



Submission in response to ACCC
Draft Decision

**Public inquiry into final access
determinations for fixed line services –
primary price terms**

PUBLIC VERSION

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CONTENTS

Section 1. EXECUTIVE SUMMARY	4
Section 2. APPROACH TO SETTING ACCESS PRICES	7
Impact of NBN on fixed line pricing	8
Compensation for declining demand	8
Access prices that promote the LTIE	9
Proposed next steps	10
Section 3. COST ALLOCATION	12
Transition to NBN through asset disposal or cost allocation	12
Economic approach to cost allocation	14
CAN assets common allocations	17
CORE assets common allocations	21
Section 4. DEMAND FORECAST	27
CAN demand	27
CORE services	28
Section 5. EXPENDITURE FORECASTS – CAPEX	32
Prudency and efficiency of costs included in Telstra’s forecasts	33
Telstra’s forecasts by capex driver	36
The efficiency and prudency of Propex	40
Next steps for the ACCC	40
Section 6. EXPENDITURE FORECASTS – OPEX	42
Prudency and efficiency of Telstra’s forecasts	43
Identifying costs drivers and the responsiveness of Telstra’s opex to changes in demand	46
Telstra’s proposed cost and productivity indices	58
Estimation of indirect costs	59
Next steps for the ACCC	60
Section 7. PRICE STRUCTURE - WADSL	62
WADSL price structure does not reflect cost causality	62

Calculating a cost-based WADSL charge	65
The Dedared Service cannot be used to supply services	66
There is no equivalence between Telstra Retail and WADSL end-users	68
Section 8. PRICE STRUCTURE – ULLS AND FOAS/FTAS	70
Unconditioned Local Loop Services	70
Fixed Originating and Terminating Access Services	70
Section 9. COST OF CAPITAL	72
Comparison of WACC estimates	72
Return on equity	72
Cost of debt	80

Section 1. EXECUTIVE SUMMARY

- 1.1 In developing the final FAD for fixed line services the ACCC has a real opportunity to stimulate further competition in the fixed line market and to deliver lower prices for consumers.
- 1.2 Data available in the Draft Decision suggest that there is strong case for prices to decline based on the tangible fact that:
 - (a) Depreciation and amortisation costs will be reduced as some of the legacy fixed line assets are fully depreciated;
 - (b) Data presented by Telstra shows that capex and opex costs were overstated in the previous regulatory period and should be lower; these costs should decline further as Telstra reduces its spend on its legacy fixed line infrastructure as it sweats these assets in the transition to the NBN;
 - (c) The cost of capital Telstra faces should be lower reflecting reductions in interest rates; and
 - (d) Whilst demand is reduced with the impact of the NBN, the impact on unit prices should be fully offset since costs are reduced as assets are decommissioned and/or demand shifts to Telstra's NBN related services.
- 1.3 In setting the draft prices the ACCC has largely relied on data and modelling provided by Telstra. This data has resulted in prices being made stable. However, it is clear from the Draft Decision that there are considerable problems with the Telstra data. Section after section of the Draft Decision identifies concerns the ACCC has with the data presented by Telstra, including that:
 - (a) It is not satisfied that the opex or capex is prudent;
 - (b) It is not satisfied that some of the claimed costs relate to the declared fixed line services;
 - (c) The appropriateness of many of the cost allocations cannot be properly verified;
 - (d) A number of Telstra's forecasts do not appear reasonable, being based on historic trends that are most unlikely to be maintained in the transition to the NBN; and
 - (e) Costs appear resilient in the face of dramatic changes to demand.
- 1.4 Further, these concerns are reinforced by the advice provided to the ACCC's by its independent advisor, WIK-Consult. WIK-Consult considers Telstra's forecasts and assertions to be "arbitrary", "problematic", "highly implausible" and "not appropriate." WIK-Consult also advised that Telstra "have incentives (and possibilities) to distort its expenditure forecasts compared to values that are efficient and prudent." Access seekers should not be penalised by the ACCC simply accepting these "discretionary decisions by Telstra".
- 1.5 As a result of its concerns, WIK-Consult recommends that the ACCC adopts a different approach which provides less discretion to Telstra in determining key modelling assumptions. WIK-Consult observed that correcting for the identified errors would lead to a price decline in the regulated rates.

- 1.6 There is a clear sense that Telstra has formulated its data in a manner calculated to increase access prices. Telstra has submitted several iterations of its data (including after the release of the Draft Decision), each of which has resulted in more costs being allocated to regulated services and less to its retail services. Further, its claims that costs are unresponsive in the face of significant changes in demand defies commercial logic, since it suggests either that Telstra has little control over its expenditure or that it would be prepared to see maintain expenditure at the cost of reduced margins. Neither is plausible.
- 1.7 It is clear from the Draft Decision that adjustments will need to be made to the current modelling to deliver price outputs that are consistent with the fixed principles and are legally sound. These adjustments are not controversial but they will materially lower the draft access prices that have been artificially inflated by Telstra.
- 1.8 In developing a final price ruling Optus recommends that the ACCC adopt the following changes – the majority of which are consistent with the recommendations set out in the WIK-Consult report;
- (a) In setting access prices the ACCC should place limited weight on investment incentives and focus on end-user outcomes since the NBN policy settings (which guarantee that roll-out and customer migration will occur) means that legacy access prices will not impact on NBN investment incentives.
 - (b) The NBN compensation payments should be assumed to adequately compensate Telstra for any loss of scale due to the transition to the NBN.
 - (c) The FLSM should be corrected to include disposal of assets resulting from NBN migration consistent with the ACCC's own policy statement. For practical purposes this could be achieved through inclusion of NBN SIOs and traffic in the cost allocation factors.
 - (d) The cost allocation approach proposed by Telstra should be amended to better reflect the allocation of costs to regulated fixed line services, non-regulated fixed line services, NBN and other services.
 - (e) The costs of unused or underutilised building space as a result of NBN migrations should not be allocated to regulated services. This can be achieved through asset disposal or cost allocation to NBN.
 - (f) The costs associated with transmission assets should be allocated on a per Mbps basis; and demand driven transmission allocated to non-regulated FLS.
 - (g) The costs of empty or underutilised ducts should not be allocated to regulated fixed line services, but treated as an NBN-related asset disposal.
 - (h) Telstra's forecast ULLS SIOs have been overstated and should be adjusted downwards to reflect declining growth not linear growth.
 - (i) Voice call volumes should include calls originating and terminating on Telstra NBN access lines, as all voice services will continue to use core voice assets.
 - (j) The costs associated with data services should reflect the likely usage of relevant assets by Telstra's NBN services – as the majority of core data assets are used by all Telstra end-users irrespective of the access technology.
 - (k) Only capex forecasts deemed to be prudent and efficient should be included in the FLSM. In the absence of justifiable evidence, Telstra's forecast should be rejected and

the ACCC should have the flexibility to set capex forecasts for the next regulatory period by taking into account historic trends, as observed over the last regulatory period.

- (l) Only opex forecasts deemed to be prudent and efficient should be included in the FAD. In the absence of such evidence, Telstra’s forecast should be rejected and the ACCC should set opex forecasts for the next regulatory period by taking into account historic trends, as observed over the last regulatory period, albeit adjusted for the clear decline in demand that will result from NBN migration. Historic trends show that opex forecasts should be declining over time and this decline should accelerate with the rollout of the NBN

- 1.9 These changes in whole or in part will result in a reduction in access charges (at least in the order 10%). Optus submits that lower access prices are the only outcome that would be consistent with the long term interest of end-users and the fixed principles. It is also the only outcome that will avoid the risk of Telstra over recovering costs, particularly in light of the considerable compensation it will receive on the impact of the NBN to its legacy network. The ACCC should embrace this opportunity to reduce access prices and deliver tangible benefits for consumers.
- 1.10 Finally, on a practical point Optus notes that it may be difficult for the ACCC to accommodate some of the above changes within its constrained timeline. This is especially the case for the requirement to set alternate capex and opex forecasts, which would in any event require further industry consultation. An option available to the ACCC is to make those changes that can be accommodated within the timeframe now and revisit the FAD within a shorter time period. This should lead to a material reduction in access prices that should benefit end-users.
- 1.11 Optus recommends the ACCC makes a final FAD for a two year period covering FY2016 and FY2017. The ACCC should impose a 10% reduction in regulated rates, consistent with the findings of the expert opinions of Frontier Economics and WIK-Consult. The proposed rates are below.

Figure 1 Summary of draft FAD prices for the declared fixed line services

Service	Unit	Current Charges (2011 FAD)	Proposed Charges (10% reduction)
ULLS B1-3	\$ per line per month	16.21	14.59
ULLS B4	\$ per line per month	48.19	43.37
WLR	\$ per line per month	22.84	20.56
FOAS & FTAS	cents per minute	0.95	0.86
LCS	cents per call	8.90	8.01
LSS	\$ per line per month	1.80	1.62
WADSL Z1	\$ per port per month	24.44	22.00
WADSL Z2/3	\$ per port per month	29.66	26.69
AGVC/VLAN	\$ per Mbps per month	32.31	29.08

Section 2. APPROACH TO SETTING ACCESS PRICES

- 2.1 The pricing decisions in this FAD Inquiry need to balance the interests of end-users (promote competition, lower prices, increased usage) and the longer-term interests (ongoing access to services, reinvestment, new products and services, new networks) of access providers.
- 2.2 The requirement to promote competition, e.g. though lower prices, are bounded by the requirement to cover the direct costs of providing access and the legitimate commercial interests of access providers. Longer term interests, such as adequate return to encourage investment, are bounded by concepts of efficient investment and long term competition by access seekers. Optus has consistently put forward the position that the factors surrounding the transition to the NBN and payments to Telstra removes the need for the regulator to set prices to promote investment in copper fixed line services – the network is being transferred to NBN Co or being shut down. There is no relevant build-buy decision anymore. This view is supported by the ACCC's expert advisors WIK-Consult, who observed:

Pricing decisions for the legacy copper network infrastructure do not have any immediate impact on the investment decisions regarding the NBN and the incentives for such investments. The NBN investments are conducted by NBN Co, a governmentally owned and funded entity under an ongoing, predefined and incentivised roll-out plan.¹

- 2.3 The incentives for competitive and efficient outcomes may also be compromised in markets where there is a clear dominant provider. Since, *“By leveraging such market power into otherwise competitive parts of the supply chain or related industries, a private firm’s conduct in such circumstances may provide poor outcomes for competition and efficiency.”²* As such, the unique conditions under which this FAD will operate cannot be ignored.
- 2.4 The over-riding factor, therefore, is whether the prices in the FAD promote competition during the transitional period. WIK-Consult again observes that the focus of fixed line pricing should be on how to make best use of legacy infrastructure so long as it is in place, and to compensate Telstra for the cost of the legacy network which is used to provide regulated services.³ Optus agrees with this approach.
- 2.5 To facilitate this outcome, Optus believes that:
- (a) The ACCC should adopt its stated position on the treatment of NBN-Telstra compensation and impact of asset disposals and shared usage with NBN Co.
 - (b) Any change to the current pricing structure for each of the declared fixed-line services should be subject to a cost-benefit analysis to ensure that end-users are made better off.
- 2.6 Finally, Telstra’s proposed alternative to set access prices outside the FLSM should be viewed with considerable caution.⁴ Notwithstanding the review of a number of key FLSM inputs

¹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.34

² ACCC, 2014, Reinvigorating Australia’s Competition Policy, ACCC Submission to the Competition Policy Review, 25 June, p.38

³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.34

⁴ In December 2014, Telstra released an updated FLSM incorporating their proposed amendments to the model inputs. This was largely in support of the Telstra submissions to the Fixed Line FAD submissions previously

discussed elsewhere in this submission; setting prices outside the FLSM framework would break the causal link between prices and cost and is likely to create a significant risk of cost over or under recovery.

Impact of NBN on fixed line pricing

- 2.7 As discussed throughout this submission, NBN rollout assumptions will be a key driver for determining the relevant demand and cost allocation factors to be applied to the declared fixed line services subject to this FAD inquiry.
- 2.8 Optus notes that while the rollout of NBN impacts on demand forecasts, there is no consideration of NBN payments that Telstra will receive in return for the migration of customers, disconnection and transfer of assets to NBN.
- 2.9 The ACCC published a position statement on the treatment of the Telstra-NBN Co arrangements. The ACCC has stated that the impact of the Telstra-NBN Co arrangements would be taken into account and would make specific adjustments to account for the associated transactions.⁵ The ACCC stated it would account for transactions under the Revised Definitive Agreements (revised DAs) as follows:
- (a) Assets sold to NBN Co – to be treated as asset disposals;
 - (b) Assets leased to NBN Co – to be taken into account in the cost allocation framework;
 - (c) Decommissioned or assets utilised to a lesser extent – regulatory values of decommissioned assets to be removed, and appropriate reduction in the share of assets utilised to a lesser extent from the cost base.
- 2.10 The Revised DAs were announced on 14 December 2014 and it remains unclear to what extent (and how) the various transaction types will be taken into account by the ACCC in the FLSM. For example, **[CiC]**,
- 2.11 Optus strongly supports the implementation of the ACCC’s NBN position statement and the adoption of WIK-Consult’s expert advice. The FLSM must be corrected to include asset disposals. It is not feasible to forecast that demand will fall by **[CiC]** and there will be no asset disposals. In the absence of verifiable and credible evidence on asset disposals over the model period, the FLSM could use NBN SIOs as a proxy value. That is, allocating value of assets to NBN using SIO as the driver will have the same impact as accurately forecasting asset disposals.
- 2.12 In addition, the FLSM must also include NBN services as a distinct asset category as per the advice of WIK-Consult. There is little doubt that assets included in the FLSM will be used either exclusively or jointly to support Telstra’s retail and wholesale services on the NBN. The use of NBN SIO in the CAN cost allocation will go a long way to addressing these concerns. This issue is addressed in more detail in section 3.

Compensation for declining demand

- 2.13 In the 2011 FAD the prices for the declared services were not adjusted to reflect declining demand. This reflected the position that Telstra should not be compensated either for loss of

provided – it includes the incorporation of Telstra’s Fully Allocated Cost (FAC) Framework for cost allocation, and the reasoning for Telstra’s proposed one-off uniform price uplift for the regulatory period. It was the release of this model which provided one of the first opportunities for access seekers to review the interactions of Telstra’s various proposals.

⁵ ACCC, 2014, Position statement on the treatment of the Telstra-NBN Co arrangements, October, p.v

market share resulting from competition or the fact that customers were choosing alternative products. There has been no change in the relevant policies/legislation since the 2011 FAD which would justify altering this conclusion.

- 2.14 More notably, firms in competitive industries are not protected from the impact of declining demand in terms of their ability to recover costs. Regulated firms should not be treated as a special case.
- 2.15 Declining demand will come from three sources during the period of this FAD; due to fixed competition; due to use of alternative technology; and migration to NBN. However, the removal of fixed line services to NBN continues to be the largest single driver of decline in the demand for fixed line services over the model period.
- 2.16 Even though the migration of services to NBN may be reflected in the form of declining demand, the asset base does not reflect this same decline – leading to higher costs of supply being borne by the remaining subscriber base. Under the current assumptions in the FLSM, Telstra is arguing that the roll-out of the NBN, and the transfer of SIOs, has no impact on the number of copper lines, transmission assets, capacity of switching equipment or DSLAMs, or any other asset include in the model. This is implausible and clearly inconsistent with known facts.
- 2.17 Optus agrees with the conclusion of WIK-Consult that the Telstra-NBN Co payments adequately compensate Telstra for any loss of scale due to the transition to NBN. WIK-Consult observes that a *“rational operator [would] request to be compensated for any costs of stranded assets (which could also be an overcapacity) due to the migration to NBN”*. A rational operator would then allocate the costs of stranded assets and excess capacity to cooperating with NBN⁶ – as should the FLSM.
- 2.18 There is therefore no justification for any form of compensation for declining demand through higher access charges.

Access prices that promote the LTIE

- 2.19 Telstra has proposed three separate scenarios for the recovery of its fixed line service costs, as allowed under the FLSM:
- (a) Scenario A – Optimised result for a one-off uniform price lift applicable to all services. The aggregate result in the total revenue generated over the five year period set equal to the total revenue requirement determined in the FLSM.
 - (b) Scenario B – Single non-uniform price uplift based on averaged revenue requirement per service over four-year period to FY2019. The aggregate result in the total revenue generated over the five year period set equal to the total revenue requirement determined in the FLSM.
 - (c) Scenario C – Optimised result for glide-path applied equally to all services. The aggregate result in the total revenue generated over the five year period set equal to the total revenue requirement determined in the FLSM.
- 2.20 Optus notes that while each scenario results in the cost recovery equal to the total revenue requirement determined in the FLSM, the impact on access prices for individual services varies considerably.

⁶ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.24

- 2.21 The Draft Decision has adopted a similar approach to Telstra’s ‘Scenario A’ adjustment described above. This represents a clear deviation from the cost-based prices set out in the draft FLSM figure 2.
- 2.22 Optus recommends that the ACCC should assess the impact of changing from a cost-based charge to an average charge for each service and determine the end-user cost and benefit. It is important to note that not all services will have the same impact on end-users over the period of the FAD.

Figure 2

[CiC]

Source:

- 2.23 In addition, adoption of the proposed Draft Decision charges is likely to lead to significant over recovery of Telstra’s costs over the next few years. The ACCC, WIK-Consult, access seekers and Frontier Economics have all raised serious concerns over the cost forecasts and cost allocations. There is near unanimous opinion that the proposals put by Telstra are neither prudent nor efficient, and are inconsistent with the legislative provisions.
- 2.24 Optus, other access seekers and Frontier Economics have proposed an interim solution while the significant problems identifies are being addressed by the ACCC. The scope and serious of the identified flaws means it is not feasible to meet the ACCC’s intended timetable for finalisation of the FAD.
- 2.25 The question is what charges should be set for the short term. Optus does not support adopting the charges proposed in the Draft Decision. The proposed Draft Decision ‘average’ charges will result in Telstra recovering revenue far in excess of the costs incurred. Figure 2 compares the individual access prices as determined in the Draft Decision FLSM for FY15 to FY17⁷ and the average charge proposed in the Draft Decision.
- 2.26 This clearly shows that Telstra will over-recover its costs should the Draft Decision charges be implemented for the next two years (FY16 and FY17). [CiC]

Proposed next steps

- 2.27 Optus recommends that the ACCC adopt a short term FAD for two years while it addresses the substantial flaws in the current set of forecasts. Optus strongly supports the proposal by Frontier Economics that the ACCC should at the minimum put through a small set of the improvements recommended by WIK-Consult. This should be the focus for the period up to the final FAD decision.
- 2.28 Optus supports the recommendation that the ACCC bring forward WIK-Consult’s proposed 10% decline in the FAD rates to FY16 – and apply it for the two year FAD while the ACCC conduct a full review.
- 2.29 Telstra will likely argue that this prevents it from recovering costs. Such claims, however, are false since modelling based on Telstra’s own forecasts (which in the opinion of the ACCC and WIK-Consult are neither efficient nor prudent) shows the proposed Draft Decision charges are far in excess of Telstra’s actual costs (figure 2).

⁷ For WADSL, Optus has applied the same methodology as applied in the 2013. First, the revenue requirement per SIO is apportioned in AGVC/VLAN and Port (weighted average) using the same relativities set out in the 2013 FAD. For AGVC/VLAN, the monthly AGVC/VLAN price (per Mbps) is then based on the new forecast average usage (Mbps/SIO), while the monthly port charges apply the same cost relativities by Zone as set out in the 2013 FAD.

- 2.30 Telstra has already benefitted from the delay in setting the new FAD and the rollover of existing rates. The new FAD was supposed to be in force for FY15, but due to difficulty with Telstra's data, the ACCC has been unable to conclude the Inquiry. Consequently, the existing 2011 FAD rates were rolled over. This resulted in Telstra over-recovering its FY15 costs by **[CiC]**. Access seekers and end-users should not be further penalised because of Telstra's gaming and delay of the FAD process.
- 2.31 A 10% decline, applied immediately, would ensure that end-users are not penalised due to Telstra's delay. It would also provide Telstra an incentive to assist the ACCC to finalise the FLSM using verifiable forecasts and cost allocation factors.

Section 3. COST ALLOCATION

- 3.1 Cost allocation factors –the basis on which shared costs are allocated to separate services – are a key element in ensuring that services reflect the true cost to provide. And hence, appropriate cost allocation factors are required to ensure the efficient use of, and investment in, infrastructure.
- 3.2 Costing of services that utilise a set of common and shared assets can be complicated –cost allocation factors can be used to hide a cross subsidy or to shift costs onto access seekers thereby inflating access prices and limiting competition. But there is an accepted economic approach to the issue – cost causation. That is, shared costs should be allocated to services on the basis of that it caused the company to incur that cost. This principle must be the basis of allocation in order to ensure that the LTIE is promoted.
- 3.3 Telstra is proposing to use several cost allocators which are at odds with the cost causation principle. The Draft Decision and WIK-Consult have identified several instances where alternative cost allocators should be used. Optus agrees with these observations. Optus supports the use of cost allocators that reflect the reason for which costs are to be incurred – i.e. that reflect the level of demand for the asset.
- 3.4 This section discusses Telstra’s proposed approach to cost allocation, and outlines Optus’ proposed approach.

Transition to NBN through asset disposal or cost allocation

- 3.5 The ACCC has provided guidance on how it will treat the transition to NBN during the period of the FAD. The ACCC has stated:
 - (a) For assets that are sold to NBN Co, the ACCC proposes to treat these as asset disposals and to remove the regulatory values of those assets from the RAB. This will ensure that assets no longer used in the provision of declared services are not reflected in regulated prices, and maintain cost reflective prices.
 - (b) For assets that are leased to NBN Co, the ACCC proposes to account for this in the cost allocation framework of the FLSM. Treating leased assets in this way will ensure that the costs allocated to, and recovered from, declared services reflect the costs of supplying the declared services. It will also ensure that Telstra does not continue to receive revenue from users of declared services for the share of assets no longer used to provide declared services.
 - (c) As a consequence of the migration of customers to the NBN, certain fixed line assets will be decommissioned or utilised to a lesser extent. The ACCC proposes to remove the regulatory values of decommissioned assets and an appropriate share of assets utilised to a lesser extent from the cost base. The ACCC considers this will ensure assets no longer used in the provision of declared services are not reflected in regulated prices and maintain cost reflective prices.⁸
- 3.6 This approach is supported by the ACCC’s expert advisors WIK-Consult, who state:

⁸ ACCC, 2014, Public Inquiry into final access determinations for fixed line services —primary price terms: Position statement on the treatment of the Telstra-NBN Co arrangements for regulated pricing, Section 3

- (a) WIK-Consult fully support the principles the ACCC has developed in its position statement of October 2014 on how to consider and to treat the NBN-related migration payments.⁹
- (b) Telstra fails to properly account for asset disposal due to NBN. The migration to NBN makes more of Telstra's assets obsolete than just [CiC].¹⁰
- (c) Telstra's allocation of allocation of duct to fixed line services and other services (including NBN, HFC and other third party services) lacks some plausibility. In particular, Telstra allocates duct overcapacity to fixed line users. Excess capacity due to NBN migration should be treated as asset disposal.¹¹
- (d) Telstra's forecast on exchange space "*are highly implausible*". The current allocation appears to allocate all overcapacity due to NBN migration to fixed line services. This is not appropriate.¹²

3.7 With regards to the payments made to Telstra under the DAs, WIK-Consult offered the following economic interpretation:

- (a) A rational operator would cooperate with NBN if it would be fully compensated for any economic loss due to the economic presence of NBN; and
- (b) A rational operator would request to be compensated for any costs of stranded assets, or excess capacity, due to the migration.¹³

3.8 Notwithstanding the clear position statement issued by the ACCC in October 2014, and the expert view of its advisors in March 2015, the Draft Decision FLSM does not address the transition to NBN either through asset disposal in the RAB; or cost allocation framework. Specifically:

- (a) Telstra's proposed FLSM (v.1.2) does not contain any significant asset disposal. The model contains a total of [CiC] of asset disposals over the period FY14-FY19. This can be compared to a total of [CiC] of capital additions over the same period.
- (b) Telstra's proposed FLSM or Draft Decision does not include a cost allocation approach that takes into account leasing and use of Telstra assets by NBN Co.
- (c) Telstra's proposed FLSM or the Draft Decision does not take into account decommissioning of assets, or asset utilisation to a lesser extent, in the proposed cost allocation framework.

3.9 Telstra and the ACCC have not taken into account the disposal of assets as NBN rolls-out – either through transfers to NBN under the new DAs, or decommissioning of excess capacity in switches or buildings, as compensated through the DAs. This is despite a forecast [CiC] – where under the DAs at least the copper lines are to be transferred to NBN. Over the same

⁹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.2

¹⁰ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.6

¹¹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.2

¹² WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.2

¹³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.24

period total SIOs are forecasted to fall by [CiC] and a [CiC] decline in PSTN traffic is forecasted.

- 3.10 As a result, it cannot be said that prices in the draft FAD are cost reflective since assets (or parts thereof) no longer used in the provision of declared services continue to be reflected in regulated prices. This is a substantial flaw in the Draft Decision FLSM and Telstra's FLSM. The assumption that NBN migration would have no impact on the capacity of existing assets is, as noted by WIK-Consult, highly implausible.
- 3.11 There should be no debate about whether the ACCC will take into account NBN impacts in the FAD – the view of the ACCC has been clear since October 2014. The question therefore is how the FLSM should take into account asset disposal, and asset decommissioning, in order to give effect to the ACCC's position on the treatment of NBN migration.
- 3.12 Ideally, the FLSM would accurately reflect the value of assets transferred to NBN Co – both part and whole transfers. However, given the timeframe under which the ACCC wish to make a final decision, and the level of information currently before the ACCC, it is not clear that the ideal solution is achievable. An alternative approach to achieve the same outcome is to reflect disposals through cost allocation and ensuring that NBN Co usage of assets are accurately measured. Asset disposal can be accurately dealt with through cost allocation factors – where NBN Co uses an asset 100% it is fully transferred, and where its share is less than 100% it is in the process of being transferred. Optus strongly supports this approach. We advise in below sections how this can be implemented.

Economic approach to cost allocation

- 3.13 The accepted approach to cost allocation so as to ensure economically efficient outcomes is to first allocate costs directly to services that cause the cost; and where direct allocation is not possible, to allocate indirectly to several services.
- 3.14 This is reflected in the fixed principles, which states:
- (a) Allocation factors should reflect the relative usage of the network by various services;
 - (b) Direct costs should be allocated to the service to which they relate; and
 - (c) Allocation of shared costs should reflect causal relationships between supplying services and incurring costs.¹⁴
- 3.15 While there is broad agreement over the principled approach, there is often debate over the specific allocation keys used. To that end, it is useful to briefly go over the economic basis of cost allocation. Costs
- (a) **Direct Costs:** service specific costs that are directly related to the production of the specific services. If the service ceased to be supplied, these costs would be avoided. These costs should be directly allocated to the service as there is an unambiguous causal connection with the service
 - (b) **Joint Costs:** these costs cannot be allocated to one service, but they are incurred when producing a set of services. The specific group of services have an unambiguous causal relationship with the indirect costs and share the same driver of cost. These costs can be indirectly attributed to services within the considered group of services.

¹⁴ Fixed Line Services Final Access Determination 2011, Clause 6.14

- (c) **Common Costs:** these costs are incurred when producing all services. These costs have an unambiguous causal relationship with all services. These costs are indirectly attributable to all services. These costs can be only avoided by ceasing all production.
 - (d) **Business overheads:** these costs are incurred to operate a telecommunications company, but are not incurred to operate the network. Examples include, legal, HR, strategy and CEO office costs. These costs are allocated in an arbitrary way as there is no direct causal relationship with network outputs. The costs are shared across the full suite of products by the firm.
- 3.16 The standard approach when allocating joint and common costs is to use a capacity based allocation rule – i.e. use the relevant cost driver such as SIOs, busy throughput or some other metric which reflects the factor that determines the level of cost incurred.

Telstra's cost allocation approach

- 3.17 Telstra's proposed cost allocation framework (CAF) model attempts to address its claim that *"the current cost allocation approach in the FLSM is unnecessarily complex, does not provide certainty with respect to cost recovery, and is internally inconsistent"*¹⁵ by introducing a standalone CAF Model for the purposes of determining the relevant cost allocation factors.
- 3.18 The 'Allocations' sheet calculates the cost allocation factors to be applied to the RAB; and include a number of Telstra embedded assumptions which effectively remove the effect of the cost allocation adjustments that were addressed in the 2011 FAD. In broad terms, for the FLSM Asset Classes;
- (a) Specific Allocator is calculated based on demand and routing factor inputs to determine cost allocators for the regulated fixed line wholesale services; and
 - (b) General Allocator is calculated based on the weighted average allocator for a particular service across the Asset Class group to a particular Asset Class.¹⁶
- 3.19 Put simply, *"Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between this asset class and the relevant services."*¹⁷ The five Asset Classes to which this applies include: CA10 indirect capital assets; CO07 other communications plant and equipment; CO08 network land; CO09 network buildings/support; and CO10 indirect capital assets.
- 3.20 A key feature of the General Allocator approach is that a share of the relevant Asset Class is first allocated to third party use. The remaining costs in these Asset Classes are then allocated using the 'General Allocator' which uses a methodology similar to the revenue share approach adopted in the 2011 FADs.
- 3.21 Optus observes that there may be an inherent circularity given that the General Allocators are calculated based on the estimated Revenue Requirement for each year. This is driven by Telstra's forecast demand, which in turn has implications for the forecast capex and opex to be rolled into the RAB.

¹⁵ ACCC, 2014, Public inquiry into final access determinations for fixed line services – primary price terms, Discussion Paper, July, p.40

¹⁶ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to discussion paper, October, p.107

¹⁷ ACCC, 2014, Public inquiry into final access determinations for fixed line services, Additional information on cost allocation, July, p.45

- 3.22 There also appear to be a number of inconsistencies in the embedded assumptions used to calculate the Specific and General Allocators applied in the ‘Allocations’ worksheet. For example, **[CiC]**.
- 3.23 Industry submissions also highlight significant concerns with accepting Telstra’s proposed cost allocation approach. Not unlike its original proposal, the ACCC in its 2011 FAD final decision was emphatic in its rejection of Telstra’s cost allocation proposal.
- 3.24 The CCC has also provided supplementary submissions in support of this view; concluding that to accept a change in methodology now would unwind the two non-independent decisions – on accepting the partial cost allocation approach *and* adjusting the value of the initial RAB – made in 2011.

We continue to support the ACCC’s views that changing the cost allocation approach to reflect total demand changes is undesirable and inconsistent with the ACCC’s reasoning in 2011. ...given the history of the setting of the RAB ...

We submit that making only one of the two adjustments could not be in the LTIE, and will result in Telstra recovering more revenue than is necessary to promote Telstra’s legitimate business interests.¹⁸

Draft Decision and WIK-Consult

- 3.25 The Draft Decision proposes to adopt Telstra’s fully allocated cost framework. But the ACCC noted that the basis of certain allocators require further verification and will undertake further consultation and expert advice on the cost allocations proposed. The ACCC has committed to obtain expert advice on the methodology proposed and assumptions used by Telstra.¹⁹ Optus welcomes the commitment to undertake further work on this issue .
- 3.26 WIK-Consult has provided its initial expert views on the cost allocation, concluding that the model fails to distinguish between costs related to regulated fixed line services (FLS), non-regulated FLS, NBN and other services. WIK-Consult also observes that it cannot be determined which portion of total expenditure allocated to a RAB asset category is driven by regulated fixed line services.²⁰ WIK-Consult concludes that:

Therefore it cannot be made sure that the FLSM allocates expenditure to services according to cost causation.²¹

- 3.27 WIK-Consult recommends that the model be amended to allow for forecast expenditure to be allocated to asset subcategories for the four expenditure types (FSR regulated, FSR non-regulated, NBN, other). WIK-Consults further recommends that the model should utilise Telstra’s IMC cost data to allocate costs directly to the four expenditure types. **[CiC]**

Optus’ preferred approach

- 3.28 Irrespective of whether a full or partial allocation method is adopted, the LTIE will only be promoted where the correct allocation factors are adopted. In other words, the allocation method needs to:

¹⁸ Frontier Economics, 2014, Cost allocation methodology and its relationship to the opening regulatory asset base, A further submission to the ACCC’s review of Primary Prices, December, p.10

¹⁹ ACCC, 2015, FSR FAD – Primary price terms draft decisions, p.155

²⁰ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.84

²¹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.82

- (a) Allocate costs directly to services where a direct causal relationship can be identified;
 - (b) Allocate costs indirectly across joint services where a direct causal relationship exists across the joint products. Costs should be allocated on the basis of the demand that caused the cost;
 - (c) Allocate common costs across all network services using an appropriate cost allocation factor.
- 3.29 Optus agrees with the proposal put forward by WIK-Consult that the asset classes should be separated into regulated services, non-regulated services, NBN services, and other (including mobile and transmission). This will enable costs to be allocated directly to the services for which the cost was incurred. Joint costs could be allocated across service types using an appropriate allocation key. This would be the most practical and effective way to implement the fixed principles and ensure that costs are allocated efficiently. Absent this, the allocation method proposed by Telstra is inconsistent with the fixed principles as no attempt is made to allocate costs directly to services for which the costs were incurred. Any FAD prices based on this approach would therefore be inconsistent with fixed principles and therefore not valid.
- 3.30 Optus recommends that capital expenditure, operating expenditure and PROPEX that can be allocated directly to the services for which the costs were incurred should be allocated directly. The Draft Decision has already started this process by directly allocating NBN-related expenditure away from regulated services. Optus recommends that the ACCC further utilise Telstra's IMC data to allocate costs directly to non-regulated fixed services, NBN, or other (mobile & transmission).
- 3.31 Optus agrees with WIK-Consult that demand-related expenditure during periods where access demand is declining should be allocated to non-regulated services – either Telstra non-regulated, NBN or other depending on which service type is the driver of demand.²²
- 3.32 Optus' preferred approach to the cost allocators for specific asset classes are discussed in detail below.

CAN assets common allocations

- 3.33 This section discusses Optus' preferred approach to cost allocation for the CAN asset classes. The advice below assumes that costs are first allocated directly to regulated, non-regulated, NBN, and other service classes (as per the advice of WIK-Consult).

CA01 Ducts and Pipes

- 3.34 Telstra has proposed to allocate ducts using a two stage method:
- (a) Allocate ducts to fixed line and non-fixed line services based on the length of ducting installed for each type of service. The share of duct allocated to regulated service decreases from **[CiC]**.²³
 - (b) Ducts that are allocated to fixed line services are then further allocated across the relevant regulated services on the basis of SIOs for ULLS, WLR, ISDN and other DSL. There is no taking into account the number of NBN SIOs.²⁴

²² See, for example, WIK-Consult's comment on demand-driven CAPEX for transmission equipment which cannot be explained on the grounds of increased demand for FLS. See: WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, pp. 107, 109, 110, 113

²³ Telstra, FLSM FY2015 to FY2019 v1.2, March 2015, Sheet "Demand Forecasts", row 184

- 3.35 It is not clear in Telstra’s documents why there is a total of [CiC] km of ducts in FY14, and yet NBN Co only uses [CiC] km of ducts after migration. The FLSM shows there is [CiC] km of ducts for other non-NBN purposes. All other ducts relate to the copper or HFC networks which are being fully migrated to NBN Co. Telstra should explain where the other [CiC] km of duct goes after migration.
- 3.36 There appears to be a disconnect between the allocation of duct length to fixed services and the resulting length per SIO. Because of the fixed nature of fixed line services, one could reasonably expect that the length per household (per SIO) would remain relatively stable. This is not the case, however, in Telstra cost allocation framework.

Figure 3

[CiC]

Source:

- 3.37 Figure 3 shows the duct length per SIO for all fixed line services. This shows that there is a drastic increase in the length per SIO over the lifetime of the FLSM. [CiC]
- 3.38 It may be that the ‘missing’ [CiC] km of duct length represent empty ducts which are decommissioned due to the transition to NBN. However, if this is the case this should be treated as an asset disposal, as per the advice of the ACCC. The Draft Decision FLSM does not do this, and in fact contains no asset disposals at all.

Recommended approach

- 3.39 Ducts are a common cost – that is, ducts are used by regulated and non-regulated fixed services, NBN services, mobile, and transmission services.
- 3.40 The FLSM currently allocates empty ducts to fixed line services. This is not correct. Empty ducts are, in effect, an asset disposal for which Telstra has been compensated through the DAs. The FLSM should treat empty ducts as an asset disposal.
- 3.41 Optus recommends that the model should assume a constant per CAN SIO duct length (based on FY14 actuals) for regulated fixed line services over the lifetime of the model. This would produce the same result as if the assets were disposed (in effect the value of the disposed assets is allocated to non-regulated services).
- 3.42 Optus also supports the approach proposed by WIK-Consult. However, it is not clear whether the information required to be supplied by Telstra would be available within the timeframe imposed by the ACCC. While allocating CAN duct length (i.e. total duct length excluding that length allocating to other non NBN, mobile and transmission) across the total number of SIOs (including NBN SIOs) is a significant improvement on the Telstra proposed approach, this approach would spread the cost of unused ducts across all SIOs, including regulated SIOs. In so far as the DAs represent compensation for asset disposals, this would represent a double recovery.
- 3.43 Should the ACCC adopt a SIO-based allocation, Optus recommends that the allocation per Band be weighted based on the proportion of duct length per band. This data is available in Telstra’s July Cost Allocation document. According to this data [CiC]
- 3.44 Based on the information currently provided to the ACCC, Optus recommends that:

²⁴ Telstra, Cost Allocation Framework for the FLSM, July 2014, pp.20-1

- (a) The FLSM assumes a constant duct length per regulated CAN SIO, as per FY14 actuals. All other duct lengths would be recovered from non-regulated services, including NBN, retail, mobile and transmission.

CA02 Copper Cables

- 3.45 Telstra has proposed to allocate copper cables costs on the basis of:
- (a) Overall allocation to Fixed Line Services within each ULLS Band (Fixed Services) is calculated by the proportion of installed copper cable pair kilometres in a given Band.
 - (b) Within each ULLS Band, costs are allocated to the Fixed Line Services on the basis of SIOs. Costs are allocated to ULLS (separately for each ULLS band), WLR & Retail Basic Access, ISDN and Other DSL services.
- 3.46 Telstra's proposal does not include any allocation of copper cable to NBN services, or include any asset disposals, even though the use of copper is a key plank in the NBN MTM design. **[CiC]**
- 3.47 Further, Optus notes the recent \$390m contract with NBN Co for Telstra to design and maintain the copper sold to NBN Co under the DAs which provide for payments of more than \$100 Billion. As stated by Telstra, *"The contract term is up to four years and the estimated gross contract value, based on Telstra's estimate of the volume of work it will be awarded by NBN Co, is up to approximately \$390 million. The contract value will also be subject to the rate of progress in the NBN rollout and the outcome of future price reviews under the terms of the contract."*²⁵
- 3.48 WIK-Consult recommended that copper cables be allocated across regulated, non-regulated and NBN services on the basis of total SIOs, including:
- (a) Number of regulated CAN SIO;
 - (b) Number of non-regulated CAN SIO; and
 - (c) Number of customers on NBN Co access lines.
- 3.49 Optus agrees with the proposal put forward by WIK-Consult. Given the transfer of copper to NBN Co, the SIO based allocation key must include NBN within the total. Optus agrees that the costs assets costs should be allocated jointly across regulated, non-regulated and NBN services, as these are the three services that will use copper lines over the period of the model.

Recommended approach

- 3.50 Optus recommends that NBN SIOs should include all fixed-line access methods – while FTTN/B are the method for which copper will be re-used, FTTP & HFC NBN SIOs should also be included to reflect the value of copper assets disposed. In effect, the total number of NBN SIOs represents copper cable asset disposal. In the absence of the value being accurately removed from the RAB, Optus recommends the allocation factors remove the value from regulated services. This will result in the same outcome.

²⁵ Telstra, 2014, "Telstra signs planning and design contract with NBN Co," Media Release, 19 December 2014

CA03-CA06 Other Cables, Pair Gain Systems, CAN Bearer and other CAN Assets

- 3.51 Telstra proposes to allocate costs across these services on the basis of SIOs, with no allocation to ULLS for CA03; CA04; and CA05. CA03 Other CAN Cables and CA05 Radio Bearer Equipment are also not allocated to ISDN services.
- 3.52 CA06 Other CAN Assets, [CiC], is allocated across all regulated and non-regulated SIOs including ULLS.
- 3.53 Optus notes that the number of NBN SIOs is not included in the allocation factor for these asset classes. During the migration to NBN, it would appear reasonable that the assets included in class CA03-CA06 would be decommissioned if not re-used by NBN Co. Optus recommends that the ACCC request information on the assets that would be disposed of (decommissioned or transferred to NBN Co) as a result of an area migrating to NBN.
- 3.54 Assuming that these assets are impacted by the migration to NBN, the number of NBN SIOs should be included in the allocation factor so as to reflect the disposal of the relevant assets. Absent such allocation factor, the ACCC needs to ensure the appropriate proportion of the asset class value is removed from the RAB — where the proportion would be calculated as the number of NBN SIOs over total SIOs. Either approach should result in the same allocation to regulated services.

CA07-09 Network Land and Buildings/Support

- 3.55 The allocation of network land and buildings between the Can and CORE assets (CA08/09 and CO08/09) was determined by the ACCC in 2011 when calculating the initial value of the RAB. Telstra proposes to continue with the split. The portion of the value of network land that has been allocated to CA08/09 reflects the part of the exchanges and land that supports the customer side of the MDF.
- 3.56 Telstra proposes to allocate the costs allocated to CA07-09 assets on a per SIO basis. Telstra state that while other services in addition to the fixed line services make use of network land and buildings, because CA08 and CA09 are designed to only reflect the costs of supporting the customer-side of the MDF (which is exclusively used for connecting fixed line access services), allocation of costs is based on SIOs for the Fixed Line Services.²⁶
- 3.57 Optus notes that the allocation of building costs between customer MDF side and the CORE assets was determined by the ACCC on the basis of its analysis of the Telstra TEA model.²⁷ Around [CiC] of total land and buildings initial RAB value has been allocated to CA08 and CA09.
- 3.58 Optus agrees that given that the CAN allocation of buildings is supposed to reflect the customer side of the MDF, the appropriate allocator is SIOs connected to the MDF. However, there remains a question of how best to take into account the decommissioning of the MDF as SIOs migrate to the NBN. The WIK-Consult report highlights that additional information is required to ensure that the costs of the customer side of the MDF are accurately allocated to regulated and non-regulated services.²⁸ WIK-Consult recommends Telstra:

²⁶ Telstra, Cost Allocation Framework for the FLSM, June 2014, p.29

²⁷ ACCC, 2011, Public inquiry to make final access determinations for the declared fixed line services, Discussion paper, April 2011, p.51

²⁸ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.106

- (a) Explicitly state number of buildings by band which are still in use for provision of fixed line services. Buildings in an area that has been migrated to NBN cannot be included.
 - (b) Identify the MDF-racks which are made redundant during the migration process. The floor space associated with the decommissioned MDF racks cannot be allocated to fixed line services.
- 3.59 Optus agrees with the WIK-Consult approach. In the absence of Telstra supplying the required information, the disposal of building assets and the decommissioning of MDF equipment could be estimated by including NBN SIOs in the total SIO allocation factor.

CORE assets common allocations

- 3.60 This section discusses Optus' preferred approach to cost allocation for the CORE asset classes. The advice below assumes that costs are first allocated directly to regulated, non-regulated, NBN, and other service classes (as per the advice of WIK-Consult).
- 3.61 Optus reiterates that a flaw in the allocations proposed by Telstra and adopted in the Draft Decision is that costs are not first allocated to services on a direct basis. Rather, the model assumes costs are joint and indirectly allocated. Any price based on this approach would therefore be inconsistent with the fixed principles.

CO01 Switching Equipment - Local

- 3.62 Telstra uses two cost drivers to allocate local switching equipment; SIOs and MOU. To do this, Telstra splits local equipment into port and use; with port being allocated on SIO basis and use being allocated on MOU basis.
- 3.63 While this two pronged approach appears suitable, Optus is concerned that Telstra pays no regard to the growing importance of IP call volumes – this is particularly important for the transition to NBN. That is, the type of access network over which calls are placed should have no impact on core asset use.
- 3.64 This view is supported by the detailed asset class description provided in Telstra March 2015 documentation.²⁹ [CiC]
- 3.65 These appear to be assets related to IP voice capability. As such, the total volume of voice MOU must include all forms of voice calls – including calls to and from NBN end-users. Optus supports the use of:
- (a) SIOs as a basis to allocate port-related expenses, so long as total SIO includes NBN SIOs;
 - (b) MOU as a basis to allocated use-related expenses, so long as the volume of calls minutes includes calls originating and terminating over IP-call technology, including for NBN end-users.
- 3.66 Optus notes that the call minute demand in Telstra's forecast clearly does not include NBN-related call volumes as it assumes a significant fall in origination and termination minutes.
- 3.67 Optus also recognises the observations from WIK-Consult with regard to decommissioning legacy switching equipment. WIK-Consult state that are in full agreement with the ACCC that

²⁹ Telstra, 2015, Further explanation of FSLM relevant opex for FY2014, p.177

“assets which are either decommissioned or utilised to a lesser extent due to migration to NBN should be removed totally or an appropriate share of it from the regulated cost base.”³⁰

CO02 Switching Equipment - Trunk

- 3.68 Telstra proposes to allocate costs to the fixed line voice services on the basis of MoU, weighted by routing factors reflecting the relative intensity with which a given minute of traffic from each service makes use of the asset class.³¹
- 3.69 As discussed above in CO01, Optus is of the view that all forms of minutes of use should be included in demand – both PSTN (circuit switched) and IP based origination and termination traffic. The MOU demand forecasts put forward by Telstra appear to either discard the migration to and growth of IP traffic, or erroneously assumes end-users will no longer use fixed line to make phone calls.

CO04 Inter exchange cables

- 3.70 Telstra uses the NDSR Report to allocate the number of fibre kilometres to services. Telstra indicates that the report allocates fibre lengths to services on the basis of the equipment to which the cable is connected. Costs are then allocated to services on the basis of SIOs – for example, links allocated to DSL is allocated across retail and wholesale ADSL on the basis of end-user SIOs.
- 3.71 Optus is concerned by this approach. First, it does not represent the driver of fibre investment – capacity, i.e. data throughput. Second, it assumes that the uses of cable links are fixed and cannot be changed.
- 3.72 The assets included in CO04 relate only to fibre cables. Fibre cables can be used for all communications service; regulated and non-regulated fixed services; transmission; mobile; NBN. The active equipment at the end of the fibre cables determine the type of traffic moved over the link – and in modern telecommunications network the trend is towards common IP architecture. Where the use of links, are allocated on a virtual basis and can be shifted when required. Telstra acknowledge this; [CiC] This implies that as traffic switches from legacy services to next generation services (including NBN), the transmission links will be redesigned and reallocated. However, the proposed allocation key does not do this. They hold the allocation relatively stable. Moreover, because fibre links are shared assets, multiple services can be sent over the same fibre cable. Should the transition to NBN result in stranded assets, as recognised by WIK-Consult, the payments received by Telstra provide compensation for this.
- 3.73 Optus recommends that costs associated with transmission cables be allocated on a per Mbps basis (where total Mbps reflects total transmission capacity, including fixed, transmission, mobile traffic). This is consistent with cost causation principles; consistent with the approach adopted in 2011 FAD; and consistent with the advice of WIK-Consult.
- 3.74 In addition, the level of Mbps demand should also include the level of NBN-related Telstra wholesale and retail data usage – as more than likely this traffic will be traversing Telstra transmission links.

³⁰ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.117

³¹ Telstra, 2014, Telstra Cost Allocation Framework – Confidential – July, p.34

CO05 Transmission Equipment

- 3.75 Telstra undertakes a multi-stage process, similar for CO04, to allocate transmission equipment across its various services. The allocation is as follows:
- (a) Identifies the percentage of SDH, PDH and other transmission equipment. Percentage reflects number of units.
 - (b) Normalise the different sized equipment links to a 2Mbps equivalent basis.
 - (c) Allocate the percentage of 2Mbps equivalent links to ADSL, non-ADSL, mobile and PSTN on the basis of use in November 2013.
 - (d) The allocation per service class is then allocated on basis of SIOs for ADSL services and MOUs for voice services.
- 3.76 Such a process is unnecessarily complicated, and includes many unnecessary assumptions which decreases transparency and increases the risk that Telstra is manipulating outcomes to favour its commercial interests.
- 3.77 [CiC]
- 3.78 There clearly is no connection between the driver of demand for transmission and the allocation of transmission equipment.
- 3.79 [CiC].

Figure 4

[CiC]

Source:

- 3.80 [CiC]
- 3.81 Optus suggests there is no need to undertake such a complicated allocation process, which necessitates numerous assumptions that appear to favour Telstra's interests.
- 3.82 Optus recommends that costs associated with transmission cables be allocated on a per Mbps basis (including NBN traffic). This is consistent with cost causation principles; consistent with the approach adopted in 2011 FAD; and consistent with the advice of WIK-Consult.
- 3.83 There are several advantages to this approach:
- (a) It is simpler and thus needs fewer opaque network assumptions;
 - (b) Better reflects the cost drivers;
 - (c) Reflects the fact that network allocation can be changed (i.e. transmission links can be reallocated from voice to data to reflect demand);
 - (d) Inclusion of NBN demand reflects the fact that Telstra transmission links will also be used to transport Telstra's retail and wholesale NBN traffic. The transferability of ADSL and NBN traffic can be seen in Telstra Wholesale's Broadband Aggregation Service which combines NBN and ADSL backhaul capacity for access seekers.

- 3.84 In summary, this approach better reflects the use of Telstra’s transmission equipment and the drivers of its transmission costs.

CO06 Core Radio Bearer Equipment

- 3.85 Core Radio Bearer Equipment contains assets used to support the SDH and PDH transmission network in regional and remote areas. These assets are used in place of fibre optic cables. These costs are allocated using a similar process to CO05. The comments above are relevant to this asset class.
- 3.86 The key flaw in the Telstra allocation is the assumption that the purposes for which the links are used will remain relatively stable notwithstanding significant fall in demand over the relevant time period. Optus recommends the same allocation be adopted as for CO05. Over the period of the FAD, Telstra will be able to shift traffic and alter its transmission network to reflect changes in the level of demand for services. More importantly, and efficient firm facing competition would do this.

CO07-09 Other Equipment, Network Land and Network Buildings/Support

- 3.87 These network asset classes represent the fixed line network exchange buildings (and associated land) and exchange building equipment – including power and air-conditioning equipment, equipment racks and cable infrastructure, and other supporting infrastructure – that are used by all fixed line services as well as many other services. These assets are used by Telstra to supply retail and wholesale services (fixed and mobile), and used by access seekers through the TEBA service for ULLS, LSS, WADSL, transmission) and for NBN Co assets.
- 3.88 Telstra distinguishes between Telstra use of exchange space and third party use (TEBA and NBN Co).³²
- 3.89 First, Telstra assumes its own use of racks. **[CiC]**
- 3.90 TEBA rack use is calculated as follows
- (a) Telstra forecasts the number of TEBA racks required over the forecast period excluding impact of the NBN. Telstra assumes total TEBA racks of **[CiC]**
 - (b) Telstra assume that the impact of NBN is that access seekers will require **[CiC]** TEBA racks after roll-out is completed. This is based on the assumption **[CiC]**
 - (c) TEBA racks are assumed to trend to the post-NBN TEBA total based on the assumed brownfields rollout of NBN.
- 3.91 The number of NBN racks is calculated per year as follows:
- (a) Telstra assume a total NBN rack count of **[CiC]**
 - (b) NBN racks are allocated across ULLS Bands on the basis of the FY14 allocation.
- 3.92 The ACCC’s expert advice from WIK-Consult made the following observations on this static approach:³³

³² Telstra, 2015, FLSM FY2015 to FY2019 v1.2, sheet “Demand Forecasts”, Exchange Spaces Rack Demand

³³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, pp.105-7

- (a) The forecast results are highly implausible to us. Not only third parties but also Telstra will need less building/rack capacity due to its migration of customers/services to the NBN. WIK-Consult does not subscribe to Telstra's forecast assumption of its own building space use. **[CiC]**
- (b) The allocation of excess capacity to fixed line services is not appropriate. Telstra has the option to dispose of the assets, or use it for non-telecommunications purposes. The transition to NBN is the causal factor in the excess capacity, and as such should be allocated to NBN and not the other fixed line services.³⁴
- (c) Allocation of building-related costs should be attributed on basis of floor space rather than racks. Racks used by NBN Co and in TEBA space are likely located in separate colocation chambers than Telstra's own equipment. Consequently, floor space attributable to Telstra racks should be less than for NBN and TEBA racks;
- (d) Telstra's usage of racks should be split between regulated FLS, non-regulated FLS, and other services (mobile and transmission). Optus notes that Telstra is able to identify the services to which its TEBA racks are used. It is reasonable to expect Telstra to do the same; and
- (e) The model should explicitly state the number of buildings per Band that are still in use for FLS over the lifetime of the model. A building in which all DSLAMs and MDFs are redundant due to migration to NBN should not be included in the FLSM. Optus notes that decreasing the number of racks as a result of fewer PSTN SIOs would have a similar effect – i.e. as described above by keeping the ratio of SIOs per rack consistent over time.

3.93 Optus agrees with observations from WIK-Consult. It is not immediately clear that Telstra's focus on racks, rather than space used, accurately reflects the manner in which NBN access seekers will use exchange space over time. It also fails to take into account the potential for Telstra to decommission exchanges, or to use exchanges solely for the purposes of non-regulated services such as mobile, business services, or transmission.

3.94 Optus makes the following observations on its use of TEBA:

- (a) Optus' use of TEBA relates to all declared services, including services not impacted by NBN. Specifically, Optus uses TEBA to connect to wholesale transmission and MLL. The use of these services is not impacted by rollout of NBN.
- (b) **[OPTUS CiC]**

3.95 In conclusion, there would appear to be several flaws in the approach to allocating building space in Telstra's March 2015 FLSM. These include:

- (a) Focus on rack usage rather than allocation of space;
- (b) Assumes all building area associated with racks are of the same dimension;
- (c) Fails to take into account lower demand from Telstra as a result of transition to NBN Co, yet assumes a significantly drop in access seeker demand due to NBN;
- (d) Assumes all access seekers racks relate to ULL services, whereas access seekers require TEBA for other regulated services.

³⁴ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March

- 3.96 Further, rather than relying on indirect allocation, Telstra should identify the number of racks actually used per service. It is not reasonable for Telstra not to provide this information. As noted above, Telstra provides this information for TEBA, therefore it should similarly have the information for its own usage.

CO12 Data Equipment

- 3.97 This asset category includes costs for assets associated with the provision of internet services. That is, DSLAMs, IGRs, BRAS and various IP Data routers. The FLSM allocates these costs exclusively to Retail DSL, Wholesale DSL and other DSL. Detailed comments on the approach taken to allocated costs to Wholesale ADSL services are in section 4 and section 7. In summary:
- (a) Allocation of Data Equipment across the DSL services does not appear to adequately take into account NBN demand for internet usage. It is observed that almost all assets in this category (DSLAMs not included) will be utilised to provide internet connectivity to NBN end-users. Telstra will provide both retail and wholesale access to NBN end-users. Indeed, Telstra Wholesale already does this through its Broadband Aggregation service. For more detail see paragraph 4.22.
 - (b) Allocation of costs across the DSL service types are done on the basis of SIOs. This is not the most accurate cost driver for all assets included in this asset category. For example, while DSLAMs are dimensioned primarily on the number of connected SIOs, all other assets (transmission, routers, IGRs, BRAS) are dimensioned on the traffic throughput. Allocating costs on the basis of Mbps throughput better reflects the cost causal relationship.
 - (c) A more accurate cost allocation method would be to directly allocate customer port assets (such as DSLAMs), and backhaul assets using direct causal relationship. Using information provided by Telstra and available to the ACCC, it is possible and quite simple to break down data assets (CO10) into port data assets (CO10a) and backhaul data assets (CO10b). The costs can then be further allocated on a per SIO basis for port assets, and a per Mbps basis for backhaul and aggregation assets. This would better reflect the cost causal relationship.

Section 4. DEMAND FORECAST

- 4.1 In this section, Optus outlines its views and proposed approaches to the demand forecasts put in the Draft Decision and Telstra's latest FLSM (March 2015). Optus provides comments on the forecasts relating to:
- (a) Demand for CAN services (ULLS); and
 - (b) Demand for CORE services (voice and data traffic).

CAN demand

- 4.2 This subsection provides comments on:
- (a) Overall trend growth for ULLS; and
 - (b) Distribution of ULLS SIOs across the four bands.

Growth of ULLS is not linear

- 4.3 [CiC]
4.4 [CiC]
4.5 [CiC]

Figure 5

[CiC]

Source:

- 4.6 Optus recommends that the forecast growth in ULLS take into account the decline in the net additions observed in the actual historical CAN Snapshot RKR data. Using a decreasing rate of increase is more consistent with historical trends than linear growth rate.

ULLS SIOs across the four bands

- 4.7 While the Draft Decision observes that the overall forecast of ULLS SIOs appear reasonable, no comment is made in relation to the allocation of SIOs across the four bands. The different allocation to the ULLS bands does not impact the cost estimate in the draft FLSM and Telstra's FLSM v1.2, as there is no weighting of the SIOs as used the previous FLSM. Optus notes that WIK-Consult has recommended that SIOs be weighted on copper line length, and this is consistent with Optus' preferred approach.
- 4.8 When band weighting is adopted then the allocation of ULLS SIOs across the four bands does impact on the cost of providing ULLS. Optus has compared Telstra's forecasted (pre-NBN) allocation of ULLS SIOs across the four bands to the historically number of ULLS as reported in the quarterly Telstra CAN Snapshot RKR. [CiC].
- 4.9 [CiC].

Source:

- 4.10 Optus recommends that:
- (a) ACCC request additional information seeking reasons why the future trend of ULLS SIOs (pre-NBN) should be biased towards Bands 3 and 4.
 - (b) Absent a credible and convincing reason, the ACCC should reject Telstra’s forecast and assume that the allocation of ULLS SIOs across the four bands is consistent with the historic trend (which shows a declining rate of growth).

CORE services

- 4.11 Core services should be impacted to a lesser degree by the roll out of the NBN. In particular, given that NBN is an access only network, the same voice switched and internet routers will be used for legacy and next generation access lines. All call capabilities and internet content are the responsibility of the RSPs. It is fundamentally incorrect to assume Telstra’s fixed core network will face a decline in traffic due to migration to NBN access lines.

Voice services

- 4.12 The FLSM includes both pre-NBN and post-NBN forecasts for:
- (a) Retail PSTN calls (local calls; national STD; international and fixed to mobile (F2M));
 - (b) Fixed origination and termination access service (FOTAS) calls; and
 - (c) Local Call Service.
- 4.13 The forecast usage utilises a consistent per connection usage assumption.³⁵ These per connection usage assumptions are applied to the sum of Telstra Retail and WLR SIOs.
- 4.14 While the forecasts (pre and post NBN) assume the same usage per SIO, a major flaw in the forecast is that it assumes only Telstra PSTN customers will make phone calls. The model implicitly assumes that Telstra retail NBN customer will not make or receive phone calls. In other words, the model pays no regard to the cost of termination or origination over NBN access lines or HFC networks.
- 4.15 This has very important implications for regulated voice services that apply regardless of the access technology. The declared service description (FOTAS) was amended to specifically be technology neutral. The Declaration Decision stated:
- The ACCC considers that regulated voice interconnection services are, and should be, available across all networks. The ACCC considers that these amendments will remove ambiguity and reflect its view that the scope of the declared service is not confined to interconnection of PSTN/TDM core networks but also includes interconnection with IP-based core voice networks.*³⁶
- 4.16 The service relates to interconnection of core networks – and thus includes all the relevant SIOs attached to that core, irrespective of the specific access technology used. This is the

³⁵ Telstra, FLSM FY2015 to FY2019 v1.2, “Demand Forecasts”, Demand Assumptions

³⁶ ACCC, 2014, Public inquiry into the fixed lines services declarations, Final Report, April, p.57

approach of Optus, which applies the same FOTAS call charge to all calls terminated on Telstra's fixed network irrespective of whether the ultimate end-user is a Telstra retail NBN, HFC or PSTN end-user.

- 4.17 It is not clear to Optus how the estimated PSTN-only FOTAS cost applies to all of FOTAS calls originating and terminating on NBN access lines, or HFC networks. **[CiC]**
- 4.18 It would appear that the asset class CO01 Local Switching and CO02 Trunk Switching contain assets relating to both traditional PSTN voice and IP voice calls. This makes sense, as most modern fixed networks utilise IP call protocols to efficiently transport voice calls through the core network. **[OPTUS CiC]** It is also consistent with the service description of FOTAS, which applies irrespective of the core technology used to transport calls.
- 4.19 Clearly these FLSM asset classes include assets that are used to provide next generation calling services to customers on NBN access lines.³⁷ It is not clear, therefore, why the FLSM demand forecast only uses PSTN SIOs as the relevant base. **[CiC]**

Figure 7

[CiC]

Source:

- 4.20 Optus recommends that the total fixed calling base, for core services, should include both Telstra retail and wholesale PSTN and NBN SIOs. Absent this, it should be made clear that the regulated FOTAS rate does not apply to calls made to and from NBN subscribers (that rate should be set close to zero).
- 4.21 This view is backed up by Optus call data to Telstra's fixed network. Optus data represents the calls that are terminated on Telstra fixed numbers – it applies to end-users on both copper and NBN and HFC access lines. **[CiC]**

Data services

- 4.22 Data throughput (Mbps) should not be adjusted for NBN roll out. Assets included in the data asset class for example, will still be used to supply broadband over the NBN access network. For instance, Telstra has also been acknowledged that:

Telstra was seeing a consumption boom across all of its core network and customer segments... that it was changing the way the company was building and managing its networks.

...Telstra will be making investments in backhaul capacity for both ADSL and cable as well as improving the efficiency of video services through CDNs, caching and improved compression techniques³⁸

- 4.23 The FLSM includes services for:
- (a) Telstra retail broadband; and
 - (b) Wholesale ADSL.

³⁷ Telstra has offered voice-only services over NBN since 2013. See <http://www.itnews.com.au/News/352000,telstra-unveils-uni-v-nbn-voice-service.aspx>. Also see <https://www.telstra.com.au/help/download/document/personal-critical-information-summary-t-voice-plus-nbn.pdf>

³⁸ Communications Day, 2015, "Telstra says no plans to charge Netflix for delivery", 22 April, p.4

4.24 There is no separate peak usage forecast for NBN end-users, either wholesale or retail.

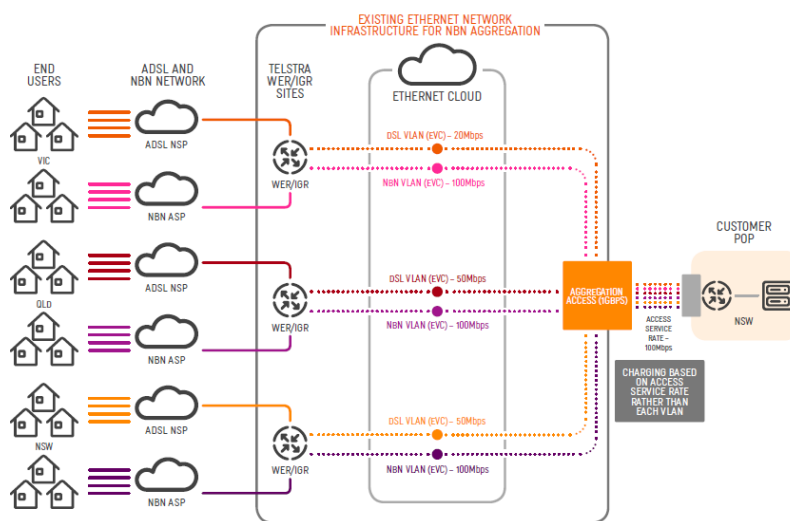
NBN Wholesale peak usage (Mbps) should be an identified service

4.25 The forecast of WADL SIOs does not include wholesale backhaul customers for Telstra’s NBN wholesale product.³⁹ The impact of NBN migration increase over time. It is appropriate to include NBN migration impacts in respect of WADSL end-users (i.e. end-user lines that have a WADSL service over the top), as this service will cease once NBN migration occurs.

4.26 However, this is not the same for the WADSL backhaul product (VLAN). Many of the backhaul assets (IGRs/BRAS and transmission) used to backhaul WADSL will also be used to backhaul NBN originated data traffic. For example, Optus notes that Data Equipment asset class includes assets such as [CIC] Further it is clear that the same transmission equipment will be used to transport Ethernet traffic from IGRs to wholesale customers irrespective of whether the end-user is using DSL or NBN.

4.27 Optus further notes that Telstra Wholesale offers wholesale access to NBN on a combined basis with DSL VLAN backhaul using largely the same network assets. Telstra Wholesale’s Broadband Aggregation service offers wholesale customers seamless connectivity and traffic management of all broadband traffic irrespective of access technology (WADSL or NBN). Telstra’s network diagram for this product (figure 8) shows that assets including the IGR/BRAs are used to support both WADSL and NBN access.

Figure 8 Broadband Aggregation



Source: Telstra Wholesale, Broadband Aggregation Factsheet

4.28 It would appear that assets on the customer side of the IGR/BRAS would be specific for NBN or DSL, but all assets, including Ethernet transmission on the network side are common. As common assets, the costs of the assets should be allocated across all users of the common assets. Telstra Wholesale states that:

For the Broadband Aggregation solution, the BRASs in a given State are networked to a pair of IGRs. Each Customer may connect to a pair of IGRs for each State in which they have a Broadband Aggregation solution.⁴⁰

³⁹ Telstra, 2014, Final access determinations (FADS) inquiry – Confidential response to information request under the BBM RKR, February, p.48

⁴⁰ Telstra Wholesale, DSL Layer 2 Internet Grade, Issue 7, October 2014, p.67

- 4.29 The projected peak usage of NBN wholesale end-users should be identified as a standalone product as this service will use many of the same shared assets as the WADSL backhaul service.
- 4.30 In addition, it would also appear that the assets used to backhaul wholesale broadband traffic would also be the same assets used to provide retail backhaul traffic. Optus is not aware of Telstra having separate IGR/BRAS for retail and wholesale traffic. Further, it is not clear that Telstra sends retail and wholesale traffic over dedicated and different physical fibre links.
- 4.31 Therefore, as these products all use the same shared assets, the demand for both ADSL (wholesale and retail) and NBN (wholesale and retail) should be separately identified, and the costs of shared assets allocated across the services based on the combined forecasted peak throughput.

Wholesale peak usage should grow at same rate as retail

- 4.32 The effect of the NBN can be taken away by focusing on the peak usage per SIO (that is, total Mbps divided by SIOs). The Draft Decision shows that Telstra’s retail DSL and wholesale DSL forecast grow at significantly different rates.

Figure 9

[CiC]

Source: Telstra, BB RKR Data Tables, Forecast Demand

- 4.33 At the start of the forecast period, [CiC] This small difference makes sense in the 2011-13 time period given Telstra’s dominance of the burgeoning IPTV market, and its aggressive use on un-metering Foxtel content. However, it is not clear (and Optus is not aware of any justification put forward) of why the per SIO usage should grow at such divergent rates over the forecast period. [CiC] There would appear to be no reasonable explanation for this difference; especially since popular IPTV providers such as Netflix are offered unmetered on numerous access seeker networks.
- 4.34 Optus notes the detailed analysis undertaken when preparing the forecast for retail ADSL usage, including: [CiC]
- 4.35 It does not appear reasonable that these factors should differ between retail and wholesale users. There is a market wide trend for high traffic demand growth, and this is supported by the latest ABS and Cisco forecasts. Further, the impact of recent IPTV launches demonstrates the drastic affect that service can have on demand. The factors driving demand for internet usage affects Telstra retail and wholesale end-users in the same manner.
- 4.36 The only reason why WADSL SIO usage would not grow at the same pace as Telstra’s retail usage is due to the pricing of wholesale capacity. For instance, while retail demand forecast represents actual end-user peak demand for internet traffic, the WADSL demand represents the amount of backhaul capacity wholesale providers are willing to purchase for their end-users. That is, it does not reflect end-user demand; rather it reflects wholesale RSP demand. The driver of wholesale RSP demand is the price. [OPTUS CiC] It is difficult, therefore, to predict the future demand for VLANs absent knowing the price. But all other things being equal, if VLAN pricing was cost reflective and did not restrict demand, then the growth of end-user demand served via wholesale RSPs should reflect the demand of Telstra retail end-users.

Section 5. EXPENDITURE FORECASTS – CAPEX

Key points

- All capital expenditure forecasts should reflect prudent and efficient costs. The onus of proof should be on the access provider. The ACCC has acknowledged concerns Telstra has presented insufficient evidence in support of the relevance, efficiency and prudence of its forecast capex. The forecasts should therefore be rejected.
- It would be inconsistent of the ACCC to criticise Telstra’s assumptions, and yet accept Telstra’s base year values subject to minor adjustments.
- In the absence of justifiable evidence, the ACCC should have the flexibility to set capex forecasts for the next regulatory period by taking into account historic trends, as observed over the last regulatory period albeit adjusted for NBN impacts.
- At a minimum, the ACCC should allocate capex expenditure directly to regulated FLS; non-regulated FLS; NBN; and others prior to using indirect allocation factors.
- The ACCC should set out its preferred independent capex forecast, consistent with the advice of WIK-Consult and the approach of the AER, prior to making any final decision.

5.1 The Draft Decision states that under a BBM approach, forecast capital expenditure should reflect prudent and efficient costs. However the ACCC is concerned that while Telstra has provided several submissions which include material adjustments to its forecast capital expenditures, it considers that Telstra has not provided sufficient evidence or detail in relation to four key issues:

- (a) Methodology for forecasting capex;
- (b) NBN-specific capex;
- (c) Demand-related expenditure; and
- (d) Capital projects not relevant to fixed line services.⁴¹

5.2 The 2011 FLSM approach to forecasting expenditure in the previous regulatory period was based on historic capex. In general, the ACCC accepted Telstra’s capex forecasts during the last FAD inquiry, confirming *“its view that forecasts provided by Telstra are likely to be the most accurate measure of capital expenditures available.”*⁴²

5.3 A new approach has been considered in this FAD Inquiry. In general, Telstra has employed a bottom up or “project level” bottom up approach in preparing capex forecasts for the next regulatory period. As such, *“Telstra’s new method is to identify the projects related to the FLSM asset classes and then, based on the project program, to identify spend in future years for these projects.”*⁴³ Since the submission of its original forecasts (BBMRKR response) in

⁴¹ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.59

⁴² ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.55

⁴³ Telstra, 2014, Final access determinations inquiry – confidential response to information request under the BBM RKR, Comparison Statement, REDACTED, February, p.20

February 2014, there have been several revised iterations of forecasts provided to the ACCC. These include revisions and response to information requests to the ACCC dated: 3 October 2014; 7 October 2014; 15 December 2014; 19 January 2015; 6 February 2015.⁴⁴ Telstra has also provided a further revision dated 12 March 2015 since the release of the draft FAD.

5.4 Notably, it has been identified that the impact of the NBN rollout on the fixed line network is a key driver of the material changes to Telstra's forecast capex. However, the ACCC has also expressed concerns about the disconnect in the approach for taking into account the impact of NBN rollout with respect to capex forecasts, relative to demand forecasts. Optus similarly canvasses this concern in its discussion on demand forecasts.

5.5 Despite these concerns, the ACCC FLSM adopts the following capex forecasts.

Figure 10

[CiC]

Source: ACCC FLSM v2.0 (March 2015)

5.6 The remainder of this section sets out Optus' views on:

- (a) The prudence and efficiency of costs included in Telstra's forecasts;
- (b) Assessing Telstra's forecasts by capex driver;
- (c) The efficiency and prudence of Propex; and
- (d) Next steps for the ACCC.

Prudence and efficiency of costs included in Telstra's forecasts

5.7 The Fixed Principles (clause 6.10) require the ACCC to assess the reasonableness of Telstra's capex forecasts with respect to five specific criteria. On this basis, Telstra submitted that its forecasts "*reflect the costs of a prudent service provider acting efficiently.*"⁴⁵

5.8 Stakeholders have highlighted numerous concerns about the prudence and efficiency of the rebased capex forecasts including:

- (a) The capex forecast methodology (which includes concerns with the NBN rollout impact on capex forecasts, and estimation of capex forecasts using IMC codes);
- (b) The inclusion and allocation of NBN-related capex.

5.9 The Draft Decision also highlights these concerns and concludes that, as it stands, Telstra's proposed total forecast capex does not reflect efficient and prudent costs. As such, its decision is to "*downward adjust the capital expenditure forecasts to reflect the efficient and prudent costs of fixed line services.*"⁴⁶ This adjustment however, has only taken into account the removal of Telstra's NBN-specific capex.

⁴⁴ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, pp.7-8

⁴⁵ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.66

⁴⁶ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.67

- 5.10 Consequently, the ACCC has based its expenditure forecasts on Telstra’s forecasts to some extent. This is also despite the fact that Telstra’s forecast expenditures have yet to be deemed prudent and efficiently incurred.
- 5.11 While Optus supports the Draft Decision to remove Telstra’s NBN-related capex, the ACCC should not accept Telstra’s forecasts for the other capex drivers in the current form. Optus’ concerns regarding the establishment of the Baseline and Forecasts for each of the capex drivers are further discussed below.

Methodology for forecasting capex

- 5.12 Telstra’s forecast capex for fixed line services comprise a number of expenditure categories: Demand-driven and AROS capex; Discretionary capex; and NBN-related capex.
- 5.13 While Telstra has made considerable downward adjustment of its 2013-14 base year capital expenditure, compared to the 2011/2013 FADs, this is largely a result of the change in Telstra’s forecasting approach, which has been based on the following [CiC]
- 5.14 Further, Telstra also explains that *“the decline in expenditure requirements is not expected to be as rapid as the decline in demand. This is because many expenditure requirements relate to activities which are unrelated to service demand.”*⁴⁷
- 5.15 In part, this can be observed through a comparison of the overall Baseline (pre -NBN) and forecast values to be included in the FLSM. The following table summarises the actual and forecast capex by driver (FY2014-FY2019).

Figure 11

[CiC]

Source:

- 5.16 This shows that even at a high level, there is a clear lack of transparency on the functional relationship between the cost driver volume and the level of capital expenditure. For example, the ACCC has highlighted concerns with [CiC]
- 5.17 The ACCC also considered it would be appropriate to forecast capex on the basis of cost driver volumes. However following further information requests, Telstra has stated that [CiC] Therefore even though the costs can largely be attributed to some form of activity type or business unit, the absence of any cost-volume relationship means forecasts cannot be verified.
- 5.18 [CiC]
- 5.19 As such, this raises two important areas for assessment: the prudence of historic values and evidence in support for the choice of trend analysis to be adopted for each driver.

Establishing the Baseline information

- 5.20 Capital expenditure projects are grouped in Telstra’s databased under program-specific codes known and IMC codes. Within each IMC code, capex is further broken down into individual asset codes which can be mapped to the asset categories used in the FLSM. As noted by Telstra: [CiC]

⁴⁷ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.49

- 5.21 While Telstra has assessed the relevant capex for fixed line services at the IMC-level, its justification has only been provided for a subset of the total IMC codes available. Further, only the aggregate capex is presented (as hard-coded values) in the Forecast Model. Optus makes specific comments on these concerns below.
- 5.22 First and foremost, Telstra should use the IMC-level information it has to allocate costs directly to the four categories of assets: regulated FLS; non-regulated FLS; NBN; and other. Telstra clearly has the data to do this. The ACCC should not permit Telstra to avoid this step. Optus again emphasises that the fixed principles require that costs are allocated directly to service where information is available to do so.

Top 10 IMC capital programs

- 5.23 Telstra has provided further information on the Top 10 IMCs based on the expenditure attributable to the FLSM asset classes for FY2015. [CiC]
- 5.24 This information has been used in support for the Demand-Driven and NBN-specific capex totals for FY2015. [CiC] A comparison of the Demand/Baseline and NBN capex in the Forecast Model and Top 10 IMCs is set out in the table below.

Figure 12

[CiC]

Source:

- 5.25 Optus notes that in attempting to reconcile this data, several key observations can be made: [CiC]
- 5.26 The importance of assessing the prudence of this Baseline information is accentuated given the overall mechanics of the Forecast Model and use of trend analysis to forecast capex in future years.
- 5.27 WIK-Consult has also provided advice on the inclusion of certain IMC projects which is largely in support of the ACCC’s view that insufficient justification has been provided. Therefore, the ACCC’s position that it “cannot form a view that Telstra’s capital expenditure forecasts represent prudent and efficient expenditure at this stage”⁴⁸ must be held.

Telstra’s trend analysis approach

- 5.28 The trend analysis approach varies amongst the different drivers and demonstrates most of the ACCC’s expressed concerns. A more detailed discussion will also be set out in the ‘capex drivers’ sections below. [CiC Begins]
- 5.29 [CiC]
- 5.30 [CiC]
- 5.31 [CiC]

⁴⁸ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.77

- 5.32 WIK-Consult makes similar observations and recommends that: “Forecast capex should be based on underlying asset types and asset quantities rather than on trend analysis.”⁴⁹ This is based on the following assessment: [CiC]
- 5.33 Despite these obvious concerns, “For the purposes of this draft decision, the ACCC’s decision is to accept Telstra’s capital expenditure forecast methodology.”⁵⁰ However, absent any confidence in this assessment of Telstra’s forecast methodology, the ACCC cannot accept Telstra’s forecasts in its current form. Telstra has provided little, if any, justification that its expenditure is efficient and prudent, and has failed to provide sufficient evidence to identify the appropriate cost causal relationships. Absent this, the ACCC cannot be reasonably satisfied that the forecast methodology produces efficient and prudent outcomes.

Telstra’s forecasts by capex driver

- 5.34 As highlighted above, Telstra’s forecast capex for fixed line services comprise of a number of expenditure categories.⁵¹ Each of these is separately discussed as follows.

Forecasting demand-driven capex

- 5.35 Demand-driven capex is the largest driver of capex over the forecast period, [CiC].
- 5.36 A breakdown of Telstra’s forecasts into CAN and Core assets (as well as pre and post-NBN) further highlights the concerns raised above – namely that the trends observed differ between the overall CAN and Core asset classes.

Figure 13

[CiC]

Source: Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015)

- 5.37 However, as shown in the table above, there is a very clear divergence in the trends observed for both the CAN and Core demand-driven capex. For example, [CiC]
- 5.38 The disaggregation of the demand-driven capex by asset classes also raises additional concerns. In addition to the trend analysis approach applied to demand-driven capex, the ACCC has highlighted concerns on the lack of evidence to support the linkage between demand-driven capex forecasts and the allocation to the declared fixed line services. These are discussed below.

Reasonableness of the trend analysis approach

- 5.39 The trend analysis approach applied to forecasting demand-driven capex is based on [CiC]
- 5.40 [CiC]
- 5.41 [CiC]
- 5.42 [CiC]

⁴⁹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.63

⁵⁰ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.69

⁵¹ For the avoidance of doubt, Optus’ comments generally refer to FY2014 as the base year

Figure 14

[CiC]

Source:

5.43 [CiC]

5.44 [CiC]

Figure 15

[CiC]

Source: Optus analysis; Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015)

5.45 [CiC]

5.46 WIK-Consult similarly acknowledged this issue, noting that:

Due to the mechanics of the Forecast Model, a simple rearrangement of the historic CAPEX-figures in the time period 2011/12 – 2014/15 on the time axis (while leaving the total amount of CAPEX spent in this time period constant...) would have changed the CAPEX-forecast for 2015/16 – 2018/19 dramatically.⁵² [emphasis added]

5.47 Optus therefore submits that it is unclear on what basis the current trend analysis approach is preferred over other alternatives for each asset class. Given the significant variations that can result from the choice of trend applied, as well as the variations of trends applied to different asset classes, Optus recommends that the reasonableness of using a linear extrapolation for forecasting capex should be reviewed. The onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected. On the evidence before it, the ACCC cannot reasonably assess Telstra's proposal as efficient and prudent. The ACCC is therefore compelled to reject Telstra's forecasts

Linkage between capex and its allocation to services

5.48 The Draft Decision raises concerns over the capex forecasts across a number of Core asset classes, and in particular the lack of evidence to support the linkage between the demand-related capex forecasts and the allocation of that forecast to the declared fixed line services. The main example is in relation to CO05: Transmission Equipment.

5.49 The Forecast Model shows that transmission equipment contributes [CiC] which highlights that the CO05 asset class and its cost drivers should warrant further review.

5.50 In particular, the ACCC has considered that the current trend forecasts for transmission equipment [CiC]

5.51 WIK-Consult's advice to the ACCC also concluded:

*There is prima facie evidence that the **absolute level** of demand-driven CAPEX cannot be explained on the grounds of demand for regulated FLS...*

⁵² WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.109

According to the FLSM, FLS access seekers shall be charged for demand-driven CAPEX on transmission equipment. However, demand for regulated FLS is highly unlikely to be the reason for investment in additional transmission equipment.⁵³

5.52 [CiC]

Figure 16

[CiC]

Source:

5.53 Despite the concerns outlined above, the ACCC has effectively accepted Telstra's forecasts for the Draft Decision. Optus recommends that this position should be revised and the linkage between cost and cost driver should be provided. This relationship should also be justifiable when viewed in the context of cost allocation. The onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected.

Forecasting AROS-related capex

5.54 AROS-related capex refers to capex incurred for asset replacement and operational support activities. In general, the trend adjustment applied to AROS-related capex is similar to those for demand-driven capex, with the exception of an imposition of constraint factor to limit the annual growth of AROS capex. Optus notes that the previous observations in relation to the use of trend adjustments similarly apply to AROS capex.

5.55 A breakdown of Telstra's forecasts into CAN and Core assets (as well as pre and post-NBN) is set out in the table below.

Figure 17

[CiC]

Source:

5.56 Telstra has not identified any cost causal relationships in any of its submissions to this Inquiry. WIK-Consult also observes that: *"Asset replacement follows a different economic logic than (new) investment in operational support. The drivers for both types of investment are different. Integrating both types of CAPEX in one category makes it impossible to assess the reasonableness of such CAPEX. Therefore, Telstra should provide separate figures for these expenses."*⁵⁴ As such, it is difficult to supply detailed comments on the prudence of AROS expenditure. However, since AROS relates to asset replacement and operational support there should be a clear link between the number of assets and the AROS capex. [CiC] Optus is not aware of any justification put by Telstra for such a large annual increase.

5.57 The onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected. At this stage, sufficient evidence has not been presented, and Telstra's proposal should be rejected.

⁵³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.110

⁵⁴ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, pp.37-38

Forecasting discretionary capex

- 5.58 Discretionary capex represents a small portion of total capex on the fixed line network. As such, Telstra has adopted a constant forecast for the Baseline for all years in the forecast period. The NBN trend factor is then applied to arrive at the forecast capex for inclusion in the FLSM. Notably, Telstra has acknowledged [CiC]
- 5.59 A breakdown of Telstra’s forecasts into CAN and Core assets (as well as pre and post-NBN) is set out in the table below.

Figure 18

[CiC]

Source:

- 5.60 Telstra has not identified any cost causal relationships in any of its submissions to this Inquiry. As such, it is difficult to supply detailed comments on the prudence of discretionary capex. However, the onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected. At this stage, sufficient evidence has not been presented, and Telstra’s proposal should be rejected

Forecasting NBN-related capex

- 5.61 NBN-related capex relates [CiC]
- 5.62 As noted above, NBN-related capex has been forecast using a completely separate approach to the other capex drivers and [CiC] This is set out in the figure below, however does not explain the [CiC]

Figure 19

[CiC]

Source:

- 5.63 First, and foremost, NBN-related capex should not be included in the FLSM:
- ... it would be inappropriate to recover from fixed line access seekers or other users of the fixed line network costs of network investments which would not be required in the absence of the NBN roll out. **If these investments are for the specific purpose of NBN rollout and would not be required in the absence of the NBN, these costs should be recovered from NBN Co and not from other users of the fixed line network.***⁵⁵
[emphasis added]
- 5.64 WIK-Consult made similar conclusions that: *“NBN-related CAPEX should be treated as incremental to the NBN. That CAPEX must not be allocated to the FLS. The same consequence should be taken for any PROPEX related to those CAPEX.”*⁵⁶
- 5.65 The ACCC also highlighted a number of concerns, to which it has also sought further information, including:⁵⁷ [CiC]

⁵⁵ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.71

⁵⁶ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.5

- 5.66 Optus notes that **[CiC]** Regardless, these cost and expenditures should be regarded as incremental to the NBN, and WIK-Consult’s recommendation that “*FLS access seekers must not be charged for any CAPEX that is associated with the lease or sale of resources to NBN Co*”⁵⁸ should still hold.
- 5.67 The ACCC is therefore correct in its draft decision to exclude NBN-specific capex from the FLSM, on the basis that this expenditure is incremental for the NBN roll out and should be recovered from the users of NBN Co (and not other users of the fixed line network).

The efficiency and prudence of Propex

- 5.68 As discussed in Section 6, where the ACCC has deemed Telstra’s propex forecasts to be prudent and efficient, this should be included within capex. Further work is required to establish that Telstra’s mark-up for Propex is efficient and prudent.
- 5.69 Optus notes that Propex expenditure data is available on an IMC-basis.⁵⁹ Allocation of IMC code expenditure to service should be done on a direct cost causal relationship. It is not clear that has been done. It is clear, for example, that IMC codes **[CiC]** are not related to regulated fixed line services and should be excluded.
- 5.70 The onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected. The current approach to Propex – a percentage mark-up – makes it difficult to comment on the forecast given the significant changes required in forecasted capex to meet the prudence requirements.
- 5.71 Optus welcomes further consultation on the efficient level of propex once the ACCC makes a decision on the level of efficient and prudent capex.

Next steps for the ACCC

- 5.72 Both the ACCC and WIK-Consult have identified numerous substantial problems with the capex forecasts put forward by Telstra. The onus must be on Telstra to establish that its proposal is efficient and prudent. If it cannot, then its approach must be rejected.
- 5.73 On the evidence before it, the ACCC cannot reasonably assess Telstra’s proposal as efficient and prudent. The ACCC should therefore feel compelled to reject Telstra’s forecasts.
- 5.74 The ACCC should not consider itself bound to accept Telstra’s forecasts in the absence of other preferred forecasts. First, it fails to recognise the significant information asymmetries present in this Inquiry. Second, it fails to recognise the incentives faced by Telstra to supply forecasts that favour itself and are detrimental to the LTIE and end-users. We note the comments by WIK-Consult on the incentives faced by Telstra.
- 5.75 The ACCC must not reward Telstra for failing to provide sufficient evidence that its forecasts are efficient and prudent. Allowing these forecasts in the FLSM is not consistent with the legislative criteria, the fixed principles, or the approach adopted in other industries that rely on RAB forecasts.

⁵⁷ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.72

⁵⁸ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.94

⁵⁹ See Telstra, Final Access Determinations (FADs) Inquiry – additional information in response to information request under the BBM RKR, February 2014, p.12

- 5.76 Optus refers to the observation in Frontier Economics' expert opinion to the use of independent forecasts by the AER. The AER creates its own forecasts of expenditure and compares this against the regulated firm's forecast. Where the regulated firm's forecast is above the AER's forecasts, the AER seeks an explanation. If the explanation is not satisfactory, the AER takes the view that the regulated firm's forecasts are not prudent and efficient. The AER will then substitute its own forecasts. This was the process undertaken in the latest draft decisions for NSW and ACT electricity distribution networks, and it should be the process undertaken by the ACCC in this Inquiry.

Section 6. EXPENDITURE FORECASTS – OPEX

Key points

- All operating expenditure forecasts should reflect prudent and efficient costs. The onus of proof on prudence should be on the access provider. The ACCC has indicated in clear terms that Telstra has presented insufficient evidence in support of the relevance, efficiency and prudence of its forecast opex. This needs to be addressed before prices are finalised.
- Only opex forecasts deemed to be prudent and efficient should be included in the FAD. In the absence of such evidence, the ACCC should set opex forecasts for the next regulatory period by taking into account historic trends, as observed over the last regulatory period, albeit adjusted for the clear decline in demand that will result from NBN migration.

- 6.1 Under the BBM approach, and required by the fixed principles, forecast operating expenditure must reflect prudent and efficient costs. However the ACCC is concerned that while Telstra has provided several submissions that include material adjustments to forecast operating expenditures it has not provided sufficient evidence that actual and forecast opex is prudent and efficient.⁶⁰
- 6.2 Forecasting operating expenditure in the previous regulatory period was based on historic opex. However, since the forecasts provided by Telstra were not disaggregated by asset class the 2011 FLSM allocated forecast opex to each asset class according to its share of the total undepreciated asset value in 2008-09.⁶¹
- 6.3 A new approach has been considered in this FAD Inquiry. In general, Telstra has employed a bottom up methodology for the preparation of its relevant actual and forecast operating expenditure. However since the submission of its original forecasts (BBMRKR response) in February 2014, there have been several revised iterations of forecasts provided to the ACCC. These include revisions and response to information requests to the ACCC dated: 3 October 2014; 7 October 2014; 15 December 2014; 19 January 2015; 6 February 2015.⁶² Telstra has also provided a further revision dated 12 March 2015 after the release of the Draft Decision.
- 6.4 While the numbers have been slightly 'refined' in each iteration, the general approach of providing forecast estimates of direct opex attributable to the relevant FLSM Asset Classes, as well as indirect opex applicable to the fixed line services, remains the same.
- 6.5 This approach is particularly problematic as the forecast data assessed in the Draft Decision has been superseded with 'newer' Telstra forecast data. The ACCC is therefore correct to highlight there remains a lack of transparency and difficulties in cost traceability for the assessment of whether Telstra's opex forecasts, as well as the base year actual opex are prudently and efficiently incurred.

⁶⁰ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.29

⁶¹ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.80

⁶² ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, pp.7-8

- 6.6 Despite these concerns, the ACCC FLSM adopts Telstra’s opex forecasts as set out in figure 20 below.⁶³ Optus strongly disagrees with this approach. The burden must fall upon the access provider to supply clear and traceable evidence as to the prudence and efficiency of its forecasts. Where there is any doubt as to the reliability of the evidence, the Draft Decision must reject the proposed forecast and adopt an alternative approach.

Figure 20

[CiC]

Source:

- 6.7 The remainder of this section sets out Optus’ views on assessing the prudence and efficiency of opex forecasts for inclusion in the FLSM. In addition, where the ACCC continues to adopt Telstra’s forecasts, we provide commentary on a number of adjustments that need to be addressed before they can be accepted in the FLSM.
- 6.8 This section:
- (a) Assesses the prudence and efficiency of Telstra’s forecasts;
 - (b) Identifies cost drivers and impact of changes in demand;
 - (c) Assessing the proposed cost and productivity indices;
 - (d) Assessing the estimation of indirect costs; and
 - (e) Outlines the further adjustments required to Telstra’s forecasts.

Prudence and efficiency of Telstra’s forecasts

- 6.9 The Fixed Principles (clause 6.9) requires the ACCC to assess the reasonableness of Telstra’s opex forecasts with respect to four specific criteria. On this basis, Telstra submitted that its forecasts were “clearly prudent and efficient.”⁶⁴ Telstra also considered compliance with relevant regulatory obligations, such as the USO, CSG and NRF requirements, “continue to be a major driver of fixed line network operating expenditure.”⁶⁵
- 6.10 Stakeholders have highlighted concerns with the approach taken to allocate expenditure forecasts to FLSM Asset Classes. In particular, there was general consensus on concerns related to the prudence and efficiency of rebased opex; the responsiveness of Telstra’s opex to changes in demand; and the general transparency and treatment of allocation of opex forecasts to FLSM Asset Classes.
- 6.11 The Draft Decision highlighted these concerns, including some specific examples, which will need to be addressed before the release of the Final Decision. The ACCC has also received

⁶³ In doing so, the ACCC has acknowledged that “For the purposes of this draft decision, the ACCC’s decision is not to make adjustments to Telstra’s forecast operating expenditure with the exception of adjustments to Telstra’s forecast operating expenditure arising from the ACCC’s draft decision on the forecast change to CPI, the removal of Telstra’s proposed adjustment to its Business Unit Support mark-up and the removal of NBN-related propex.” See: ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.30

⁶⁴ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.60

⁶⁵ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.61

advice from WIK-Consult on their assessment of whether or not the forecast expenditures provided by Telstra are both prudent and efficient.⁶⁶

General lack of transparency and allocation of costs to FLSM Asset Classes

6.12 Telstra's forecast opex for fixed line services comprise of a number of expenditure categories:

- (a) Unattributable costs (corporate overheads allocated to fixed line services);
- (b) Propex (expensed capex);
- (c) Telstra Wholesale Group;
- (d) Line Sharing Service (LSS);
- (e) Information Technology Services (ITS);
- (f) Telstra Service Operations (TSO); and
- (g) Telstra Operations Business Unit – This includes: Customer Service Delivery (CSD); and Service Operations Business Unit Support (BU Support).

6.13 While Telstra has made a considerable downward adjustment of its 2013-14 base year operating expenditure, compared to the 2011 FAD, this is largely a result of the change in forecasting approach adopted by Telstra rather than through efficiency gains.

6.14 Telstra's revised approach adopts a bottom-up construction of costs where:

Most of the estimated fixed line cost centres appear not to be generated from a single, transparent cost allocation system. Telstra's attribution of cost from the general ledger cost centres to fixed line asset classes is based on a composite of discussions with internal staff from relevant cost centres, surveys, and different allocation systems and multiple databases.⁶⁷

6.15 There is difficulty in tracing costs from general ledger to asset classes. This raises concern for verification since there is little to no information available on the allocation process adopted. As such, it is unclear to what extent a significant change in an underlying assumption (or change in forecast demand) would have on Telstra's expenditure forecasts. Information currently provided by Telstra on this issue is largely hard-coded in the 'Opex Forecasts' provided by Telstra (with the latest versions, dated 6 February 2015 and 12 March 2015 which are yet to be assessed in the context of this draft FAD).

6.16 Even though the costs can largely be attributed to some form of activity type or business unit, the absence of any cost-volume relationship means forecasts cannot be verified. WIK-Consult makes similar observations:

The Forecast Model presents sequences of expenditure and demand. However, the Forecast Model does not tie expenditure to demand on the basis of CVR or AVR.⁶⁸

⁶⁶ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March

⁶⁷ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.31

⁶⁸ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.4

- 6.17 Notwithstanding the approach taken to estimate indirect costs, the allocation of indirect costs is currently based on the equi-proportionate distribution of the full aggregated direct opex to FLSM Asset Classes – although this involves a mark-up on already marked-up volumes.
- 6.18 Optus therefore believes that:
- (a) The ACCC should determine a single set of Telstra forecasts from which to assess whether the base year costs provided have been prudently and efficiently incurred. This would include releasing any adjustment (minor or otherwise) it has applied to those forecasts to arrive at the output to be included in the FLSM.
 - (b) In its current form, the expenditure forecasts provided are neither transparent nor traceable, particular given that it has stated:
 - (i) For the purposes of this draft decision, the ACCC’s decision is to not make further adjustments to Telstra’s forecast operating expenditure. The exception to this is the removal of Telstra’s upward adjustment to its Business Unit Support mark-up, the removal of NBN-related propex and an adjustment to Telstra’s forecast CPI.⁶⁹
 - (ii) This confirms that the ACCC has based its expenditure forecasts on Telstra’s forecasts to a large extent. This is also despite the fact that Telstra’s forecast expenditures have yet to be deemed prudent and efficiently incurred.

Inclusion of Propex as an operating expenditure

- 6.19 Propex is defined as the expenditure that occurs in the course of investing in assets. Telstra has considered this to be the project-derived opex from capex forecasts (i.e. expensed capital) therefore its Forecast Model accounts for propex as opex.
- 6.20 Notably, the propex has been estimated as part of the overall capex forecasts but then allocated across to the opex forecasts to be considered as part of the indirect opex. This raises two immediate concerns.
- 6.21 First, it increases the likelihood of double-counting of costs. **[CiC]** As summarised by WIK-Consult:
- Accounting for PROPEX like for OPEX implies: Each additional dollar of PROPEX translate 1:1 into an increase of the costs allocated to Telstra service portfolio. If PROPEX was accounted for as CAPEX, its impact on the FLS cost base would be much smaller.*⁷⁰
- 6.22 Second, propex is directly related to projected capital expenditure requirements. Therefore, as concluded in WIK-Consult’s advice: *“The expenditure to which Telstra refer as “PROPEX” is in fact CAPEX. The mere fact that expenditure on the planning of investment and the commissioning of assets is labour-relation does not qualify the PROPEX as OPEX.”*⁷¹ Under normal commercial and accounting principles Telstra would likely capitalise this expenditure.

⁶⁹ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.10

⁷⁰ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.35

⁷¹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.36

- 6.23 The Draft Decision discusses a number of concerns with Telstra’s propex forecasts, as well as highlighting a number of further issues that may subsequently arise. Optus therefore believes that the ACCC should accept WIK-Consult’s advice and remove Propex from consideration as part of Telstra’s Opex forecasts. The inclusion of propex within opex forecasts is neither prudent nor efficient for a number of reasons:
- (a) Telstra has not sufficiently demonstrated how propex incurred for an asset class is related to the capex cost drivers on which it is effectively based. The ACCC noted that absent this information, there is the risk of double-counting through the addition of separate propex to capex forecasts for some asset classes, and in particular where the capex forecasts already contains labour and intermediate inputs required for the commissioning of plant and equipment. The hard-coded nature of the historic propex also emphasises the lack of transparency in mapping of propex to asset classes.
 - (b) Telstra’s propex forecasting methodology also raises concerns. For example, Telstra’s propex approach clearly deviates from the approach (i.e. forecasts based on the indexation of base year amounts by applying the relevant trend adjustments) taken for the other ‘opex’ cost centres even though Telstra considers propex as an opex expense. The ACCC therefore noted concerns that **[CiC]**
- 6.24 Despite the range of concerns and advice from WIK-Consult concluding that ‘Telstra’s approach in expensing propex is inappropriate’, the Draft Decision has accepted Telstra’s propex forecast in the FLSM. The exception to this is the removal of NBN-related propex.⁷²
- 6.25 The Draft Decision has also highlighted three further issues related to propex for consideration:⁷³
- (a) NBN-related fixed line expenditures – there are concerns that NBN-related expenditures may be attributed to FLSM asset classes.
 - (b) NBN-related propex – there are concerns that NBN-related propex is incremental to NBN, and incremental costs should not be assigned to asset classes where costs are shared between different services.
 - (c) Capex-opex trade-off – there are concerns that Telstra has had insufficient regard to the trade-off between capex and opex across its asset classes. This is likely to result in an over-estimate of Telstra’s expenditure forecasts for the next regulatory period.
- 6.26 Optus understands that these concerns largely reflect implications that the underlying propex assumptions may have with other components in the FLSM. Therefore it would be neither prudent nor efficient for the ACCC to accept propex forecasts without also being satisfied that the implications of these assumptions are also prudent and efficient.

Identifying costs drivers and the responsiveness of Telstra’s opex to changes in demand

- 6.27 Optus is concerned that Telstra’s forecasts has not identified key opex cost drivers. Telstra’s forecast expenditures currently do not adequately respond to changes in demand for fixed line services.

⁷² ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.53

⁷³ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, pp.53-58

- 6.28 This is of significant concern given the expected declines in fixed line demand over the forecast period and the implications it may have on forecasts due to network scalability and costs incurred. This is also despite Telstra's acknowledgements that:

The overall reduction in operating expenditure requirements is largely driven by the expected decline in demand for fixed line services. For those operating activities that are related to demand for network services – such as fault repair and proactive maintenance – there is forecast to be a significant decline in operating costs.⁷⁴
[emphasis added]

- 6.29 In addition, Optus believes that the ACCC has overstated the relevance of Telstra's regulatory obligations (to which Telstra is eligible for compensation) as a potential barrier to Telstra's responsiveness of Telstra's opex to changes in demand.⁷⁵
- 6.30 While a number of specific concerns have been raised, these issues have not been sufficiently addressed in the Draft Decision. Optus therefore believes that:
- (a) Further work must be conducted to assess the impact of network scale effects. Given the forecast declines in fixed line demand, it seems implausible that there would be no similar or corresponding decline in expenditure forecasts.
 - (b) There are also serious concerns regarding the lack of identified cost volume relationships being established within the information provided. This impedes on the ability to assess and verify the forecasts that have been provided.
- 6.31 Importantly, the onus must be on Telstra to establish the prudence of its stable opex. Absent such evidence, the ACCC should reject the proposition. Optus further discusses these concerns below.

Network scale effects have not been addressed

- 6.32 There appears to be a lack of accountability for network scalability. For example, while Telstra has adopted a base-step-trend framework this has only been partially implemented [CiC]
- 6.33 As a result of this incomplete implementation, the Draft Decision has signalled that:
- ...more information on how network size changes the scale of operations for the fixed line cost centres of Networks, ITS, TSO and propex (and certain activities for CSD) will improve the transparency and verifiability of how Telstra's forecast operating expenditures respond to changes in forecast demand.*⁷⁶
- 6.34 Optus understands that the ACCC intends to further consult on this issue before the release of its final decision. As such, Optus will provide further comment at a later date. But as stands, Telstra's approach should not be assessed as prudent – and therefore should not be included in the FLSM.

⁷⁴ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.59

⁷⁵ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.35

⁷⁶ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.36

Overall decline in opex does not match the forecast proportional decline in demand

- 6.35 Despite acknowledgement of the largely demand-driven nature of opex, the forecast reduction in real opex is nowhere near as large as the forecast decline in demand for fixed line services. Telstra explains that:

*This reflects the fact that **many components of Telstra’s operating expenditure are largely fixed and relatively invariant with demand**, and so this expenditure will not necessarily decline at the same rate as demand. In particular, many of the costs of operating and maintain the fixed line network – such as network power and IT systems costs – are largely independent of the number of service being supplied over the network.*

*Further, it is expected that over the next five years, there will be increases in input costs and some increases in maintenance requirements associated with ageing of fixed line network infrastructure. **These increases in unit costs and higher maintenance requirements will to some extent offset the effect of declining demand.***⁷⁷

- 6.36 This effectively suggests that the majority of Telstra’s opex is fixed in nature, and when considered in conjunction with increases in input costs and other requirements, this will offset the effect of declining demand. This is in line with WIK-Consult’s advice which acknowledges (but cautions) that on the issues of incentive to distort expenditure allocations:⁷⁸
- (a) The regulated firm has the incentive not to show all possible productivity gains in its forecast which can be materialized by the firm within the regulatory period. This holds in particular for OPEX.
 - (b) The firm has an incentive to ignore asset volume and cost volume relationships and to treat costs as fixed and not responsive to volume declines
 - (c) The firm has an incentive to inflate base year expenditures.
 - (d) The firm has an incentive of double-counting of the same expenditure and cost.
- 6.37 WIK-Consult’s concerns cannot be ignored by the ACCC in the assessment of whether Telstra’s expenditure forecasts have been prudently and efficiently incurred. This incentive emphasises the need to ensure the onus of proof is placed upon Telstra to present its position.
- 6.38 Similarly, there are concerns surrounding the cost-volume relationships given the expectation that Telstra’s fixed line network is expected to shrink by **[CiC]** per cent by FY2019. However, over this same period, total opex in real terms is only expected to decrease by **[CiC]**, and thereby resulting in an overall increase of **[CiC]** in the equivalent opex per fixed line SIO. For clarity, this is illustrated in the table below based on Telstra’s January 2015 forecasts.

Figure 21

[CiC]

Source: Refer to ‘Opex forecasts’ sheet: Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015)

⁷⁷ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.59

⁷⁸ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.32

- 6.39 Similar observations have already been made in previous submissions. For example, Optus noted in its October 2014 submission that:

It can be argued that if the demands for PSTN services are declining, Telstra's opex is also likely to decline. As volume and customer numbers fall, faults and call-outs are likely to occur less frequently than if the assets were fully utilised. However this does not seem to be the case based on the forecasts provided. Rather, the forecasts appear to show that even with declining demand, the aggregate opex costs (e.g. for faults) are still growing. This means that over time, the relative costs of addressing a fault becomes relatively more expensive to resolve on a per SIO basis.⁷⁹

- 6.40 This view has not changed. [CiC]

- 6.41 The Draft Decision also acknowledges that:

While the assessment of the origination of costs, which occurs at the cost centres, is of primary importance, it is also necessary to assess the attribution of cost centres' operating expenditure to asset classes where:

- *Declared service shares are increasing or decreasing modestly*
- *There is no allocation to NBN Co or where NBN Co's share is increasing modestly.⁸⁰*

- 6.42 The Draft Decision further concludes that given *"Telstra has not been able to provide sufficient information on why many of its cost centre's costs fail to change in response to the declines in the operations for FLSM asset classes, both absolute and relative to its other operations. As a result, it is difficult to determine whether the responsiveness of Telstra's cost centres to changing demand is reasonable and therefore whether operating expenditure is prudent and efficient."*⁸¹ [emphasis added]

- 6.43 On this basis, the ACCC should act on its own conclusion and either request further information/clarification or determine its own set of forecasts for inclusion in the FLSM. In the absence of further information, the ACCC should maintain the FY2014 opex/SIO ratio throughout the forecast period. In reality, Telstra would seek to reduce its costs as demand drops, because that is rational commercial behaviour.

Drivers of opex at cost centre level

- 6.44 Telstra's cost centre level opex data further emphasis the lack of responsiveness of these cost centres to Telstra's shrinking network. This has been highlighted at Table 3.5 in the Draft Decision.⁸²
- 6.45 From this, the Draft Decision identifies several areas where Telstra has provided insufficient information on why many of its cost centres fail to change in response to the decline in

⁷⁹ Optus, 2014, Submission in response to ACCC discussion paper: fixed line services final access determination – primary prices, October, p.27

⁸⁰ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.40

⁸¹ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.39

⁸² ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.37

operations for FLSM asset classes, both absolute and relative to its other operations.⁸³ More broadly, Telstra previously acknowledged that:

*for the purposes of forecasting expenditure Telstra has also assumed that there will be ongoing efficiency gains in a number of areas over the forecast period. These include assumed reductions in labour costs associated with network maintenance and operation of network IT systems, and reductions in energy usage associated with emissions reductions initiatives. Telstra has also assumed that it will be able to make significant cost savings as demand for network services declines.*⁸⁴

- 6.46 A general concern also relates to the allocation of opex to FLSM asset classes. In most cases, the base year amounts are hard-coded into the Forecast Model. Similarly, any allocation matrices provided for allocation to asset classes are also hard-coded.
- 6.47 As a starting point, the Draft Decision has already flagged a number of these concerns, including: **[CiC]**
- 6.48 Optus extends this discussion in the context of Telstra's Service Operations (i.e. CSD, Networks, ITS and TSO) below.

Drivers of CSD Activity Costs

- 6.49 The majority of opex costs are incurred by the CSD business unit; however this is expected to decline relative to the other operations business units over the forecast period. A key driver is therefore identified to be the level of faults forecasted.
- 6.50 Notably, the level of faults forecasted determines the overall level of direct opex being forecast for CSD activities. This in turn, influences the level of maintenance expenditure forecasts that make up the remaining share of CSD activity opex costs.
- 6.51 However, there are concerns with the allocation and drivers of maintenance expenditure, such as within the context of maintenance and other activity costs contributing to the CSD business unit. In particular, the Draft Decision has the following concerns:
- (a) Cost assumptions related to CSD activity costs.⁸⁵
 - (b) The relationship between the maintenance and other activity expenditures incurred, and the quantity and type of related assets being addressed.⁸⁶
- 6.52 The following table sets out a summary of the Total CSD Direct Opex by Activity Type and the labour cost assumptions applicable to Proactive Maintenance and Other Activities (these ratios always correlate to 100% with respect to SIOs). A different set of labour cost assumptions also apply for Faults, and will be discussed in the context of CSD Faults.

⁸³ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.39

⁸⁴ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.50

⁸⁵ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.33

⁸⁶ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.34

Figure 22

[CiC]

Source:

- 6.53 As applied in Telstra's Forecast Model, the 'Distribution of Activity Type by Asset Class' for total CSD Direct Opex in FY2014 is used to determine the ratios to be applied for the allocation of direct costs to FLSM asset classes in future years. The direct costs are calculated on an annual basis then allocated accordingly. Telstra has provided several revisions to its CSD Operating Expenses for FY2014, each time effectively increasing the estimated contribution of maintenance expenditure to the CSD cost centre – resulting from changes to the [CiC]
- 6.54 The above examples highlight issues with transparency and relevance of costs incurred (as allocated to the FLSM asset classes) in the base year. For the purposes of providing updated forecasts, the base year has been taken to be 2013-14 – as such, the information provided by Telstra should be actuals, and be subject to limited changes or need for reconciliation.
- 6.55 The majority of CSD direct opex is fault-related. The number of faults is determined based on the relevant 'Fault Rate' multiplied by the total number of CAN SIOs (for CAN faults) and/or total number of ADSL SIOs (for ADSL faults). In addition to this, [CiC]
- 6.56 Optus addresses these concerns below.

Repair costs per fault

- 6.57 Telstra surmises that CSD fault repair costs are driven by forecast fault volumes and unit rates for repair. That is, it can be observed as a cost-volume relationship. [CiC]
- 6.58 In particular, Telstra has applied a blended unit rate for fault repair based on the weighted cost of external versus internal labour for fault repair. The table below provides a comparison of these labour rates relative to the blended rate.

Figure 23

[CiC]

Source: Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015)

- 6.59 As highlighted in figure 23, the [CiC]

6.60 [CiC]

Differential fault rates for CAN and ADSL

- 6.61 Telstra's Forecast Model assumes that based on historic trends, the fault rates across the fixed-line network will continue to increase. Between FY2003 and FY2014, Telstra submits that the CAN fault rate has [CiC]
- 6.62 As such, this historic trend continues to form the basis of the forecast fault rate. Telstra has also set differential fault rates to distinguish between CAN and ADSL faults. Comparisons of these assumptions are set out in the table below.

Figure 24

[CiC]

Source: Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015)

6.63 In attempting to verify these assumptions, Optus makes the following observations:

- (a) It has been highlighted that Telstra does not separately produce forecasts for ADSL premises faults, as this has historically been reflected in the rate of CAN faults. As such, the forecasts for ADSL faults have been assumed to follow the same trend as the CAN fault rate.⁸⁷
- (b) The fault rate applied increases annually by 4% over the forecast period. This is despite Telstra's acknowledgement that:

*On an all else equal basis, CSD and Telstra Operations forecast that **CAN fault volumes will increase by approximately 2% per annum over the next three years**, despite the expected decline in CAN SIOs, implying an increase in the fault rate that exceeds the linear trend.*⁸⁸ [emphasis added]

- (i) Telstra provided further information dated 30 January 2015, to clarify that the 2% per annum assumption [CIC] This suggests that the use of a more conservative growth in forecast fault rate may be justified.
- (c) The historic fault rate has been based on the observed trend for the period FY2003 to FY2014. However, it can also be seen from the same data that over the last regulatory period (i.e. FY2011 to FY2014) the observed fault rate has increased at a rate well below the historic trend.⁸⁹
- (d) For CAN fault rates at least, this is in line with previous observations made by the ACMA. For example, "The Australian Communications and Media Authority (ACMA) reports the current fault rate for telephone services on the entire copper network at ~17 percent. The portion of faults on the local access network is not reported; however at some European network operators less than one fifth of all faults have been in the local access network. Given uncertainty about quality of Australian copper, the Strategic Review assumes that half of reported faults are in the local access network and will require remediation."⁹⁰ This implies that the portion of faults on the CAN may actually be in fact less than that reported, particularly when taking into account the portion of faults attributable to ADSL.
- (e) The ACCC has also highlighted concerns that [CIC]

6.64 In addition, [OPTUS CiC]

6.65 Optus therefore recommends that an adjustment to reduce the annual increase in CAN fault rates is appropriate. For example, [CiC]

Implication of migration of customers from Telstra to NBN

6.66 The migration of customers from Telstra to NBNs has two kinds of effects on CSD Opex fault repair, including:

- (a) It impacts on the quantity of SIOs, i.e. the forecast declines in demand; and
- (b) It impact on the fault rate of SIOs.

⁸⁷ Telstra, 2014, Forecast Model v1.05, Framework and guide to forecast assumptions, October, p.34

⁸⁸ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to Discussion Paper, 3 October, p.32

⁸⁹ Telstra, 2014, Forecast Model v1.05, Framework and guide to forecast assumptions, October, pp.32-33

⁹⁰ NBN Co, 2013, Strategic Review, December, p.87

- 6.67 While there is no dispute that declines in demand will eventuate as migration occurs, the latter assumption that fault rates will increase is more contentious. This was similarly observed by WIK-Consult: [CiC]
- 6.68 Optus believes that this is unlikely to be the case and WIK-Consult is correct to acknowledge that: [CiC]
- 6.69 First, Telstra's Forecast Model assumes an upward trend in fault rates, [CiC] These activities are clearly NBN-related, and as such should not be considered within the context of FLSM-related opex. Therefore, it is unclear on what basis migration to NBN would lead to an increase in the fault rates applicable to the remaining fixed line SIOs. The costs of faults arising through NBN related activities should not be allocated to FLSM services, but rather should be allocated to Telstra's NBN project.
- 6.70 Second, the ACCC has already recognised that *"a consequence of migration is that certain assets will be either decommissioned or utilised to a lesser extent. This will ultimately mean that some assets that are currently used to provide declared services will no longer be used for this purpose, either fully or in part"*⁹¹ – however, this should not mean that a result of migration is an increase in fault rates across the remaining customer base.

CSD: Maintenance expenditure forecasts

- 6.71 The remaining drivers of CSD direct opex comprises a combination of Proactive Maintenance and Other Activities, contributing on average [CiC] per cent of total CSD direct costs over the forecast period.
- 6.72 This however raises several concerns for the assessment of the prudence and efficiency of costs being incurred, including:
- (a) The relevance and use of CAN SIOs as the key driver of maintenance; and
 - (b) Material changes proposed in the latest forecasts provided.
- 6.73 In addition to fault-related costs, these costs also contribute to the indirect costs allowed under Telstra's Forecast model. As such, inflation of these costs will also lead to the inflation in indirect costs calculated for the overall CSD business unit.

Use of CAN SIOs as the key driver of maintenance expenditure forecasts

- 6.74 Telstra has submitted that routine maintenance costs and other costs are expected to decline as the number of SIOs on the CAN declines. In particular, that: *"Proactive and routine maintenance costs are linked to the decline in CAN SIOs because such works are exclusively on the CAN. This is a highly conservative assumption. It effectively assumes no economies of scale in carrying out these activities. It also sets aside any fixed element to these costs – such as the requirement to support regulatory requirements and service levels."*⁹² WIK-Consult similarly observed that: *"the driver of the bulk of OPEX spent on Proactive Maintenance is the quantity of CAN SIO."*⁹³ CAN SIOs in this context is based on the sum of total WLR, ULLS, PSTN Retail Access, ISDN and Other DSL SIOs.

⁹¹ ACCC, 2014, Public inquiry into final access determinations for fixed line services – primary price terms, Position statement on the treatment of the Telstra-NBN Co arrangements for regulated pricing, October, p.11

⁹² Telstra, 2014, Forecast Model v1.05, Framework and guide to forecast assumptions, October, p.35

⁹³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.39

- 6.75 It was previously also noted that that future efficiency gains could arise due to the highly elastic relationship between field workforce costs and SIOs. In particular, [CiC]
- 6.76 However this approach appears to differ from that applied in the Forecast Model. For example, [CiC]
- 6.77 [CiC] This can be further illustrated through the comparison of the YoY declines in the aggregate costs for these CSD activity types.

Figure 25

[CiC]

Source:

- 6.78 WIK-Consult has also highlighted a number of related concerns, largely related to the metrics and drivers of these CSD activities. In particular, the use of CAN SIO volumes as the key driver of maintenance expenditure, where:
- (a) CAN SIO is the key driver of duct cost – “The maintenance work to be spent on a piece of duct (assuming that a surface type such as pavement or trench is given) depends on the length of the duct and possibly also on the diameter of the duct, but it does not depend on the quantity of active wire pairs in the copper loops passing the duct.”⁹⁴
 - (b) CAN SIO is implied as the key driver of OPEX associated with copper loops – “CSD maintenance work is primarily a function of the quantity of CAN SIO... However, it is not realistic that the quantity of CAN SIO (respectively the quantity of active wire pairs) is the only driver of the maintenance work spent on copper cable. The other driver is the length of the cable deployed.”⁹⁵ This is notwithstanding the expected declines in the overall length of copper cables as NBN rolls out.
- 6.79 To this end, WIK-Consult considers that:

*As far as the copper cable used for the provision CAN SIO is concerned, it is plausible that the correlation between annual maintenance costs and the overall length of active wire pairs is stronger than the correlation between maintenance costs and the quantity of CAN SIO. **The overall length of active wire pairs depends on the quantity of CAN SIO and the overall length of copper cable.**”⁹⁶ [emphasis added]*

- 6.80 This puts into question the current approach adopted by Telstra which is effectively a carry-over of the previous year’s costs adjusted by a combination of indexation and forecast savings. Put simply, unlike the calculation of CSD Fault Activity –no clear cost-volume relationship can be observed.

Telstra’s maintenance expenditure forecasts

- 6.81 As highlighted in figure 22, Telstra has provided several revisions to its CSD Operating Expenses for FY2014, each time effectively increasing the estimated contribution of maintenance expenditure to the CSD cost centre.

⁹⁴ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.42

⁹⁵ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.42

⁹⁶ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.43

- 6.82 [CiC]
- 6.83 [CiC]
- 6.84 It is not clear why these revisions have occurred. The amendment to the base year value cannot be adequately traced to verifiable sources; and the lack of identified cost drivers means other adjustment cannot be rationally and objectively tested.

Drivers of Networks Activity Costs

- 6.85 The Networks business unit comprises the second largest contribution to Telstra Operations and is “responsible for the planning, design, deployment and performance of Telstra’s access, core and service enabling networks, including the fixed line network CAN and Core.”⁹⁷
- 6.86 Telstra’s Forecast Model categorises the Networks business unit into three distinct activities: Power Consumption; Rents and Building Outgoings; and Other (including maintenance contracts and equipment licences). A summary of these Network Opex costs by Activity Type is set out in the table below.

Figure 26

[CiC]

Source: Nominal Telstra Opex Forecasts. Refer to ‘Opex forecasts’ sheet in each of the following: Telstra, Fixed Services Forecast Model, Version 1.1 (January 2015); Telstra, Fixed Line Services Access Pricing Model FY2015-19, Version FY2015 to FY2019 v1.1 (6 February 2015); and Telstra, Fixed Line Services Access Pricing Model FY2015-19, Version FY2015 to FY2019 v1.2 (12 March 2015).

- 6.87 The Draft Decision highlights concerns that: [CiC]
- 6.88 Notably, it can be observed that the nominal forecast for Networks Opex [CiC] Optus discusses these concerns in the context of Telstra Network categories below.

Networks: Power consumption

- 6.89 Network power is a significant expenditure item for the Networks business unit. It is the single largest cost input for a Network Activity which as set out in the Forecast Model comprises the [CiC]
- 6.90 However Optus is concerned over a number of forecasts that have been put forward. [CiC]
- 6.91 [CiC]
- 6.92 WIK-Consult has highlighted similar concerns with Telstra’s approach and recommends that to address these concerns a cost-volume relationship needs to be established.
- (a) In particular, for each type of building opex associated with emergency power supply, rectifiers and air-conditioning should be separately identified. This opex would also include a share of building rentals as allocated by the asset’s associated occupancy rate/footprint.
 - (b) For each type of active network asset, information on the average annual asset quantity and annual energy consumption (kWh) for that network asset should be identified. This would lead to the identification of a price per kWh of electricity.

⁹⁷ Telstra, 2014, Forecast Model v1.05, Framework and guide to forecast assumptions, October, p.37

- (c) The building opex identified above should then be allocated to the active network assets (switching and transmission equipment) on the basis of the annual amounts of electricity consumed by the active network assets.⁹⁸

6.93 Optus believes that adopting WIK-Consult’s recommendations would improve the transparency related to the calculation of electricity expenditure attributable to the Networks Opex cost centre.

Networks: Rents and Building Outgoings

6.94 In aggregate, the largest cost item for the Networks business unit in all years is the combination of rents, council and water rates, and other building outgoings. Telstra submitted that it does not expect there to be any material change to its network rental accommodation and land portfolio over the next regulatory period, despite the expected fall in network demand. Optus notes that this is an assumption which warrants further investigation by the ACCC –noting that European fixed line operators have disposed of their excess PSTN buildings when transitioning to a next generation fibre network.⁹⁹

6.95 The approach taken is therefore simply to increase the base year amounts by the rental index for Rents; and CPI for the remaining Building Outgoings.

6.96 Optus believes that in both cases, the current indexation assumption applied by Telstra seems high. For comparison, the table below provides a summary of the CPI and Housing Price Index for period FY2010 to FY2014.

Figure 27 CPI and Housing Price Index (FY2010 to FY2014)

	FY2010	FY2011	FY2012	FY2013	FY2014	Average
Housing Price Index (year-ended change)	5.9%	4.6%	3.3%	5.3%	3.9%	4.6%
Consumer Price Index (year-ended change)	3.1%	3.5%	1.2%	2.4%	3.0%	2.5%

Source: RBA, Consumer Price Inflation: Expenditure Groups, Table G2. See also: ABS, Cat. 6401.0 – Consumer Price Index, Australia, Dec 2014

6.97 First, Telstra has assumed a constant annual increase of **[CiC]** to apply to all rents. This is higher than that reported in the year-ended Housing price index, to which new dwelling purchases by owner-occupiers and rents are the main contributors. As shown above, the Housing price index shows on average only a 4.6% YoY increase over the five year period.

6.98 Second, the CPI applied has been based on Telstra’s own forecast CPI which is higher than the 5-year average for the historic ‘All Groups’ CPI for all forecast years. The Draft Decision does not accept Telstra’s forecast CPI assumptions.¹⁰⁰

6.99 Notwithstanding the potential overstatement of indexation to be applied, it is also unclear why the allocation of these costs to CAN and Core ‘Network Buildings/Support’ Asset Classes have been linked to **[CiC]**

⁹⁸ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.54

⁹⁹ WIK-Consult, 2009, *The Economics of Next Generation Access – Addendum*, p.6; Remko Bos, 2007, NGN in the Netherlands: a regulatory perspective, OPTA, March, p.12,

¹⁰⁰ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.48

6.100 As suggested by WIK-Consult, this appears to be the result of the misguided use of electricity consumption as the driver of building costs. As such, they state that *“the driver of building costs is hardly power consumption, but rather the footprint occupied by accommodated network plant.”*¹⁰¹ Optus therefore believes that this allocation approach needs to be changed. This is also discussed in Section 2.

6.101 Telstra has an opportunity to reduce its building costs as demand declines; prudence principles require this opportunity to be reflected in the FLSM.

Networks: Other direct costs for Networks

6.102 These other network costs include a combination of: internal labour costs to maintain the network; maintenance contracts with service vendors; apparatus licence fees payable to the ACMA; and satellite lease payments (i.e. considered as miscellaneous costs). Telstra has also noted that to the extent these latter two cost categories do not relate to the fixed network, those costs have been removed.¹⁰²

6.103 Similar to the above comments on indexation for the previous Networks activity type, these costs do not appear to be linked to declines in demand, hence remains relatively constant in real terms over the forecast period.

Drivers of ITS Activity Costs

6.104 The ITS business unit includes software, hardware and development of IT systems, with the costs incurred predominantly associated with maintenance contracts with service vendors to maintain network systems. **[CiC]**

6.105 The approach taken is therefore simply to increase the base year amounts by applying the relevant trend adjustments to each of the ITS expenditure categories. The aggregate outcome is then allocated accordingly to FLSM Asset Classes based on the allocation matrix resulting from a two-step process. As described by Telstra: **[CiC]**

6.106 **[CiC]**

6.107 The following table provides a summary of Telstra’s historic and forecast allocation of ITS costs to relevant IT systems, as allocated to the fixed line network asset classes.

Figure 28

[CiC]

Source:

6.108 Optus notes that while the table above highlights **[CiC]**

6.109 Optus is also concerned that in attempting to validate the application of these allocation factors for ITS costs, several key observations can be made: **[CiC]**

6.110 **[CiC]** The issue of allocation of shared costs to services is discussed in section 3

¹⁰¹ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra’s expenditure forecasts, Report for the ACCC, 5 March, p.57

¹⁰² Telstra, 2014, Forecast Model v1.05, Framework and guide to forecast assumptions, October, p.42

Drivers of TSO Activity Costs

- 6.111 The TSO business unit is responsible for the security, reliability, quality and speed of response and restoration of Telstra's network and IT systems. Similar to the ITS cost centre, it supports the provision of fixed line services, as well as other services provided by Telstra.
- 6.112 The approach taken is therefore simply to increase the base year amounts by applying the relevant trend adjustments to each of the four TSO 'Opex by Business Group' categories (i.e. NAO, NIO, NSF and NITO); then allocated into asset classes accordingly.
- 6.113 **[CiC]**
- 6.114 Optus notes a number of concerns with the assumptions underlying this approach: **[CiC]**
- 6.115 WIK-Consult similarly recognises these concerns and recommends that "*Distinct TSO activities should constitute distinct cost centres which are clearly identifiable in the Forecast Model... In particular, it has to be clear whether a TSO cost centre is a secondary cost centre or a tertiary cost centre.*"¹⁰³ In general, Optus supports WIK-Consult's recommendations and recognises that this would improve transparency into whether or not this allocation reflects the principle of cost causation.

Telstra's proposed cost and productivity indices

- 6.116 In addition to the drivers identified above, the underlying cost inputs are also responsible for the magnitude of expenditure costs forecast. This is of particular importance where a cost-volume relationship has been established.
- 6.117 As highlighted in the above section on drivers of cost centre level opex, the role of the various indices are also significant drivers of expenditure forecasts over the regulatory period. In the majority of cases, the Forecast Model determines opex forecasts by inflating the base year expenditure according to a set of relevant expenditure indices (as summarised in Table 3.12 of the Draft Decision).¹⁰⁴
- 6.118 General concerns relating to the Telstra's choice and application of its indices have also been raised by both the ACCC and WIK-Consult.
- (a) There appears to be an inconsistent approach to the application of indices to different cost centres, and cost centre expenditure groups. For example, "*The ACCC notes that Telstra has not provided sufficient explanation why it has not applied efficiency indices to all its cost centre activities.*"¹⁰⁵
- (b) Notwithstanding concerns surround the inclusion of propex within opex forecasts, Telstra has not applied any cost and productivity indices to its propex cost centre.
- (c) The application of the labour price index is inconsistent **[CiC]**
- 6.119 Despite the concerns outlined above, and with the exception of Telstra's forecast change in the CPI, the ACCC's draft decision is that Telstra's proposed cost and productivity indices are

¹⁰³ WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.60

¹⁰⁴ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, pp.46-48

¹⁰⁵ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.48

prudent and efficient.¹⁰⁶ In the case of CPI, the ACCC's draft decision is to forecast an annual change of the CPI of 2.4 per cent, which results in the Telstra total real opex (\$2009) being larger as a result of the ACCC adjustment.

- 6.120 Optus believes that the above indices, or at a minimum consistency on the application of the above indices, will need to be revisited. While the ACCC has stated a preliminary view that the above indices are reasonable, it has not provided any conclusions on the approaches taken in relation to the application of the aforementioned indices.

Estimation of indirect costs

6.121 [CiC]

6.122 An extension of this concern also relates to the allocation of indirect opex to asset classes. [CiC] The resulting 'Total Direct and Indirect Operating Expenditure by Asset Classes – including indirect' is then transposed into the FLSM.

6.123 Optus therefore considers:

- (a) The use of hard-coded values needs to be well substantiated. This is particularly important given that these base year values are being represented as actuals, but at the same time they will also act as the proxy for future estimations of indirect costs. As such, this approach assumes that indirect costs are always proportional to the direct cost incurred.
- (b) There is also considerable concern regarding the use of mark-ups applied to other mark-ups. The Draft Decision has [CiC] While the use of an EPMU for indirect costs is an accepted approach to cost modelling, the indirect mark-ups should apply to the pool of direct costs and not to costs where an indirect mark-up has already been applied.

Indirect opex applied in forecast years

6.124 The following table sets out a comparison of indirect opex as a proportion of total opex for each of the specified Telstra business units. It compares the last four sets of opex forecasts as provided by Telstra.

Figure 29

[CiC]

Source:

- 6.125 In particular, this highlights that indirect costs contribute a significant proportion overall to the annual forecast opex. Several key indirect opex issues can be flagged: [CiC]
- 6.126 With the exception of Unattributable Indirect Opex, the ratio of indirect to direct opex for individual business units remains constant in all forecast years. These have been calculated by either maintaining the ratio for observed the base year, or can be traced to a set of specified mark-ups.
- 6.127 The following summarises the approach taken for each of the individual opex categories. [CiC]

¹⁰⁶ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.50

- 6.128 [CIC]
- 6.129 [CIC]
- 6.130 [CIC]
- 6.131 [CIC]
- 6.132 [CIC]
- 6.133 [CIC]
- 6.134 [CIC]
- 6.135 [CIC]
- 6.136 [CIC]
- 6.137 [CIC]
- 6.138 [CIC]

Next steps for the ACCC

- 6.139 Optus submits that it is clear in the draft FAD that the current opex forecasts in the FLSM will need to be reviewed. Where the ACCC continues to include opex forecasts based on Telstra's forecasts, then further adjustments (in addition to that already considered in this draft FAD) will need to be applied.
- 6.140 The ACCC has already highlighted several adjustments to be applied to Telstra's expenditure forecasts. These include:
 - (a) The removal of Telstra's upward adjustment to its BU Support mark-up;
 - (b) The removal of NBN-related propex; and
 - (c) An adjustment to Telstra's forecast CPI.
- 6.141 While this is a good starting point, Optus recommends that a further adjustment to Telstra's forecast opex must be made. The ACCC cannot accept many of Telstra's current forecasts as they patently do not represent prudent cost management in the face of significant changes in demand.
- 6.142 The ACCC should not feel itself bound to accept Telstra's forecasts in the absence of other preferred forecasts. First, it fails to recognise the significant information asymmetries present in this Inquiry. Second, it fails to recognise the incentives faced by Telstra to supply forecasts that favour itself and are detrimental to the LTIE and end-users. We note the comments by WIK-Consult on the incentives faced by Telstra.
- 6.143 The ACCC must not reward Telstra for failing to provide sufficient evidence that its forecasts are efficient and prudent. Allowing these forecasts in the FLSM is not consistent with the legislative criteria, the fixed principles, or the approach adopted in other industries that rely on RAB forecasts.
- 6.144 Optus refers to the observation in Frontier Economics' expert opinion to the use of independent forecasts by the AER. The AER creates its own forecasts of expenditure and compares this against the regulated firm's forecast. Where the regulated firm's forecast is

above the AER's forecasts, the AER seeks an explanation. If the explanation is not satisfactory, the AER takes the view that the regulated firm's forecasts are not prudent and efficient. The AER will then substitute its own forecasts. This was the process undertaken in the latest draft decisions for NSW and ACT electricity distribution networks, and it should be the process undertaken by the ACCC in this Inquiry.

Section 7. PRICE STRUCTURE - WADSL

- 7.1 A key question for this FAD Inquiry is how the proposed price level and structure for wholesale ADSL (WADSL) reflects cost-based cost components and whether it enables access seekers to replicate Telstra's retail offerings.
- 7.2 The ACCC has previously stated that it would prefer cost based VLAN and port charges, if there was "*robust cost information that would allow it to allocate costs to the port and AGVC components on a cost-based basis*".¹⁰⁷
- 7.3 And Telstra has observed in the SSU that the VLAN [AGVC] charging for WADSL will fall as Telstra retail demand increases:

*Increases in retail customer usage mean that more data needs to be transported from its sources to end users and, to replicate the offers made by Telstra's retail business units, wholesale customers would need to purchase more AGVC transmission. **Therefore, the AGVC price component will need to fall as Telstra's retail customer usage increases.***¹⁰⁸
[emphasis added]

- 7.4 In the original WADSL FAD, the ACCC agreed that the regulated rate should include a VLAN [AGVC] charge because "*it more directly allows wholesale customers to match the Telstra retail offers that are causing the increase in network utilisation.*"¹⁰⁹
- 7.5 Optus agrees with all of these comments. Importantly, the ACCC now has before it robust cost information that allows a cost-based allocation between port and backhaul components.
- 7.6 This section addresses the following issues:
- (a) Proposed WADSL price structure does not reflect cost causal relationship
 - (b) The Declared Service, by itself, cannot be used to supply wholesale ADSL services;
 - (c) Calculating cost reflective port and backhaul charges using available cost information and the FLSM; and
 - (d) The proposed WADSL structure harms end-users and does not promote the LTIE

WADSL price structure does not reflect cost causality

- 7.7 Establishing a cost-causal relationship is the main principle when setting cost based pricing. This principle is reflected in the fixed principles,¹¹⁰ and has constantly been applied by the ACCC in assessment of the LTIE. A cost based charge is likely to best promote the LTIE.¹¹¹ This view is supported by WIK-Consult which highlighted that the concept of cost based pricing

¹⁰⁷ ACCC, Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report, May 2013, p.48

¹⁰⁸ See Telstra, "A Guide to Telstra's price-related interim equivalence and transparency obligations", published on 5 September, at p.3, and available at: <http://www.accc.gov.au/content/index.php?id/100399>

¹⁰⁹ ACCC, Interim access determination for the wholesale ADSL service Statement of Reasons – February 2012, p.15

¹¹⁰ See clauses 6.11 and 6.14

¹¹¹ ACCC, Public inquiry to make final access determinations for the declared fixed line services – Discussion paper, April 2011, p.133; ACCC, Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report, May 2013, p.5

for fixed line services implies that only those costs that are incurred in the provision of fixed line services should be included in the cost base.¹¹²

- 7.8 The final price structure of the WADSL service – a port based charge together with a per Mbps backhaul charge (VLAN) – does not reflect the cost to provide the services because of several arbitrary adjustments to the cost estimate from the FLSM. That is, assuming that the FLSM accurately calculates a cost based charge, the adjustment from the FLSM estimate to the final pricing structure removes any relationship to the demand drivers of the service.
- 7.9 As a result, Telstra is likely to over-recover the costs of providing WADSL, and end-users are likely to suffer through higher prices and/or reduced services.
- 7.10 This sub-section:
- (a) Outlines how the FLSM allocates costs to the WADSL services;
 - (b) Explains the adjustments made to determine the final form of the charges; and
 - (c) Discusses the problems with this approach.

The allocation process in the FLSM

- 7.11 The WADSL service is a Core service in the FLSM, with costs allocated from asset class CO04 to CO12 (see figure 30). [CiC]

Figure 30

[CiC]

Source:

- 7.12 [CiC]
- 7.13 [CiC]
- 7.14 [CiC]
- 7.15 Both the Draft Decision FLSM and Telstra's FLSM v1.2 allocate asset costs to the WADSL service on the basis of services and not Mbps throughput. This is despite the fact that key assets classes, such as transmission, and key assets within assets classes, such as BRAS and IGRs, are dimensioned on the basis of traffic throughput not connected SIOs.
- 7.16 The FLSM calculates the cost to serve each WADSL SIO – it does not make any estimate of a cost per Mbps.

Estimating the final form of the WADSL charges

- 7.17 Telstra's FLSM estimates the required revenue from the WADSL service. [CiC]
- 7.18 The FLSM then converts the total per SIO cost into a port charge and backhaul VLAN charge using several arbitrary non-cost causal adjustments.
- 7.19 [CiC] The port charge is further weighted to reflect differences between zone 1 and zones 2/3 rates. These relativities reflect the percentages determined in the IAD in 2012. There has

¹¹² WIK-Consult, 2015, Assessment on the efficiency and prudence of Telstra's expenditure forecasts, Report for the ACCC, 5 March, p.90

been no development or refinement of this process. Telstra has provided no new evidence during this Inquiry.

- 7.20 The final adjustment transforms the per SIO VLAN charge **[CiC Ends]** to the Mbps format that is contained in the Draft FAD. This conversion uses an assumed 'per SIO peak usage' to estimate a per Mbps price. **[CiC]**
- 7.21 It is instructive to highlight that the peak usage assumption is only used for the final arbitrary conversion above. The wholesale peak Mbps usage is not used in the allocation of costs, even though peak throughput is the key cost driver for Telstra's data network. It must also be noted that cost recovery occurs when peak usage is **[CiC]** If usage for FY15 is above this figure, Telstra over-recovers its costs.
- 7.22 Importantly, the FLSM does not calculate the cost breakdown in this manner. The transformation from a SIO total cost to a port/backhaul uses arbitrary assumptions not based on any evidence presented during this Inquiry. It is not consistent with cost causation principles, or consistent with the LTIE. Further, it penalises end-user usage and results in artificially restricting wholesale end-users' throughput speed. Optus notes that the arbitrary transformations were adopted because at the time of the 2012 IAD, the ACCC did not believe that information on the costs of the different components of the service was available, and that it was not feasible to obtain. The ACCC committed to reviewing this allocation should further information become available.¹¹³ Such a review has not yet occurred.

Problems with this approach

- 7.23 There are several problems with the manner in which the FLSM cost estimate is transformed to the price structure in the FAD instruments:
- (a) The transformation relies on arbitrary usage assumptions which are not related to any allocation of the costs of joint assets within the FLSM (such as transmission capacity);
 - (b) The use of peak Mbps is not consistent with the rules imposed by Telstra Wholesale in its Wholesale ADSL product;
 - (c) Growth in end-user throughput results in Telstra over-recovering costs without incurring additional costs;
 - (d) Assets such as BRAS and IGRs are used to converge and route IP traffic from all types of access technologies, such as cable, DSL, NBN (see for example Telstra Wholesale's Broadband Aggregation service), yet costs are only recovered from DSL; and
 - (e) The pricing enables Telstra to impede competition in downstream broadband markets and to undermine its separation and equivalence commitments.
- 7.24 The fundamental flaw in the Draft Decision price structure is the disconnect between the drivers of costs of WADSL and the actual prices charged in the FAD. As a result, slight variations in levels of peak demand, for example, can drastically alter the amount of revenue recovered by Telstra. This negates the end-user benefits of regulating WADSL and provides an opportunity for Telstra to use the FAD to undermine competition and its equivalence obligations. These problems can be observed in the following example.

- 7.25 **[CiC]**

¹¹³ ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report*, May 2013, p.42

Source:

- 7.26 Optus notes previous comments made by the ACCC that it is preferable to set backhaul charges on a throughput basis as this better reflects usage and encourages appropriate price signals for network usage.¹¹⁴ Optus agrees with this principle. But it is only the correct approach if usage is the cost driver for backhaul assets in the FLSM. But this is not the approach adopted; Telstra and the Draft Decision do not use usage as the cost driver. The only cost driver used for DSL assets is the number of SIOs. The ACCC must either accept or reject Telstra's position. It cannot accept SIO as the cost driver for the purpose of the model, and then use a separate cost driver to justify the final price structure.
- 7.27 There are two implications:
- (a) The FLSM continues to use SIO as the cost driver, thereby refuting claims that usage is the driver of costs; or
 - (b) The FLSM adopts usage based allocation method.
- 7.28 Optus prefers the second option. Optus agrees that there should be a usage based charge, and that a usage based charge better reflect the driver of backhaul costs – capacity. But this cannot be done without the actual FLSM adopting this approach. Absent changes to the FLSM, the VLAN charge should be based on a per SIO basis – as this is the cost driver that Telstra has used to allocate costs.
- 7.29 As shown above, end-users will suffer when the cost of WADSL is estimated using a SIO cost driver but the charges are set on a usage basis.
- 7.30 The solution is to calculate cost-based WADSL charges.

Calculating a cost-based WADSL charge

- 7.31 Optus notes that the arbitrary transformations were adopted because at the time, the ACCC did not believe that information on the costs of the different components of the service was available, and that it was not feasible to obtain. The ACCC committed to reviewing this allocation should further information become available.¹¹⁵ The ACCC also commented that it would prefer cost based VLAN and port charges, if there was "*robust cost information that would allow it to allocate costs to the port and AGVC [VLAN] components on a cost-based basis*".¹¹⁶
- 7.32 Robust information does exist, and the FLSM can be easily amended to "*allocate costs to the port and AGVC [VLAN] components on a cost-based basis*." Optus submits that the ACCC must follow its previous advice and implement such pricing.
- 7.33 In order to further assist the ACCC, Optus explains below how this can be achieved.

¹¹⁴ ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report*, May 2013, p.45

¹¹⁵ ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report*, May 2013, p.42

¹¹⁶ ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report*, May 2013, p.48

- 7.34 The FLSM does not distinguish between network assets used to provide the connection service and assets used to supply the VLAN backhaul. Such a distinction, however, would be simple to implement.
- 7.35 The Telstra Wholesale DSL technical description outlines the network assets that are used to provide port services and backhaul VLAN services. The IGR/BRAS is the defining point between port and backhaul charges. IGR/BRAS are located in the trunk exchange and there are two per state. The VLAN charge (and the underlying Ethernet or Wavelength Access) relate to traffic aggregated at the IGR/BRAS and transported back to access seekers' POI.
- 7.36 Figure 32 below breaks FLSM asset class CO10 Data Assets into either port or backhaul (VLAN) related assets classes. This allocation utilises Telstra Asset Categories to allocate assets to Port or backhaul based on the relevant cost driver. That is, if the number of assets required is determined by throughput the asset is allocated to backhaul. If the asset demand is determined by connected SIOs, it is allocated to Port.

Figure 32

[CiC]

Source:

- 7.37 As can be seen, using information provided by Telstra and available to the ACCC, it is possible and quite simple to break down data assets (CO10) into port data assets (CO10a) and backhaul data assets (CO10b). The costs can then be further allocated on a per SIO basis for port assets, and a per Mbps basis for backhaul assets.
- 7.38 The ACCC committed in the WADSL FAD Inquiry that it would review the allocation between port and backhaul should further information become available.¹¹⁷ This Inquiry has provided that information; and it is shown above how an allocation can be undertaken. Optus submits that the ACCC has before it all the necessary information to undertake a proper cost based WADSL charging regime – ensuring that the port charge include only costs that relate to ports and the backhaul charge reflects only the costs incurred to provide backhaul.

The Declared Service cannot be used to supply services

- 7.39 In addition to the FAD charge structure not reflecting the cost-volume relationship used in the FLSM, the regulated charges for WADSL are not sufficient for access seekers to deliver the service.
- 7.40 The WADSL service offered by Telstra Wholesale requires charges and minimum volumes which have not been subject to regulatory consideration and which are not included in the FAD. These include:
- (a) Additional Business Grade Ethernet, or Wavelength charges;
 - (b) Mandatory redundancy charges if volume over a specified level.

¹¹⁷ ACCC, Public inquiry to make a final access determination for the Wholesale ADSL service – Final Report, May 2013, p.42

WADSL over BGE Access¹¹⁸

- 7.41 Telstra Wholesale's WADSL product requires that in addition to the port and VLAN charges, access seekers also purchase BGE capacity sufficient to meet total expected throughput (including redundancy requirements).
- 7.42 [CiC]
- 7.43 [CiC]
- 7.44 [CiC]
- 7.45 [CiC]
- 7.46 [CiC]
- 7.47 [CiC]
- 7.48 [CiC]

WADSL over Wavelength Access

- 7.49 Telstra Wholesale also offers WADSL over Wavelength Access. [CiC]
- 7.50 [CiC]
- 7.51 [CiC]
- 7.52 [CiC]
- 7.53 These Wavelength Access charges are additional to the regulated port and VLAN charge.

Backhaul redundancy

- 7.54 [CiC]
- 7.55 [CiC]
- 7.56 [CiC]
- 7.57 [CiC]
- 7.58 Optus requests that the ACCC investigate the extent that:
- (a) The BGE or wavelength service involves assets which are allocated to FLSM asset classes, and hence, the cost (or part thereof) may be included in FLSM outputs. This can be done by requesting Telstra identify network assets that are not included in the list of assets within the Data Asset class (CO10);
 - (b) The peak usage demand forecasts takes into account the Telstra Wholesale impose business rules which have the effect of doubling the required backhaul capacity.
- 7.59 It is not clear the extent to which the forecasted wholesale peak usage takes into account redundancy. But if it does, then the demand forecasts is extremely low, being effectively

¹¹⁸ Refer to: Telstra Wholesale DSL Layer 2 Internet Grade, Issue 7 October 2014; and TW Business Grade Ethernet Product Tech Spec– 26-09-2011.

[CiC] Mbps per SIO. For this reason, Optus does not believe the forecasted wholesale peak usage properly takes into account the way in which Telstra Wholesale sells the product.

There is no equivalence between Telstra Retail and WADSL end-users

- 7.60 The objective of regulated WADSL access charges is to promote competition and the interests of end-users. It is also to promote the legitimate interests of access providers. Both of which are achieved through cost-based charges. It is shown above that the disconnect between cost drivers in the FLSM and the final price conversion undermines the cost volume relationship and results in final charges that are not cost-based.
- 7.61 A further obligation imposed on Telstra is an overarching equivalence obligation under its Structural Separation Undertaking (SSU). Equivalence is a key concept and is achieved when access providers are able to use wholesale products to replicate Telstra Retail's products. Telstra may put that the regulation of WADSL supersedes the equivalence obligation – but it must be noted that the wholesale product supplied by Telstra Wholesale is a combination of regulated and non-regulated charges. As explained, it is not possible to supply wholesale DSL using only the declared service. Wholesale DSL pricing must meet both the LTIE test (cost-based) for its regulated components and the equivalence test for the overall TW wholesale DSL product.
- 7.62 This sub-section demonstrates that the VLAN price in the Draft Decision will harm WADSL end-users compared against ULLS end-users and Telstra Retail end-users. It will also be shown that the Draft Decision does not result in prices that enable Telstra Retail packages to be replicated.

VLAN price level harms end-users

- 7.63 [CiC]
- 7.64 [CiC]
- 7.65 [CiC]
- 7.66 [CiC]

Figure 33

[Optus CiC]

Source: Optus

- 7.67 [CiC]
- 7.68 [CiC]
- 7.69 The legislative requirements (efficient use of, and investment in, infrastructure) require that the price sends the correct usage signals to access seekers. That is, they face the actual cost imposed on the access provider by their use.
- 7.70 Setting WADSL backhaul prices without regard to the drivers which cause costs to be incurred results in inefficient usage decisions, which are based on the price rather than the cost of the service.
- 7.71 [CiC]

Can Telstra Retail be replicated?

7.72 A key test to assess both the LTIE and equivalence is whether access seekers can replicate the products of Telstra Retail. Failure to do undermines both the purpose of structural separation and will lead to end-user detriment. It is already shown above that the ability of access seekers to use to WADSL backhaul is restricted when compared to non-Telstra backhaul using ULLS or HFC.

7.73 [CiC]

Figure 34

[CiC]

Source:

7.74 [CiC]

7.75 Access seekers will incur significant backhaul charges to meet the usage of Telstra Retail. The total wholesale network cost per SIO will soon grow to be above market retail rate plans. The current WADSL rates, plus Telstra Wholesale business rules, means that access seekers cannot match Telstra Retail's throughput capacity. The above example clearly shows the impact of setting VLAN charges without having regard to the appropriate cost driver – Mbps throughput. If the VLAN charge was allocated across its cost driver, then as Mbps demand grows the price per Mbps would decline. This is what is experienced in real world network businesses, and indeed, is what was expected to occur by Telstra when backhaul traffic grows.¹¹⁹ This is the correct relationship between growth in usage and cost of usage. However, there is no such cost causal relationship in the proposed WADSL pricing in the Draft Decision. [CiC]

7.76 Figure 35 shows the total WADSL cost per SIO as a result of the Draft Decision price levels and structure. It is instructive to compare the revenue gained from Telstra at the regulated price level with the revenue required to be obtained from each SIO as estimated by the FLSM. [CiC] This results in a significant over-recovery of costs by around 25% over the likely three year period of the FAD.

Figure 35

[CiC]

Source:

7.77 The inefficiency of the WADSL pricing has real practical detriments for end-users. The ACCC should undertake a proper cost-benefit analysis of the impact of its proposed pricing on WADSL end-users. It should also undertake a margin squeeze test to ensure that Telstra's retail offerings are replicable with the wholesale regulated product and to determine whether Telstra is in breach of its equivalence obligations.

¹¹⁹ Telstra, "A Guide to Telstra's price-related interim equivalence and transparency obligations", published on 5 September, at p.3, and available at: <http://www.accc.gov.au/content/index.phtml/itemId/100399>

Section 8. PRICE STRUCTURE – ULLS AND FOAS/FTAS

- 8.1 In general, Optus supports the Draft Decision not to propose any change to the price structure for the ULLS, or the FOAS and FTAS.

Unconditioned Local Loop Services

- 8.2 The 2011 FAD confirmed the use of an averaged Band 1-3 ULLS price and a separate Band 4 ULLS price, on the basis that *“the aggregation of these bands is appropriate and will support investment and competition... [and] likely to result in benefits to the industry, including from simplifying the price structure and easing the transition to nationally averaged wholesale pricing for the NBN.”*¹²⁰
- 8.3 In general, Optus supports the continued use of a de-averaged price structure for ULLS, as highlighted in its previous submissions. The ACCC’s considerations for the change in the ULLS price structure in the 2011 FAD (i.e. to facilitate increased take-up in Band 3 areas) have largely failed to eventuate. Optus discusses the implication of this in Section 4.

Fixed Originating and Terminating Access Services

- 8.4 The 2011 FAD confirmed the use of a nationally average price being set for PSTN OTA services. It also noted that *“access seekers and Telstra can negotiate disaggregated prices should they choose to do so.”*¹²¹
- 8.5 There has been no evidence that would warrant a change to this conclusion. Instead, the adoption of the single, national rate for fixed OTA has presented significant benefits compared to the legacy rate table that was in place prior to the last FAD.
- 8.6 Optus therefore supports the Draft Decision on the price structure for FOAS and FTAS services being set on a national average basis. A single, national average price for fixed OTA serves two important functions:
- (a) first, it reflects the underlying costs of providing the services; and
 - (b) second, it best enables competitive providers to compete with Telstra, who continues to hold a dominant position in the fixed-line voice market.
- 8.7 Optus further notes that the regulation of FOAS/FTAS applies to *all* providers of OTA services. As OTA is a core network service, it is not subject to the same economics of the provision of access lines. Every provider of fixed connectivity has their own market for the termination of traffic – yet the price of such service is based solely on the cost of Telstra’s technology and Telstra’s level of traffic. This needs to be reviewed given the roll-out of NBN-based voice services, and the increasing use of IP technology, results in insignificant incremental costs to deliver the service.
- 8.8 In contrast, Telstra has again proposed that a geographically de-averaged price structure be appropriate for FOAS/FTAS services. The application of this proposed change is set out in the table below. **[CiC]**

¹²⁰ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.107

¹²¹ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.108

Source:

- 8.9 Telstra considered that a de-averaged approach would not be inconsistent with the objective of maintaining price stability, while also concluding that *“De-averaging FOAS/FTAS will not affect the headline rate for this service, relative to prices for other regulated services.”*¹²²
- 8.10 A key feature of Telstra’s proposed approach is its reliance on maintaining cost relativities between geographic areas – a premise not dissimilar to Telstra’s proposed approach during the 2011 FAD inquiries which *“assumes the geographic cost relativities between the fixed costs and variable costs of providing PSTN OTA services are the same”*¹²³ and which was also rejected by the ACCC.
- 8.11 In particular, Telstra has noted two main reasons for the cost disparity between regions:
- (a) Economy of scale of local switching and network building and support; and
 - (b) Distance between the POI and the local exchange in different regions.
- 8.12 Optus notes that moving to a de-averaged price structure will impact price stability as it is likely to increase access costs of individual RSPs. As has been demonstrated in the past there is often a significant disconnect between the “headline” average rate and the actual charges paid by RSPs. This disconnect can be magnified as assumptions underpinning the average such as call hold times and traffic mix change, with the result that access charges can quickly diverge from Telstra’s costs.
- 8.13 As highlighted elsewhere in this submission, the industry landscape for telecommunications continues to be dominated by networks (i.e. predominantly Telstra’s copper network) – with the majority of value still driven by core network services. It would be poor policy for the ACCC to make a determination that goes against the objective of meeting the LTIE and promotion of competition. Moreover it is not clear why a price for services supplied by all fixed line providers should reflect the cost distribution of Telstra only.

¹²² Telstra, 2014, Public inquiry into final access determinations for fixed line services –primary prices, Response to Discussion Paper, 3 October, pp.116-117

¹²³ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.108

Section 9. COST OF CAPITAL

- 9.1 WACC is a significant input variable for the setting of access prices using the FLSM – it sets the return on investment allowed on the RAB. Optus supports the continued use of the real vanilla WACC in the FLSM to calculate the return on capital.
- 9.2 Optus also notes the relationship between cost allocation method and risk variables in the WACC. It was noted in the 2011 FAD Inquiry that any additional risk associated with the adoption of the partial allocation method has been reflected through the risk variables in the WACC.¹²⁴ The Draft Decision proposed to adopt a full allocation method, thereby removing any risk identified in the 2011 Inquiry. Consequently, the risk variables need to reflect this change in risk profile.

Comparison of WACC estimates

- 9.3 The ACCC has proposed to maintain the use of a real vanilla WACC to calculate the return on capital. The following table sets out a comparison of the WACC parameters applied in the previous FAD decisions, Telstra's proposed WACC and the ACCC's proposed WACC.
- 9.4 Depending on the WACC that is applied, this can significantly change the monthly access prices. However, there is also a need to balance any impacts a change in WACC may have on the various scenarios proposed by Telstra to rebalance the 'cost recovery' outcomes.
- 9.5 The remainder of this section discusses concerns with Telstra's proposed WACC input parameters.¹²⁵ Optus also provides comments in support of the ACCC's proposed WACC.

Return on equity

- 9.6 The return on equity is a direct input into the WACC formula, reflecting the opportunity cost of not investing in another investment of equivalent risk. The ACCC estimates the cost of equity using the capital asset pricing model (CAPM).

Risk free rate

- 9.7 The risk-free rate is a measure which compensates investors for the time value of money, expected from an asset with no default risk.
- 9.8 In the FLSM, the ACCC uses a real risk-free rate, which is calculated by deflating the nominal risk-free rate by expected inflation using the Fisher equation. The estimation of these parameters has been well established in previous FAD decisions.
- (a) The Australian Commonwealth Government Securities (CGS) bonds are typically used as the proxy for the risk-free asset. That is, the 20 day average ten-year yield to maturity of 10 year CGS bonds.
 - (b) Forecast inflation rates are typically based on the RBA's latest short-term inflation forecasts as published in its Statement on Monetary Policy. That is, the geometric average of forecast inflation rates over a 10 year period.

¹²⁴ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services – Final Report, p.100

¹²⁵ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to discussion paper, October, p.81

- 9.9 [CiC]
- 9.10 [CiC]
- 9.11 In comparison, Telstra’s forecast inflation is based on its own set of forecast inflation rates for the forecast period FY2015 to FY2019. The estimate it has provided for the rate of return calculation has been set equal to the average across the five-year period (calculated to be 2.72 per cent). However, the annual forecast inflation is also separately applied for the determination of ‘Service Prices Adjusted for Inflation’.
- 9.12 As such, Optus supports the ACCC’s approach for risk-free rate consistent with its previous regulatory decisions. This results in a nominal risk free rate of 2.50 per cent consistent with that adopted in the draft FAD.
- 9.13 Optus further notes that in the case of forecast inflation, the approach taken by the ACCC should similarly be transposed to Telstra’s Forecast Model. It is unclear to what extent this has been applied in Telstra’s Forecast Model, given that its Forecast Opex sheets apply inflation rates that are currently pasted values – as such, there is every possibility that a change in the inflation forecast applied to WACC may not necessarily flow through to Telstra’s expenditure forecasts.

Market risk premium

- 9.14 The MRP is the expected risk premium investors require over the risk-free return to be willing to invest in a well-diversified risk ‘market’ portfolio.¹²⁶ The 2011 FAD confirmed the view that the best estimate for MRP is 6 per cent, which it considered to be conservative and near the top of the range of MRP estimates.¹²⁷
- 9.15 Telstra proposes that a reasonable but conservative estimate of MRP is 6.5 per cent, which lies within the AER’s considered range of 5.0 to 7.5 per cent.¹²⁸ However this should not be accepted the reasons set out below.
- (a) First, a MRP estimate of 6.5 per cent is a departure from previous AER decisions which consistently adopted 6 per cent, it was acknowledged that “[i]n the past we have generally adopted MRP estimates of 6.0 to 6.5 per cent.”¹²⁹
- (b) Second, despite a range of other sources supporting an MRP estimate of 6 per cent,¹³⁰ the shift to 6.5 per cent can be largely attributed to the AER’s use and consideration of Dividend Growth Model (DGM) estimates of the MRP.¹³¹
- 9.16 In other words, the move by the AER to adopt a 6.5 per cent MRP is due to factors relevant for the electricity sector not the communications sector. Telstra themselves have

¹²⁶ AER, 2009, Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters, Final Decision, May, p.190

¹²⁷ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.64

¹²⁸ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, pp.89-97

¹²⁹ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, p.95

¹³⁰ For example, the AER estimated a range for plausible estimates of about 5.0-6.5 per cent based on historical averages, and survey estimates which generally support an MRP estimate of about 6 per cent.

¹³¹ The AER noted: “Using our preferred application of these [DGM] models, we estimate a range of 6.1-7.5 per cent.” AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, p.97

acknowledged that it is not valid to simply adopt the approach in other sectors without taking into account the “*strengths and weaknesses of each source of evidence.*”¹³²

- 9.17 It is true that the AER forward looking estimates of the market return and MRP, based on DGM is an example of a potential approach which may inform estimation of the MRP. But it is also true that a 6 per cent MRP is within a reasonable range for the AER.^{133,134}
- 9.18 It must also be recognised that a factor for the AER in its adoption of the higher MRP was its position that “*historical excess returns should be ‘grossed-up’ for the value of imputation credits distributed, rather than the value of imputation credits created. Further, that this ‘gross-up’ should only be done for historical excess returns after the introduction of the imputation tax system in 1987.*”¹³⁵ This conclusion has no doubt been made within the electricity network provider context, in which, the use rate of distributed imputation credits is generally higher than that accepted within the fixed-line telecommunications context.
- 9.19 As such, Optus supports the Draft Decision adopting a MRP of 6 per cent (based on the available evidence). More weight should be placed on telecommunications-specific factors and less weight placed on conclusions which are specific to other industries.
- 9.20 Finally, it should also be recognised that the Draft Decision has adopted Telstra’s proposed fully allocated cost approach. This changes the relevant business risk profile faced by Telstra. The ACCC acknowledged this in the 2011 FAD Inquiry, noting that a higher WACC compensated Telstra for the risk of demand changes.¹³⁶ The move to the fully allocated cost method addresses the concerns for Telstra. Using the same reasoning applied by the ACCC in 2011 means that the WACC should have a lower risk premium as a result of the change in allocation method. As noted in the Draft Decision, there is a range in which a reasonable MRP lies. Optus submits that the change in cost allocation methods should result in the ACCC adopting a value in the lower end of the range of reasonable rates,
- 9.21 A further discussion on sources of evidence which may inform the estimation of the MRP is summarised below. This provides an expanded discussion on the range of MRP estimates referred to in Telstra’s October 2014 submission¹³⁷ which largely rely on empirical evidence considered by the AER for application in the context of the supply of electricity network services *not* fixed-line telecommunication services.
- 9.22 The evidence below demonstrates that a MRP of 6 per cent is a reasonable estimate for the telecommunications industry.

Historical average excess returns

- 9.23 Estimates based on historical averages are the most common proxy of the MRP. Further the ACCC has acknowledged that: “*this is the most robust source of evidence for estimating the*

¹³² Telstra, 2014, Public inquiry into final access determinations for fixed line services –primary prices, Response to discussion paper, October, p.84

¹³³ Australian Competition Tribunal, *Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8*, 18 September 2013, paragraph 302

¹³⁴ Australian Competition Tribunal, *Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8*, 18 September 2013, paragraph 308

¹³⁵ AER, 2009, Electricity transmission and distribution network service providers: Review of the weighted average cost of capital (WACC) parameters, Final Decision, May, p.209

¹³⁶ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services – Final Report, p.100

¹³⁷ Telstra, 2014, Public inquiry into final access determinations for fixed line services –primary prices, Response to discussion paper, October, pp.84-86

*MRP. Therefore the ACCC has placed the most reliance on this source of information in estimating the MRP.*¹³⁸

- 9.24 The AER's historical excess returns have been observed over the period 1883 to 2012, with varying average estimates depending on the period used.¹³⁹ The ACCC has also considered the MRP estimates for the sampling period extended to include 2013.¹⁴⁰ The estimates for both sampling periods are set out below.
- 9.25 The estimates provide a range of 5.9-6.5 per cent if calculated on an arithmetic mean basis and 4.0-4.9 per cent if calculated on a geometric mean basis. It therefore concludes that *"Under current market conditions, the historical returns produce a MRP estimate of 6.0 per cent from within the range."*¹⁴¹
- 9.26 Adopting a MRP of 6.0 per cent is therefore appropriate for the purpose of this draft decision. As noted above, a MRP in the lower end of the reasonable range is consistent with the change in cost allocation methods.

Market surveys

- 9.27 Survey estimates explore investor expectations about the MRP by directly asking market practitioners about their views on market risks. While subjective, it is also considered: *"The relevance of some survey results depends on how clearly the survey sets out the framework for MRP estimation. This includes the term over which the MRP is estimated and the treatment of imputation credits."*¹⁴² As at December 2013, these estimates continue to generally support an MRP of about 6.0 per cent.
- 9.28 Since the publication of its WACC guideline, the AER has also updated its MRP survey evidence for its 2014 draft decisions. It found evidence from a review of relevant surveys continued to support a MRP of 6.0 per cent.¹⁴³

Dividend growth model

- 9.29 Telstra's proposal of 6.5 per cent MRP relied largely on certain evidence (i.e. DGM) from the AER December 2013 WACC guideline. However, concerns with this evidence have subsequently also been identified in the AER's 2014 draft decisions, which highlight some of the practical limitations with using the DGM estimation method for the MRP.¹⁴⁴
- 9.30 As extensively discussed in the AER's rate of return guideline, the AER's preferred application of the DGM was to use a two-stage and three-stage model¹⁴⁵ to estimate a range of MRP

¹³⁸ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.84

¹³⁹ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.82

¹⁴⁰ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.85

¹⁴¹ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.85

¹⁴² AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.89

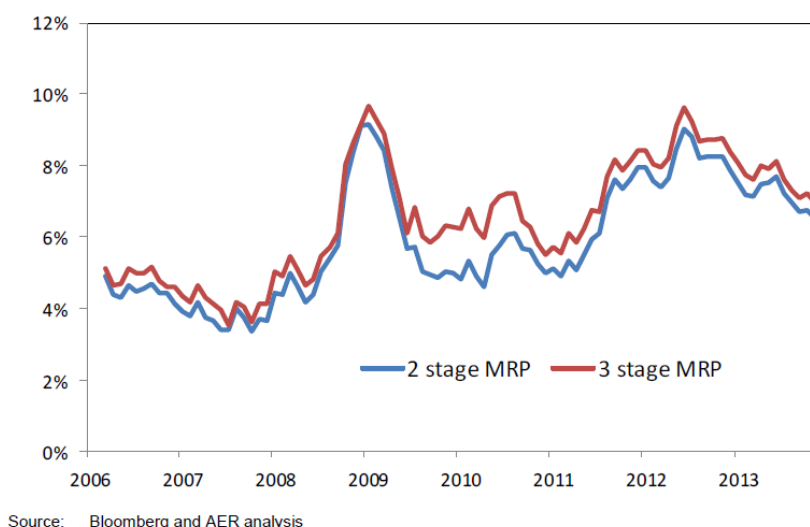
¹⁴³ As cited in ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.85

¹⁴⁴ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.87

¹⁴⁵ The AER noted: *"The principal difference between the two-stage and three-stage models is the assumption about the time that it takes for growth to revert to its long term level: the two-stage model assumes that the reversion is relatively quick; and the three-stage model assumes that the process takes somewhat longer."* AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.116

values using differing inputs.¹⁴⁶ For example, the AER’s estimates of the MRP using its preferred DGM approach over the period March 2006 and June 2013 is set out below.¹⁴⁷

Figure 37 AER’s estimates of the MRP using the two-stage and three-stage DGM



Source: AER analysis

9.31 The AER’s analysis also highlights the variance in the average MRP when considered over different time periods, as summarised in the table below.¹⁴⁸

Figure 38 Average DGM estimates of the MRP, calculated by the AER for different time periods

Time period	Two-stage (per cent)	Three-stage (per cent)
March 2006 to November 2013	5.9	6.5
March 2006 to December 2007	4.1	4.4
January 2008 to November 2013	6.7	7.4
October 2013 to November 2013	6.66	7.10

Based on AER’s analysis where DGM estimates for the period March 2006 to November 2013 have assumed a growth rate of 4.6 per cent and imputation adjustment of 1.225.

9.32 This variance was further highlighted in the AER’s 2014 draft decisions, which demonstrated that the DGM requires strong assumptions about a number of unobservable input variables to be made. As such, *“There is considerable uncertainty about the appropriate estimate of these input variables. The results (estimated from the DGM) are also highly sensitive to the estimate of these variables compared to MRP estimated from historical excess returns which may result in significantly different end results from small changes in input variables.”*¹⁴⁹

9.33 Optus therefore considers that the inherent uncertainty in the DGM approach suggests that it should not be relied on in preference to other approaches for the estimation of MRP. As such, adopting a MRP of 6.0 per cent continues to be appropriate.

¹⁴⁶ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.85

¹⁴⁷ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.118

¹⁴⁸ The values summarised in the table is based on information as discussed in the relevant appendix. AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, pp.118-119

¹⁴⁹ As cited in ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.87

Equity beta

- 9.34 The equity beta measures the correlation between the returns on an individual asset or firm with that of the overall market. As such, it is well acknowledged that:

*Regulators adopt a value for the equity beta that is expected to best represent the systemic risk profile of an efficient business. This provides the regulated business with the necessary incentives to undertake only those capital investments that are expected to earn a reasonable return.*¹⁵⁰

- 9.35 In general, the equity beta is driven by estimates of the asset beta and gearing, and to a much lesser extent, the debt beta. The ACCC has previously accepted that “a value of zero for the debt beta is approach for de-levering and re-levering equity beta.”¹⁵¹

- 9.36 The 2011 FAD confirmed the view that an equity beta of 0.7 (based on an estimated asset beta of 0.42 and Telstra’s debt/equity ratio¹⁵²) is appropriate and conservative.¹⁵³

- 9.37 The AER’s current approach also leads to a point estimate of 0.7 for equity beta. This was based on a comparator set where the benchmark efficient entity was defined as ‘a pure play, regulated energy network business operating within Australia’ – of which nine ASX-listed firms were identified.¹⁵⁴ It was noted that:

*Under the AER's approach, the AER proposes to estimate the range for the equity beta based on empirical analysis using a set of Australian energy utility firms the AER considers reasonably comparable to the benchmark efficient entity. This approach leads to a range for equity beta from 0.4 to 0.7.*¹⁵⁵

- 9.38 The AER then considers other information sources to inform a point estimate from within the empirical range and equity beta estimates. For example, empirical estimates of overseas energy networks may be used to inform the point estimate from within the range.¹⁵⁶

- 9.39 On the other hand, Telstra considers that an equity beta of 0.7 is no longer appropriate and should be increased to at least 0.8, to compensate for claims that “Telstra’s exposure to systemic risk is significantly greater than other regulated industries.”¹⁵⁷

- 9.40 Telstra also claims that this is supported by empirical evidence and considers that “a reasonable but conservative estimate of the asset beta associated with the supply of fixed line services is 0.5, this implies an equity beta of 0.8, at Telstra’s assumed gearing level.”¹⁵⁸

¹⁵⁰ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.64

¹⁵¹ ACCC, 2010, Review of the 1997 telecommunications access pricing principles for fixed line services, Draft Report, September, p.36

¹⁵² ACCC, 2010, Review of the 1997 telecommunications access pricing principles for fixed line services, Draft Report, September, p.73

¹⁵³ In reaching this conclusion, the ACCC also acknowledged that while conservative, “an equity beta of 0.7 is substantially higher than Telstra’s estimated equity beta of 0.301.” ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.65

¹⁵⁴ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, Appendices, December, p.47

¹⁵⁵ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, p.15

¹⁵⁶ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, p.83

¹⁵⁷ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to discussion paper, October, p.86

¹⁵⁸ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to discussion paper, October, p.90

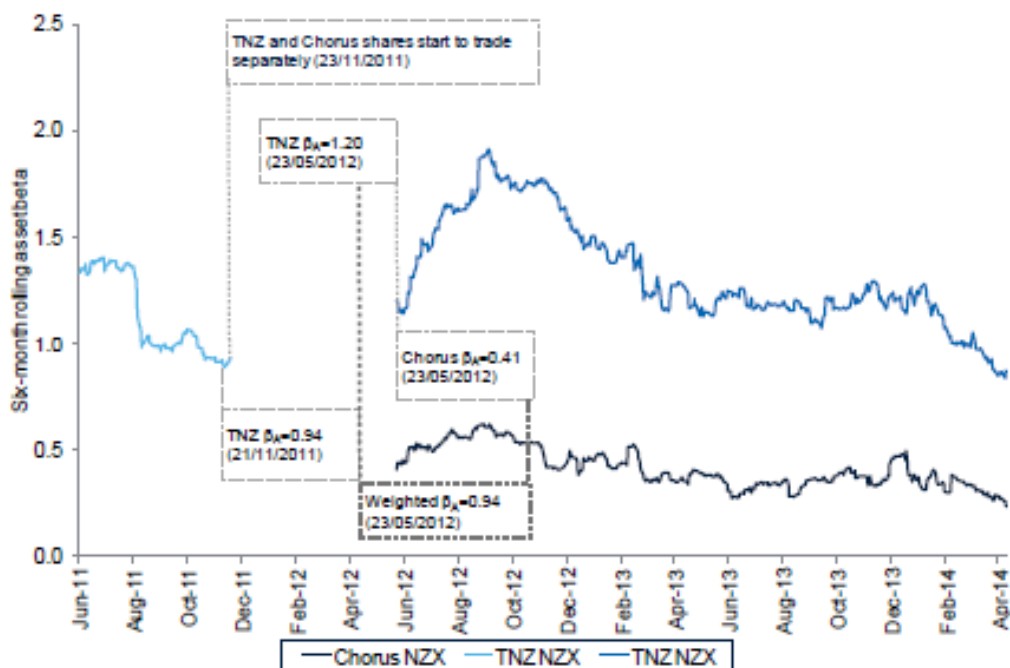
- 9.41 Optus disagrees with Telstra's proposed approach. Optus specifically disagrees with Telstra's interpretation of international comparators; and disagrees with Telstra's claims that it faces unique systematic risks over the regulated period.

International Comparators

- 9.42 The Draft Decision contains updated benchmarks for a set of telecommunication firms considered reasonably comparable to the benchmark efficient entity. For comparison, the same firms have been chosen as set out in the 2011 FAD. Telstra has submitted that the ACCC adopt an equity beta of at least 0.8. The ACCC has instead adopted an equity beta of 0.7 based on empirical evidence from international benchmarks and on the equity beta for Telstra.
- 9.43 While an analysis of international comparators can be instructive, this is more likely to be relevant in regulated services such as MTAS where the objective is to set the WACC for a hypothetical efficient operator. This is not the objective in this Inquiry. Prices are set using a BBM approach, using the actual costs incurred by an actual operator. Optus strongly supports the use of direct observations from Telstra itself.
- 9.44 **[CiC]**
- 9.45 Greater weight should be placed upon the direct observed equity beta of Telstra. Optus notes that the other observations in table 5.5 of the Draft Decision relate to telecommunications firms that are either: (a) integrated mobile-fixed operators; or (b) operate across multiple international jurisdictions. Both of which will generally lead to higher risk profiles due to competition in mobile industry, and risk associated with operating across many jurisdictions.
- 9.46 Optus submits that the ACCC should have regard to additional empirical evidence on the equity beta for Chorus Limited (Chorus) in New Zealand and that it should have regard to the estimates at the low end of the range of asset betas established by its international comparator set.
- 9.47 Chorus should be regarded as a close comparator for the regulated services in the FLSM. Chorus is a pure-play wholesale fixed-line operator of the local access network in New Zealand. This is in contrast to many of the comparators used by the ACCC in its international benchmarking which include mobile network and fixed-line retail operations. Chorus shares have been traded for almost 3 years following its demerger from Telecom New Zealand.
- 9.48 It is also instructive to note that the NZCC is proposing to use Chorus' observable equity beta when setting WACC for its regulated fixed line services. Indeed, it must be noted that Chorus itself has recommended that the NZCC set equity beta using its own observable beta.¹⁵⁹
- 9.49 The influence on asset betas of combining fixed-line operations with other operations can be observed in the asset betas of Telecom New Zealand pre and post demerger into Chorus and Spark Limited (which includes the retail and mobile network operations). Figure 39 below shows that following demerger the asset beta of Chorus has been systematically lower than the pre-demerger level and lower than for the operations retained by Spark Limited.
- 9.50 The average asset beta since demerger for Chorus (calculated daily) is 0.35 as at 30 April 2015.¹⁶⁰

¹⁵⁹ Chorus, 2014, "Submission in response to the Commerce Commission's process and issues paper for determining a TSLRIC price for Chorus' unbundled copper local loop service in accordance with the final pricing principle" (14 February 2014), p. 63-64, paragraphs 308-309.

Figure 39 Telecom New Zealand asset beta pre and post demerger



Source: Oxera, Review of the beta and gearing for UCLL and UBA services (six month beta).

9.51 This is strong empirical evidence to support the view that fixed-line businesses are exposed to lower levels of systemic risk than non-fixed line operations, and as such the ACCC should:

- (a) Have greater regard to asset betas from Chorus and other operators with pure-play fixed-line operations;
- (b) Choose an equity beta below the average identified from its comparator set that includes businesses with non-fixed line operations.¹⁶¹

9.52 Optus believes that an asset beta of around 0.3 to 0.35 to be an appropriate choice to use in the FLSM, consistent with Telstra's own asset beta and with relevant international comparators.

Changes in risk exposure

9.53 Telstra also requests a higher asset beat to reflect the higher systematic risk it faces since the 2011 FAD Inquiry. The Draft Decision concluded that: "Telstra's risk exposure is unlikely to have increased materially since 2011 because the ACCC's updated equity and asset beta estimates for Telstra are relatively stable compared to those from the 2011 FADs."¹⁶²

9.54 Optus therefore supports the Draft Decision rejecting Telstra's claim. Optus notes that there is no evidence to support Telstra's claim that it faces higher systematic risk. In addition to the evidence in the Draft Decision:

¹⁶⁰ Calculated using the Monkhouse formula as per the ACCC decision, using an equity beta of 0.97, D/E ratio of 1.76, gamma 0.45, cost of debt 3.44% and tax rate of 28%.

¹⁶¹ At a minimum, it should indicate to the ACCC that it should exclude Spark New Zealand Limited from its international comparator set as for three of the last five years, it has no local access network operations.

¹⁶² ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.92

- (a) The move from a partial allocation to a full allocation cost methods results in lower risk of cost recovery which should be reflected in the risk values in the WACC. The 2011 FAD Inquiry noted that the increased risk due to partial allocation was accounted for through the WACC. Therefore, the move to a full allocation method should be accompanied with a reduction in risk variables in the WACC.
- (b) The NBN-Telstra Definitive Agreements provide Telstra with a constant long term cash flow amounting to more than \$100 Billion over the next 35 plus years. Such a level of Government assistance is unprecedented and should therefore result in lower risk for Telstra.

9.55 Optus supports the Draft Decision to reject claims of increased risk. If any adjustment is warranted a downward adjustment should be considered.

Cost of debt

9.56 The cost of debt provides a measure of the effective rate that a company pays on its current debt.

Debt risk premium

9.57 The debt-risk premium (DRP) accounts for debt-specific risk compensation over and above the risk-free rate. The DRP is dependent on the firm's gearing level, its credit rating, term of the debt and other factors.

9.58 The 2011 FAD applied a single (long-term A-rated AUD Telstra) bond as the debt proxy to estimate the DRP. To take into account Telstra bonds issued since 2011, the 2013 FAD used the average of three (long-term A-rated AUD Telstra) bond as the debt proxy. In both FADs, the DRP was estimated as the difference between the 20 business day average of the yield on the debt proxy and the corresponding average yield on the 10 year CGS.

9.59 The ACCC does not propose to change the 10-year term-to-maturity and A-rated requirement for the chosen debt proxy. However, the ACCC has acknowledged its intent to consider a range of sources for yield on Telstra bonds, including the Telstra BVAL (TBVAL) and Telstra bond with TTM closest to 10 year. It also considers that:

Telstra's credit rating and bond yield take into account the overall characteristics of Telstra, not just the regulated fixed line services. Therefore, to the extent that the regulated services are less risky than the rest of Telstra – and to the extent it has an effect on bond yield/credit rating, the proposed approach would be likely to over-compensate Telstra by giving them the market return on Telstra's bond.¹⁶³

9.60 The Draft Decision is therefore to adopt a Telstra-specific nominal bond rate to estimate the cost of debt, where: *“Based on the ACCC's proposed approach, the DRP (for the 20 business-day averaging period ending 13 February 2015) is estimated to be 0.94 per cent.”¹⁶⁴*

9.61 Optus supports the approach in the Draft Decision.

¹⁶³ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.98

¹⁶⁴ ACCC, 2015, Public inquiry into final access determinations for fixed line services – primary price terms, Draft Decision, March, p.98

Gearing ratio

- 9.62 The gearing level of a firm refers to the ratio of debt to equity that a firm uses to finance its capital.
- 9.63 The ACCC has previously accepted a debt/gearing ratio of 40:60 is appropriate, which is consistent with previous fixed line pricing determinations. In contrast, the AER typically accepts a gearing ratio of 60:40 to be appropriate for its regulatory decisions.¹⁶⁵ This is generally accepted given the benchmark efficient utility in electricity is calculated based on BBB rated bonds.
- 9.64 Optus therefore supports no change to this assumption.

Debt issuance costs

- 9.65 Debt issuance costs are the costs associated with raising debt. They can be recovered through a direct cash flow allowance or an adjustment to the WACC.
- 9.66 The ACCC adopted an estimate of debt issuance costs to be 8.1 basis points, which was set assuming six debt issues of \$500 million, in its 2011 FAD.¹⁶⁶ This estimate was revised to 7.4 basis points in the 2013 FAD.
- 9.67 Telstra has proposed to apply the conventional approach to estimating debt issuance costs used in past regulatory decisions. As such, accepts the estimate adopted in the 2013 FAD which estimates that *“the debt issuance costs for the relevant benchmark form of debt (i.e. 10-year A-rated corporate bonds) is 7.4 basis points per annum.”*¹⁶⁷
- 9.68 Optus therefore supports no change to this assumption.

Imputation credits (gamma)

- 9.69 For regulatory purposes, gamma is generally defined as the product of the distribution rate and the utilisation rate. The ACCC in its 2011 FAD adopted a value for gamma of 0.45.¹⁶⁸ Optus believes that a value of 0.45 is the absolute minimum that should be adopted. Optus notes that the ACCC’s analysis suggests a value for gamma of at least 0.65 is appropriate. An analysis of Telstra’s dividend payments over the last 5 years strongly supports the ACCC’s conclusion that the value of theta should be between 0.65 and 1.0. In Optus view it supports an estimate at the top end of that range.
- 9.70 Gamma represents the value to investors of imputation credits. The AER considers that:

Under the Australian imputation tax system, investors can receive an imputation credit for income tax paid at the company level. For eligible investors, this credit offsets their Australian income tax liabilities. If the amount of imputation credits received exceeds an investor's tax liability, that investor can receive a cash refund for the balance.

¹⁶⁵ AER, 2013, Better regulation – Rate of return guideline, Explanatory Statement, December, p.9

¹⁶⁶ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.70

¹⁶⁷ Telstra, 2014, Public inquiry into final access determinations for fixed line services – primary prices, Response to discussion paper, October, p.84

¹⁶⁸ ACCC, 2011, Inquiry to make final access determinations for the declared fixed line services, Final Report, July, p.75

*Imputation credits are therefore a benefit to investors in addition to any cash dividend or capital gains they receive from owning shares.*¹⁶⁹

- 9.71 Recent draft decisions on gamma in relation to the AER's electricity distribution determinations¹⁷⁰ and transmission determinations¹⁷¹ have reject the proposed value of imputation credits of 0.25. Instead, the AER has proposed to adopt a gamma value of 0.4 – which falls within their estimated range of 0.3 to 0.5 indicated by empirical evidence.¹⁷² In contrast, TasNetworks proposed a value of imputation credits of 0.5, consistent with the value proposed in the AER's rate of return guideline – however, to align with the AER's other recent draft decisions it has proposed to adopt a gamma value of 0.4.¹⁷³
- 9.72 Telstra has proposed a value of imputation credits that is based on the assumption that:
- (a) The regulated entity pays out only 70% percent of imputation credits to shareholders in the form of franked dividends; and
 - (b) The shareholders in the regulated entity value these dividends at only 35% of their face value. That is, in the terminology that has developed in Australian regulatory determinations, a theta of 0.35.
- 9.73 In support of this position Telstra relies on a report by SFG¹⁷⁴ which estimates the average valuation of franking credits paid out by all listed entities to be 35% of their face value and those firms on average pay out only 70% of their franking credits as in dividends. This implies a value for imputation credits at thy time that they are created (gamma) of 0.25.¹⁷⁵
- 9.74 The ACCC has, in Optus' view, correctly rejected this approach of applying market wide averages to the specific circumstances of Telstra. The ACCC's task is not to set the cost of capital for the average firm in the market. The ACCC's task is to set the cost of capital based on a regulated fixed line telecommunications supplier –the best proxy for which is Telstra itself given that it is supplying the regulated services in question.
- 9.75 Consistent with this the ACCC notes that:
- (a) The restrictions on foreign ownership of Telstra mean that its shareholder base is at least 65% Australian residents. Given that Australian residents receive a full offset of imputation against tax liabilities, including a rebate if those liabilities are zero, then it follows that the minimum reasonable value for theta is 0.65.
 - (b) That Telstra's actual payout ratio has been consistently close to 1.0 over the last 10 years (0.98).

¹⁶⁹ AER, 2014, ActewAGL distribution determination 2015-16 to 2018-19: Overview, Draft Decision, November, p.43

¹⁷⁰ The AER has published separate draft decisions for a number of network distribution operators. Refer to AER's distribution determination 2015-16 to 2018-19: Overview, Draft Decision, November 2014 – for ActewAGL, Ausgrid, Endeavour Energy, Essential Energy

¹⁷¹ The AER has published separate draft decisions for a number of network transmission operators. Refer to AER's transmission determination 2015-16 to 2019-20: Overview, Draft Decision, November 2014 – for Directlink, TasNetworks, TransGrid

¹⁷² AER, Draft Decisions, November 2014 – see ActewAGL, p.45; Ausgrid, p.46; Directlink, p.37; Endeavour Energy, p.46; Essential Energy, p.45; TransGrid, p.43

¹⁷³ AER, 2014, TasNetworks transmission determination 2015-16 to 2019-20: Overview, Draft Decision, November, pp.38-39

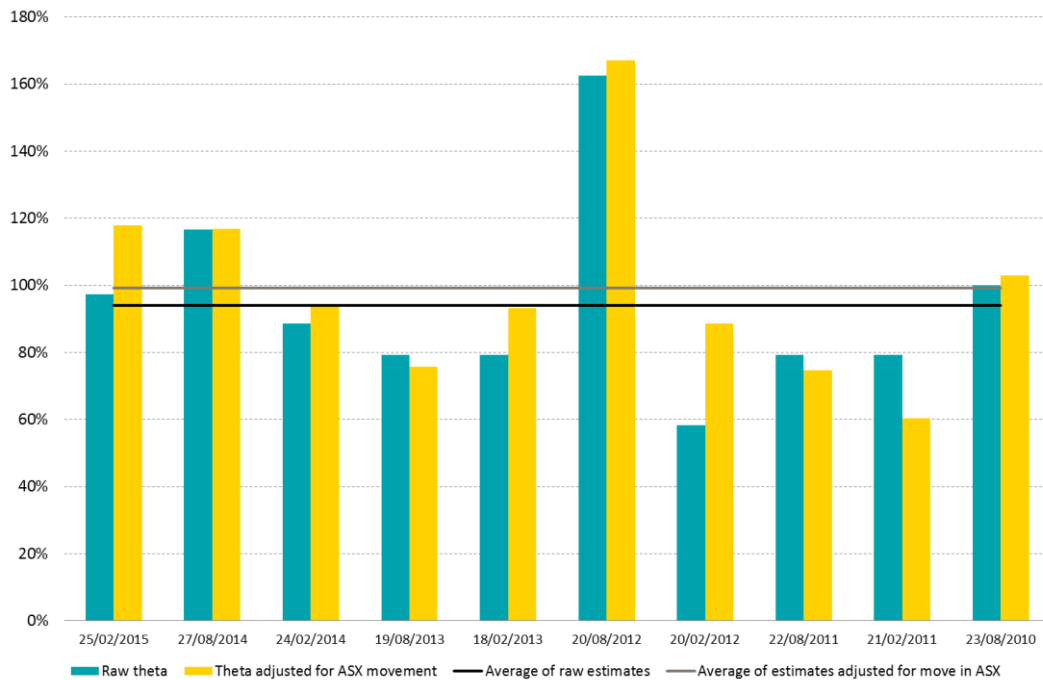
¹⁷⁴ SFG, *Updated dividend drop-off estimate of theta*, Report for the Energy Networks Association, June 2013, p.31.

¹⁷⁵ -0.70*0.35

- 9.76 However, the ACCC draft decision maintains a value for gamma of 0.45. This is despite its own analysis suggesting a value for gamma of at least 0.65 is appropriate (1.0×0.65).
- 9.77 It appears that the ACCC's reluctance to set a value of gamma at 0.65 or more appears to be due to some weight being given to the SFG estimate for theta. In Optus' opinion this is an error and zero weight should be given to the SFG estimate. The SFG estimate is an econometric estimate of the value of both cash dividends and franking credits from 2001 to 2012 for all firms listed on the ASX.
- 9.78 Putting aside the data problems associated with including all (including illiquid and thinly traded) firms listed on the ASX, the ultimate goal of such a study is to estimate the average value of imputation credits across a range of businesses with a range of different shareholders. This might be relevant if the ACCC's task was to estimate the cost of capital for the market as a whole. However, that is not the ACCC's task. The ACCC's task is to estimate the cost of capital for Telstra as the owner of a large regulated of fixed line telecommunications network.
- 9.79 The ACCC does not attempt to estimate beta for the market as a whole and then apply this to Telstra. That would be nonsensical. It is equally nonsensical to estimate the value of theta for the market as a whole and apply that to Telstra.
- 9.80 To this end, Optus has examined Telstra's dividend payments over the last 5 years. Based on this data, Optus estimates that the best estimate of the value that Telstra's shareholders place on imputation credits is the full face value of those payments (i.e., a value for theta of 1.0). In order to arrive at this estimate Optus has compared:
- (a) The change in the price of Telstra shares on each ex dividend date (measured as the opening price on the ex dividend date less the closing price on the trading day immediately before;
 - (b) The after personal tax value of cash dividends to shareholders; conservatively assuming an average personal tax rate of 20%; and
 - (c) The after tax value of imputation credits distributed with dividends.
- 9.81 Optus has found that the change in share price less the value of cash dividends (a-b) is consistently positive and averages around the same value as the after tax value of imputation credits (c). That is, the fall in the Telstra share price exceeds the after tax value of the cash dividend by an amount that is roughly equal to the after tax value of the imputation credits.
- 9.82 Optus has also performed the same calculation but instead of using the raw change in Telstra's price on the ex dividend data we have adjusted this for the change in the ASX200 over the same period.¹⁷⁶ Thus, if the ASX200 fell by 0.1% on the ex dividend date then we have assumed that the same underlying forces would cause Telstra's share price to have fallen by 0.1% even absent the ex dividend event.
- 9.83 Optus' results are summarised in the below figure.

¹⁷⁶ That is, the closing price the day before the ex dividend date and the opening price on the ex dividend date.

Figure 40 Theta estimates for telstra; last five years



Source: Bloomberg, Optus analysis

- 9.84 The data and calculations for our estimates are set out in figure 41 below. Even if we assume that the average personal income tax rate is 15%, which is rate of tax paid for earnings within superannuation¹⁷⁷ then the estimated value of theta is between 0.75 and 0.80.
- 9.85 This evidence strongly supports the ACCC’s conclusion that the value of theta should be between 0.65 and 1.0. In Optus view it supports an estimate at the top end of that range.

¹⁷⁷ This is also consistent with SFG’s range for the value of cash dividends at between 0.90 and 0.85 of their face value on average across the ASX. SFG, *Updated dividend drop-off estimate of theta*, Report for the Energy Networks Association, June 2013, p.31.

Figure 41 Calculations of annual value of franking credits

	Cash dividend (A)	Imputation credit (B)	After PYT value of cash dividend (C=A*(1-20%))	After PYT value of imputation credit (D=B*(1-20%))	Change in share price (E)	Change in share price adjusted for ASX movement (F)	Raw value of imputation credits = (E- C)/D	Adjusted value of imputation credits = (F- C)/D
25/02/2015	0.150	0.06	0.12	0.05	0.17	0.18	0.97	1.18
27/08/2014	0.150	0.06	0.12	0.05	0.18	0.18	1.17	1.17
24/02/2014	0.145	0.06	0.12	0.05	0.16	0.16	0.89	0.94
19/08/2013	0.140	0.06	0.11	0.05	0.15	0.15	0.79	0.76
18/02/2013	0.140	0.06	0.11	0.05	0.15	0.16	0.79	0.93
20/08/2012	0.140	0.06	0.11	0.05	0.19	0.19	1.63	1.67
20/02/2012	0.140	0.06	0.11	0.05	0.14	0.15	0.58	0.89
22/08/2011	0.140	0.06	0.11	0.05	0.15	0.15	0.79	0.75
21/02/2011	0.140	0.06	0.11	0.05	0.15	0.14	0.79	0.60
23/08/2010	0.140	0.06	0.11	0.05	0.16	0.16	1.00	1.03
Average	0.140	0.06	0.11	0.05	0.16	0.16	0.94	0.99

Source: Bloomberg, Optus analysis