that the ACCC is considering changing its methods of indexation, to increase consistency between price setting and indexation of expenditure inputs. While we would like to further consider the particular proposal of the ACCC, we consider that there would be some benefit in aligning the indexation approach, and to use CPI for all conversions. Primarily, this is because the benefits of using specific indexes are not obvious if the purpose of the indexation is primarily to measure the real value of expenditure (and investor's capital employed). CPI indexation has the advantage of being a straightforward and consistent method (with price calculations) for valuing expenditure inputs (costs) in constant \$2009.
How to account for the Telstra-NBN Co arrangements in the FLSM	We have discussed these issues in section 4 of our submission.

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