Dalrymple Bay Coal Terminal User Group

Estimation of Gamma

22 August 2016

1 Background

The Queensland Competition Authority (***QCA***) has substantial experience with estimating gamma, including for the purposes of determining appropriate reference tariffs for each of the Aurizon Network and Queensland Rail rail networks and the Dalrymple Bay Coal Terminal.

The QCA's approach to estimating gamma was reviewed relatively recently in the QCA's Cost of Capital: Market Parameters paper of August 2014 (***QCA Market Parameters Paper***), and in more recent decisions in relation to each of the declared rail and port infrastructure services.

Following the Australian Competition Tribunal's (***ACT***) February 2016 decision in relation to gamma regarding certain electricity networks, the QCA commissioned Dr Martin Lally to prepare a review of the ACT's decision on gamma.

The QCA has now published the Review of the ACT's Gamma Decision (13 July 2016) prepared by Dr Lally and requested submissions on that review. The users of the Dalrymple Bay Coal Terminal (the ***DBCT User Group***) provide this submission as part of that consultation process.

Given that the QCA is also currently considering the 2015 draft access undertaking in respect of the Dalrymple Bay Coal Terminal (the ***DBCT 2015 DAU***) where the QCA's draft decision proposes a gamma of 0.47, the DBCT User Group also requests that:

(a) this submission be taken into account in the DBCT 2015 DAU consideration process; and

(b) the comments made on the estimation of gamma in section 6.10 of the DBCT User Group's submission of 8 July 2016 (in response to the QCA's Draft Decision on the DBCT 2015 DAU) also be taken into account in the current consultation on Dr Lally's review.

2 Context of the ACT Decision

In April 2015, the Australian Energy Regulator (***AER***) published its final decision on the allowed revenues for the NSW and ACT electricity businesses, Ausgrid, Endeavour, Essential Energy and ActewAGL for the 2014-2019 regulatory period. These decisions included a determination regarding the value of imputation credits (known as 'gamma') which is used to estimate each business' cost of corporate income tax.

Each business had previously proposed a gamma value of 0.25, a product of a distribution rate of 0.7 and a utilisation rate ('theta') of 0.35. The distribution rate applied was consistent with the AER rate of return guidelines (estimated with reference to all equity), and theta was estimated from implied market value studies that sought to infer from market prices the value to investors of distributed imputation credits.

The AER did not accept the business' proposed gamma of 0.25 and adopted instead a value of 0.4. In deriving this estimate, the AER developed a range of possible gamma values using multiple estimation approaches for both the distribution rate and theta. However, it placed most reliance on evidence from listed equity only in estimating the distribution rate, and the equity ownership method of estimating theta.[1]

This decision was overturned by the Australian Competition Tribunal (***ACT***) in February 2016, which considered that the AER did not provide sufficient explanation for measuring the distribution rate with reference to listed equity only, and that estimation of theta must rely on

[1] Australian Energy Regulator Final Decision: Endeavour Energy distribution determination 2015-16 to 2018-19 Attachment 4 – Value of imputation credits April 2015

implied market value studies. The ACT ordered the AER to remake its decision based on a gamma value of 0.25.[2]

However, in subsequent draft decisions for Victorian electricity businesses, the AER continued to apply a gamma value of 0.4. Responding to the Tribunal's decision in its July 2016 draft decision for Ausnet Services, the AER considered that the Tribunal erred in reaching its conclusion. The AER refuted a number of the ACT's positions, noting in particular that:

(a) there is no consensus amongst experts regarding the best approach to estimating gamma, and that the AER must therefore reach its own view on an appropriate value for gamma from amongst the alternatives;

(b) it considered the ACT to have erred on the meaning of 'the valuation of imputation credits' in the National Electricity Rules and National Gas Rules;

(c) it considered the ACT's view that the tax statistics approach could be used only as an upper bound for the purposes of ascertaining theta not to be correct; and

(d) even applying the ACT's reasons in relation to gamma does not automatically lead to a value of 0.25 for gamma.[3]

The AER sought advice on the issues raised by the ACT from Dr Martin Lally, a very strongly credentialed finance academic who has been a leading expert in the debate on imputation in both Australia and New Zealand. Dr Lally supported the AER's conceptual approach to estimating gamma, and the relative reliance it placed on different information sources.[4]

At the time of publishing its July decision, the AER had not completed the remittal of its final decisions for Ausgrid, Endeavour, Essential Energy and ActewAGL.

3 The Lally Review

Given that the ACT has decided that the gamma of 0.4 adopted by the AER in the distribution determinations for Ausgrid and others[5] should be replaced by a figure of 0.25 in those determinations, the DBCT User Group acknowledges it is appropriate that the QCA critically assess the reasoning applied by ACT to ensure that it does not require reassessment of the the QCA's approach to estimation of gamma.

Since the matters covered in the ACT decision are highly technical, such a review necessarily should be prepared by an industry consultant already specialising in that area.

To perform this reassessment, the QCA also engaged Dr Martin Lally. The DBCT User Group considers that Dr Lally is an appropriate expert for the QCA to consult to clarify whether the analysis upon which the ACT based their lower estimate requires a change to the QCA's estimate of gamma.

In the report prepared by Dr Lally[6], he raises serious concerns in relation to certain premises upon which the ACT decision was critically reliant.

Among other points, Dr Lally:

[2] Australian Competition Tribunal In the matter of applications by PIAC, Ausgrid and others 26 February 2016

[3] Australian Energy Regulator Draft Decision: AusNet Services transmission determination 2017-18 to 2021-22 Attachment 4 – Value of imputation credits July 2016

[4] Lally Gamma and the ACT decision May 2016

[5] Australian Competition Tribunal In the matter of applications by PIAC, Ausgrid and others 26 February 2016

[6] Lally Review of the ACT's gamma decision 13 July 2016

(a) challenges the assertion of the ACT that theta under the Officer model is a market value of imputation credits and that consequently the assessment of theta needs to be primarily based on methodologies that seek to assess the market value of credits. Dr Lally states that theta under the Officer model is an utilisation rate and that his favoured method of estimating that utilisation rate is analysis of equity ownership;

(b) expresses concerns in relation to the use of ATO data to estimate utilisation rates. Specifically he notes the significant unexplained variances in ATO data in relation to the redemption of credits; and

(c) expresses concerns in relation to the integrity of analyses of market prices (such as dividend drop off studies) to estimate the value of credits. Specifically, Dr Lally:

(i) states that such methods are "my least preferred method for estimating theta"; and

(ii) notes that “Such estimates are highly variable according to the type of market data that is used (with dividend drop-off studies being merely one such type), the choice of statistical model, the criteria for selecting data and the treatment of outliers in the data.”

In the executive summary of his report, Dr Lally expresses his view that the best estimate of distribution is *at least* 0.83 and that he favours the use of an estimate of theta of *at least* 0.6. The product of these two estimates implies an estimate of gamma of *at least* 0.49. In other words the lower bound of the gamma estimate Dr Lally considers is appropriate is in fact above the 0.47 estimate that the QCA has adopted in all recent decisions.

Dr Lally’s concerns in relation to the interpretation of ATO statistics is also consistent with the DBCT User Group's concern regarding the low level of utilisation proposed by the ACT. While the DBCT User Group has not performed detailed research in this area, it does not agree with the statement by the ACT[7] that a redemption rate of 0.43 (updated to 0.45) represents an upper bound for redemption based on ATO statistics. The DBCT User Group notes this statement is:

(a) inconsistent with advice by Dr John Handley (a leading authority on the interpretation of ATO statistics) to AER[8] that, based on similar data, the utilisation rate is within a range 0.4 to 0.7 with a preferred range of 0.5 to 0.6;

(b) inconsistent with the analysis by Hathaway[9] that 62.5% of credits distributed are redeemed. Derivation of lower estimates appears to be predicated on assumptions made in relation to an unreconciled amount of $100 billion on Franking Account Balances identified by Hathaway; and

(c) not aligned with ownership of equities within the Australian market.

4 Gamma estimates applied by other regulators

The QCA’s recent draft decision in respect of the DBCT 2015 DAU applies an estimate of 0.47 for gamma following rigorous consideration of detailed submissions and the extensive academic literature that has evolved over the period since 1987 when imputation was introduced in Australia.

[7] ACT Reason for Decision para 1059 - 1120

[8] Handley Advice on the Value of Imputation Credits 29 September 2014

[9] Hathaway Franking Credit Redemption ATO data 1988 – 2012 Where have all the credits gone? Draft October 2014

The DBCT User Group notes that other Australian regulators have considered similar detailed submissions and the same extensive academic literature and reached different estimates of gamma.

Set out in the table below are the most recent estimates of gamma by other Australian regulators:

Regulator	Determination or document	Date	Mid-point Gamma estimate
IPART	Review of imputation credits (gamma). Research – Final Decision	March 2012	0.25
OTER[10]	2015 price Determination Investigation- Regulated Water and sewerage services in Tasmania Final Report	April 2015	0.5
ACCC	Public Enquiry into final access determinations for fixed line services. Final decision	October 2015	0.45
ESC	Melbourne Water price review 2016 Draft Decision	March 2016	0.5
AER	Final decision Jemena distribution determination 2016 to 2020. Attachment 4 – Value of imputation credits	May 2016	0.4
ERA of WA	Final decision on proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline 2016-2020. Appendix 5 - Gamma	June 2016	0.4

The DBCT User Group considers that four important observations can be made based on the information in the above table:

(a) There remains diversity of view among regulators on the estimation of gamma and there is no clear consensus.

(b) The estimate of 0.47 derived by the QCA is within the range of estimates applied by regulators other than IPART.

(c) All six estimates were made subsequent to the ACT decision in May 2011 in relation to the application by Energex, Ergon and ETSA Utilities which determined a gamma of 0.25. Only IPART determined an estimate of gamma consistent with the ACT decision in 2011.

(d) Two regulators (AER and ERA) have estimated gamma at 0.4 subsequent to the ACT decision in February 2016 in relation to the application by PIAC, Ausgrid and others. One regulator (ESC) estimated gamma at 0.5 subsequent to the ACT decision in February 2016.

The QCA should consider the strong body of evidence provided by the above determinations by other regulators which have been made following consideration of similar detailed submissions and the same extensive academic literature as that addressed by the ACT.

[10] Office of the Tasmanian Economic Regulator

5 Jurisdiction and relevance of ACT

While the ACT reviews decisions of the AER, the ACT has no similar role in relation to decisions of the QCA. Decisions of the ACT are not in any way binding on the QCA, and therefore are merely another regulatory decision made following consideration of the same issues which should be considered alongside the decisions of other regulatory bodies.

However, as discussed in the DBCT User Group's submission of 8 July in respect of the DBCT 2015 DAU, the economic regulators noted in section 4 of this submission are typically better placed to reach an appropriate estimate than the ACT, because the ACT is faced with selecting from competing views based on the more limited evidence before it in the specific proceedings.

Accordingly, the QCA should be cautious in adopting an approach of the ACT which is so out of step with the estimates of other regulators formed after more thorough consultation and consideration processes.

6 Conclusions

The DBCT User Group considers that the review by Dr Lally has rightly:

(a) identified materials flaws in the methodology relied on by the ACT in reaching the gamma estimate of 0.25; and

(b) supported the continuing appropriateness of the QCA's existing methodology and approach to estimating gamma – if anything indicating that the QCA's estimation of 0.47 may in fact be too low.

The QCA's approach also continues to be within a reasonable range of the vast majority of other regulatory estimates to gamma.

Accordingly, the DBCT User Group continues to support as appropriate the QCA's existing approach to estimating gamma as set out in the QCA Market Parameters Paper and subsequent regulatory decisions, including in respect of the DBCT 2015 DAU.