Revised Regulatory Proposal

Supporting Information: Reurn on Capital (WACC)

Aurora response to the AER's Draft Distribution Determination

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1. Introduction

Aurora provided the AER with its *Regulatory Proposal* on 31 May 2011 in accordance with the provisions of Chapter 6 of the *Rules*. Aurora also set out its answers to the Regulatory Information Notice (RIN) issued by the AER on 21 April 2011 in its response (*RIN Response*) of 31 May 2011.

The AER have reviewed Aurora's *Regulatory Proposal* and *RIN Response* and provided Aurora with the AER's *Draft Distribution Determination*, associated consultant's reports and AER models on 29 November 2011 in accordance with the provisions of Chapter 6 of the *Rules*.

Aurora does not accept the AER's revised WACC value.

Aurora provides its *Revised Regulatory Proposal* to the AER in response to the AER's *Draft Distribution Determination* in accordance with the provisions of Chapter 6 of the *Rules*. This document provides specific supporting information as an appended attachment to Aurora's *Revised Regulatory Proposal*

2. Debt Risk Premium

2.1. AER's proposed method and rejection of Bloomberg

2.1.1. Bloomberg should continue to be used to derive the Debt Risk Premium (DRP)

Aurora notes that the AER has changed its method for estimating the DRP and dispense with the use of the Bloomberg fair value curve. The AER proposal is to instead derive the DRP as a simple average of the debt risk premia for the Australian corporate bonds on issue that have a term of between 7 and 13 years. Aurora has significant concerns about the AER's method, and the application of that method.

As discussed below, Aurora considers that the Bloomberg curve has a series of significant advantages over the AER's proposed method and should continue to be applied to derive debt risk premia for regulated businesses. The Australian Competition Tribunal has endorsed the Bloomberg fair value curve as an appropriate benchmark for estimating the DRP, including that it appears to be accepted by the market as providing accurate yield estimates[1].

Much of the AER's criticism of the ability for Bloomberg to 'follow the market' is explained by the fact that Bloomberg understated the cost of debt between late 2008 and the end of 2009. PricewaterhouseCoopers showed this in a report that was submitted to the AER approximately two years ago[2]. The AER does place weight on Bloomberg's statement that it is not intended to be a source of 'predictive pricing information'[3]. However, the letter provided by Bloomberg[4] does state that its curves are 'intended to indicate if a bond is trading rich or deep as compared to peer bonds (as defined by the curve)'. This is the purpose of the Bloomberg curve when being used for setting the DRP. It could be interpreted that Bloomberg considers that its curve was not intended to predict beyond the range of its data inputs.

The main advantage with the Bloomberg curve is that it is an observable benchmark that is simple to apply. In addition, the Bloomberg service imposes a series of tests to ensure that the data that it applies is of sufficient quality. It is this 'screen' that has led to its currently percived problems (namely that it has not included all of the new bonds that have been issued, and so has been interpreted as ignoring relevant information).

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[1] The Tribunal decided that both the Bloomberg and CBASpectrum fair value curves were 'widely used and market respected' in the ActewAGL decision (this is the implication of paragraphs 78 and 80, Application by ActewAGL Distribution [2010] ACompT 4).

[2] PricewaterhouseCoopers, Victorian Distribution Businesses – Methodology to Estimate the Debt Risk Premium, November 2009.

[3] Draft Distribution Determination Aurora Energy November 2011, Sect 9.3, p. 219.

[4] Bloomberg, "LETTER TO THE AER", October 2011, p.1.

Aurora considers that these two points together create a particular strength for Bloomberg. The fact that the Bloomberg curve is observable and that Bloomberg is careful as to how new evidence is taken into account means that it has been feasible (at least prior to the GFC) to commit to using the Bloomberg curve in advance without requiring a detailed analysis of the outcomes in a particular averaging period.

In contrast, the reliability of the outcome provided by the AER's method is questionable. The method is highly dependent on the quality of the bonds that are present at any point in time, and on that sample having an average credit rating and term that approximate to the SORI requirements.

Aurora has concerns with a number of the bonds that the AER has used in its sample, which is set out further below. Aurora also notes that it is conceivable that more Australian bonds (or bonds that the AER interprets as Australian corporate bonds) may be issued prior to Aurora's averaging period, which could have a material impact on the outcome. If the AER seeks to incorporate new bonds into the sample that is then used to determine Aurora's DRP, then Aurora considers that this would amount to a change in the method the AER has applied and that Aurora would be denied due process if it is not provided with an opportunity to comment on the applicability of the new bonds that the AER proposes to include in the sample.

Aurora considers it reasonable to continue to rely on estimates based on the Bloomberg fair value curve as the primary methodology to estimate a DRP.

2.1.2. The AER has made errors when applying its own method

Aurora considers that the AER has made a number of errors in applying its methodology, which results in the DRP being underestimated. The main errors were to include a foreign issued bond in the sample and to include a series of bonds that its own adviser has concluded to be non-representative. These matters are discussed in section 1.3.

Aurora also notes, that should the AER infer the DRP directly from observed bond yields (rather than using a published fair value curve), then there may be benefit from applying more sophisticated econometric techniques to estimate the premium for 10 year BBB+ bonds. The analysis contemplated by Aurora would involve using statistical methods to more rigorously estimate how the term and credit rating of bonds affect the DRP. The potential for more sophisticated analyses to yield a benefit would remain whilst it remains necessary to use bonds that have a term that is materially different to 10 years and a credit rating from bands other than BBB+ when estimating the premium for 10 year BBB+ debt. However, it has not been possible for Aurora to undertake such analysis in the limited time provided to respond to the AER's *Draft Distribution Determination*.

2.2. Debt Risk Premium estimates applying the Bloomberg fair value curve

Adopting the averaging period utilised as a component of AER's *Draft Distribution Determination,* the Bloomberg fair value curve provides an estimate of 377 basis points for 7 year debt in the BBB credit rating band. Aurora has applied a matching bonds methodology to extrapolate this value to 10 years. The paired bonds methodology was applied by PricewaterhouseCoopers in advice it provided to Powerlink. This approach was criticised by the AER due to the fact that for many of the pairs of bonds used in that analysis the term differential did not approximate the 5 to 10 year or 7 to 10 year term differential that was of interest[5]. To respond to this criticism, Aurora has estimated the annual increment in the DRP by reference to two pairs of matched bonds with relatively long terms to maturity. These matched pairs of bonds were for Telstra (rated A, it has two bonds with approximately 5 and 9 years remaining to maturity), and Stockland (rated A-, it has two bonds with approximately 3.5 and 9.3 years remaining to maturity). Over the averaging period the average annual increment in DRP between these two pairs of bonds was 9 basis points. Aurora has applied this annual increment to the Bloomberg 7 year value of 377 basis points to obtain an estimated DRP of 401 basis points for 10 year BBB+ rated debt during the draft decision averaging period.

To provide an updated view of the debt market, Aurora has also examined an averaging period covering the 20 business days up to 20 December 2011. For this averaging period the Bloomberg fair value curve provides an estimate of 369 basis points for 7 year debt in the BBB credit rating band. Over the later averaging period the average annual increment in DRP between these two pairs of bonds was again found to be 9 basis points. Aurora applied this annual increment to the Bloomberg 7 year value of 369 basis points to obtain an estimated DRP of 398 basis points for 10 year BBB+ rated debt for the averaging period to 20 December, 2011.

2.3. Debt Risk Premium using the AER's method

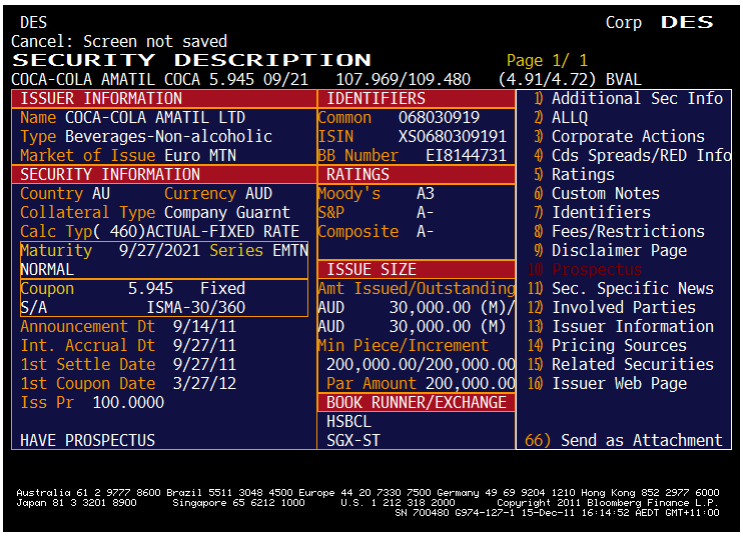
2.3.1. Composition of the AER sample

Aurora has a number of concerns with the sample of bonds that the AER has considered for the purpose of deriving the DRP.

Aurora believes that the inclusion of the Coca Cola Amatil bond is contrary to the Rules requirement to have regard to Australian corporate bonds. This bond was issued in Europe, as confirmed by the screen shot from Bloomberg shown in figure 1.

[5] See AER, Draft decision – Powerlink Transmission determination 2012-13 to 2016-17, November, 2011, p. 235, where the AER's critique of PwC's report is discussed. Also see, PwC, Powerlink, Methodology to estimate the DRP, April, 2011.

Figure 1: Bloomberg screen shot.



Aurora also notes that a review of the DRP suggests that this bond is an outlier and should have alerted the AER to the potential for the bond not to be representative. Aurora is concerned that such a bond was allowed to flow through to the AER's *Draft Distribution Determination*.

The AER's sample also includes a series of SPI bonds. Notwithstanding the fact that its adviser, Oakvale Capital, advised that the market does not treat bonds issued by SPI as representative of its credit rating (A- in this case), but rather attributes substantial value to the Singapore Government's ownership of SPI.

It is noted for completeness that the concerns that Oakvale Capital expressed with the DBCT bonds, concerning its instability while under its previous ownership prior to Brookvale becoming owner, related to events in 2009, and now cannot have any influence in the bond's current pricing.

Aurora considers that both the Coca Cola Amatil bond and SPI bond should be removed from the sample.

2.3.2. Estimation of the debt risk premia for the bonds on issue

Aurora has also checked the completeness of the bonds that the AER included in its narrow and larger sample and the debt risk premia that the AER published.

Within the sample, Aurora found only one bond for the extended sample that the AER omitted. This was a fixed rate bond that Sydney Airport issued (19 May 2011 and maturing 6 July 2018).

In relation to the debt risk premia quoted by the AER, Aurora has replicated most of the AER's estimates. Aurora found errors (with both positive and negative outcomes) for four of the bonds. Aurora considers that these errors were not material to the outcome.

The quoted DRP for the Coca Cola Amatil bond was not checked given that it was not an Australian issue. Aurora also notes that, for some of the bonds there was substantial disagreement between the different information sources as to what the prevailing market yield for the bond actually is. This is reflective of the effects of continued low levels of trade in the corporate bond market, which suggests that caution needs to be exercised when interpreting the corporate bond information.

The table 1 sets out the estimated debt risk premia for each bond and the averages for the samples discussed above, with the bonds above the dashed line being those with terms between 7 and 13 years.

Table 1. DRP for the 20 day averaging period to 14 October, 2011 (basis points)

Bond	AER's estimate	Aurora's estimate	Source of AER error	Maturity	S&P Credit rating	Type of bond
APT	303	303		22/07/2020	BBB	Fixed
Brisbane Airport	264	314	Used BVAL not BGN	9/07/2019	BBB	Fixed
Sydney Airport	377	377		20/11/2021	BBB	Floating
Sydney Airport	386	386		11/10/2022	BBB	Floating
Brisbane Airport	426	426		9/06/2021	BBB+	Floating
Brisbane Airport	369	360	Used incorrect CGS	12/12/2022	BBB+	Floating
Coca Cola Amatil	142	142	Euro issue	27/09/2021	A-	Fixed
SPI E&G C	263	249	Only used Bloomberg	1/04/2021	A-	Fixed
Stockland	297	297		25/11/2020	A-	Fixed
Transurban	372	373		10/11/2017	A-	Floating
Syd Airport	n/a	301		6/07/2018	BBB	Fixed
SPI	218	219		25/09/2017	A-	Fixed
DB RREEF	306	325	Used BVAL not BGN	21/04/2017	BBB+	Fixed
DBCT	444	443		9/06/2026	BBB+	Floating
7 to 13 years with CCA (AER)	314	317				
7 to 13 years (Aust only)	336	339				
5 to 15 years (Aust only)	335	336				
7 to 13 years (Aust, no SPI)	**346**	**352**				
5 to 15 years (Aust, no SPI)	**354**	**355**				

Source: Bloomberg, UBS, RBA, AER, Aurora's analysis

2.3.3. Conclusion on DRP applying the AER's methodology to the draft decision averaging period

Aurora considers that this analysis implies that for the *Draft Distribution Determination* averaging period the DRP should be 336 basis points. A result achieved by eliminating the European issued Coca Cola Amatil bond. For the more appropriate sample (that is, with the pseudo-sovereign SPI bond removed). It is approximately 355 basis points. Aurora considers that a proper application of the AER's proposed method would have resulted in a DRP of 355 basis points for the *Draft Distribution Determination* averaging period. For the avoidance of doubt, Aurora considers that the AER should have continued to apply the Bloomberg method and applied a DRP of 401 basis points during the averaging period.

2.3.4. Debt Risk Premium applying the AER's methodology to an averaging period covering the 20 business days to 20 December, 2011

Aurora has also applied the AER's methodology to a subsequent averaging period covering the 20 business days to 20 December 2011. For this analysis Aurora has excluded the Coca Cola Amatil bond, and has included a new BBB+ rated Caltex bond. This bond was recently issued at a 7 year term to maturity. For this updated averaging period Aurora finds that including the SPI bonds a DRP of 345 basis points is indicated. Excluding these bonds, which are inappropriate due to the shareholding of the Singapore Government, a DRP of 364 basis points is estimated. The data used in this calculation is presented in table 2.

Table 2: DRP for the 20 day averaging period to 20 December, 2011

Bond	Aurora's estimate	Maturity	S&P Credit rating	Type of bond
APT	321	22/07/2020	BBB	Fixed
Brisbane Airport	276	9/07/2019	BBB	Fixed
Sydney Airport	391	20/11/2021	BBB	Floating
Sydney Airport	398	11/10/2022	BBB	Floating
Brisbane Airport	441	9/06/2021	BBB+	Floating
SPI E&G C	254	1/04/2021	A-	Fixed
Stockland	333	25/11/2020	A-	Fixed
Transurban	394	10/11/2017	A-	Floating
Syd Airport	323	6/07/2018	BBB	Fixed
SPI	251	25/09/2017	A-	Fixed
DB RREEF	327	21/04/2017	BBB+	Fixed
DBCT	446	9/06/2026	BBB+	Floating
Caltex	354	23/11/2018	BBB+	Fixed

Bond	Aurora's estimate	Maturity	S&P Credit rating	Type of bond
7 to 13 years (Aust only)	345			
5 to 15 years (Aust only)	347			
7 to 13 years (Aust, no SPI)	360			
5 to 15 years (Aust, no SPI)	364			

Source: Bloomberg, UBS, RBA, Aurora's analysis

2.4. Conclusion on the DRP

Aurora considers that best estimate of the 10 year BBB+ DRP is obtained by reference to the Bloomberg service, which is widely accepted in the market as providing accurate yield estimates. For the averaging period applied by the AER in its *Draft Distribution Determination* a DRP estimate of 401 basis points is obtained by adding a 9 basis points per annum annual increment to the DRP obtained from the Bloomberg 7 year fair value curve. For a second averaging period covering the 20 days to 20 December 2011 a DRP of 398 basis points would have been appropriate to adopt. The estimate of 398 basis points has been similarly estimated by applying the Bloomberg fair value curve at 7 years (369 basis points), extrapolated to 10 years by adding the annual rise in the DRP estimated from an analysis of paired bonds with long terms to maturity.

Aurora found that for the averaging period used in the draft decision, using the AER's methodology but adjusting for technical and methodological errors, a DRP of 355 basis points should have been estimated. Similarly, for the later averaging period to 20 December, 2011, a DRP of 364 should have been derived under the AER's approach if it were appropriately applied.

Aurora notes that the AER will update the premium prior to the final decision by taking an average over the agreed averaging period and that there is the potential for additional bonds to be issued prior to that date. Should the AER seek to apply its current estimation methodology and expand the sample of bonds beyond that was discussed above, Aurora considers this will amount to a change to the method for deriving the DRP. Aurora will therefore be denied due process if it is not provided with a reasonable opportunity to comment upon the appropriateness of any new bonds.

The DRP for this *Revised Regulatory Proposal* based on the Bloomberg fair value curve is estimated as 398 basis points.

3. Risk Free Rate

3.1. AER draft decision and the legal question

The AER has concluded that it is bound to apply the agreed averaging period to determine the risk free rate, irrespective of the state of capital markets at that time. The recent Federal Court decision in ActewAGL's application for judicial review was quoted in support of this view[6].

Aurora notes that the AER's view of its powers in this regard and on the relevance of the Federal Court decision is contrary to Aurora's interpretation of the decision. Aurora notes that ActewAGL's building block proposal was submitted before the AER issued its SORI, which in effect entirely replaces clause 6.5.2(c) of the Rules in relation to the determination of the risk free rate (in accordance with clause 6.5.4 of the Rules). The Rules, in turn, provide the AER with the ability to depart from a method that is set out in the SORI if "there is persuasive evidence justifying a departure"[7].

Aurora considers that there is persuasive evidence to depart from the method for deriving the risk free rate that is set out in the SORI and that the AER should therefore consider these matters. Equally, the manner of determining the averaging period for the risk free rate (as set out in the SORI) is a matter that could be departed from on this basis. Aurora considers that it would be contrary to the purpose of the discretion in clause 6.5.4(g) for the AER to refuse to consider an alternative proposal from Aurora on the basis that the SORI itself prevents the AER from reviewing a previously agreed period.

Further, the specific issue before the Court in the ActewAGL case was whether, once the AER had specified an averaging period, it could subsequently alter that period in circumstances where the specified period had already concluded. Aurora previously sought the AER's agreement to reconsider an agreed averaging period prior to it commencing. Aurora considers that it is entirely consistent with clause 6.5.2(c) (and the corresponding provisions in the SORI) that the distributor and the AER should be able to agree to a revised averaging period at any time before its commencement.

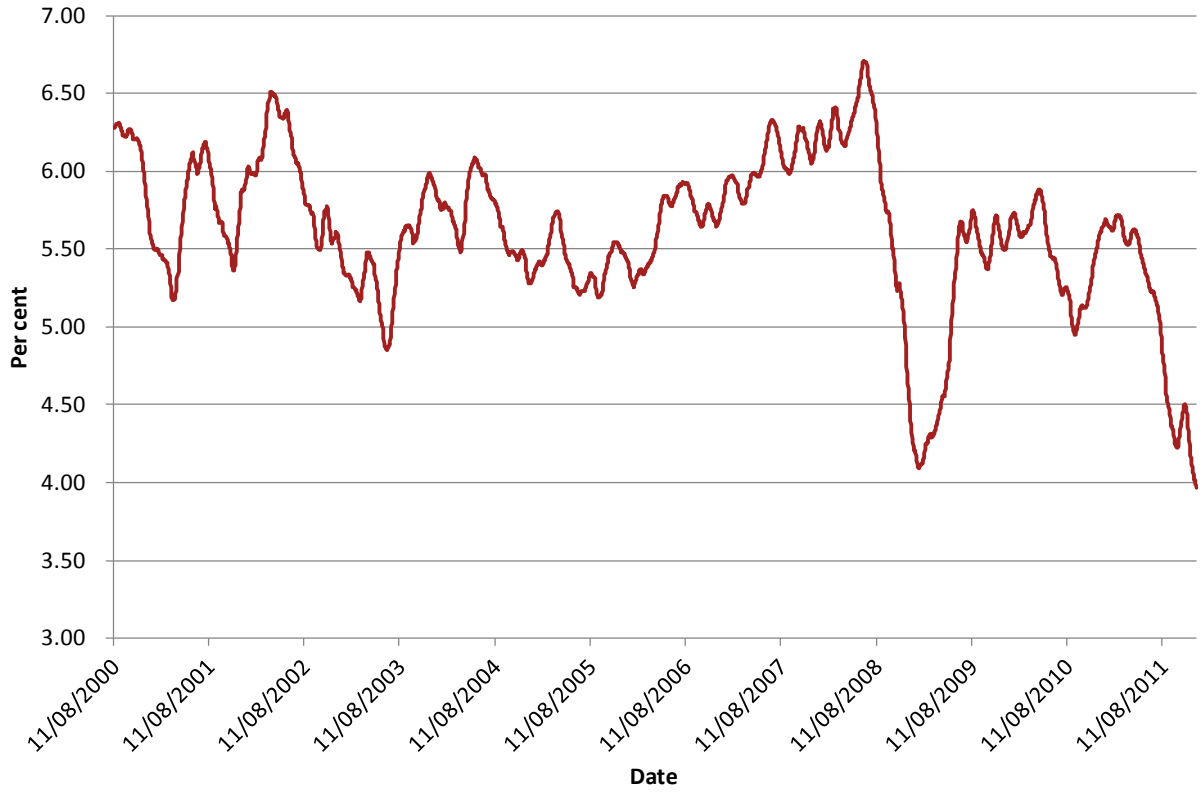
Aurora considers that at the current point in time, there is persuasive evidence to depart from the method for deriving the risk free rate that is set out in the Rules and that the AER is obliged to consider these matters.

[6] ActewAGL Distribution v The Australian Energy Regulator (2011) 195 FCR 142
[7] clause 6.5.4(g)

3.2. Recent performance of the risk free rate (RFR)

It is indisputable that the interest rates on current 10 year Commonwealth Government Securities (CGS) are at extremely low levels compared to the levels that are normal in the context of history. Figure 2 demonstrates that since 2000, prior to the Global Financial Crisis, 10 year CGS hovered around 5.5 per cent;[8] however, soon after the collapse of the Lehman Brothers Bank in September 2008, rates dropped below 4 per cent (the low point for the 20 day moving average, as shown in figure 2, was slightly higher at 4.1 per cent).

Figure 2: 20 day moving average of 10 year CGS.



While CGS increased back to normal levels towards the end of 2009, it is now clear that the recovery in world financial markets was an 'Indian summer'. Financial market conditions once again deteriorating from April 2011 as problems with the financial health of a number of European countries deteriorated.

[8] Two dates that are often used as approximate starts for the GFC are 1 June 2007 (which was just before issues with US subprime mortgages first emerged) and 1 September 2008 (which was just prior to the collapse of the Lehman's Brothers Bank). The average rates on 10 year CGS between 1 January 2000 and 1 June 2007 and 1 September 2008 were 5.67 per cent and 5.76 per cent, respectively.

Additionally the recent failure of the German government to sell its €6 billion worth of loans effectively froze the global markets in November 2011.[9] Ralph Norris, Commonwealth Bank CEO stated that:[10]

> *"This [European debt crisis] has potential to be significantly worse than the Lehman Brothers collapse and the subprime crisis because now we are talking about nation states"*

With this deterioration in Europe, rates on 10 year CGS have once again plummeted to historical lows. The rate for the 20 business days to 20 December 2011 of 3.96 per cent being commensurate with that which was experienced in the earlier stages of the GFC.

3.3. Implications of the extremely low CGS for the WACC

Irrespective of the performance of the *real economy* in Australia, Equity and debt markets operate in the financial market which are integrated with world financial markets, which has largely weathered the storm associated with the GFC, due to the cushioning impact of strong underlying demand for mineral resources from developing Asian countries. This world financial market influence is evidenced by the two historical lows in the yields on 10 year CGS. The first of these falls in the 10 year CGS was in 2008-09 during the global financial crisis. The second is occurring currently, due to the world sovereign debt crisis. During these two periods there has been a "flight to quality" in global financial markets. This has seen capital attracted to Australian CGS, given the political stability of the country, and a relatively strong Australian dollar. These exceptional levels of demand for Australian CGS have been manifested in rising prices and plummeting CGS yields.

The European crisis has had a material impact on the Australian financial markets and its flow on implications for the estimation of the cost of capital in Australia. Put simply, if the current interest rates on 10 year CGS are used in the CAPM formula it would predict that the cost of equity for a regulated DNSP would have fallen by more than 100 basis points since the start of the GFC. This is not an appropriate proposition in this period of almost unprecedented global financial market turmoil, intuition would suggest that the cost of equity would have risen at this time and not fallen as demonstrated by the CAPM.

The challenge for the estimation of the cost of equity is that, during present times, when government bond rates fall, the market risk premium (MRP) does not remain at long term average (or normal market levels). The MRP increases by an amount that is at least necessary for the estimated cost of equity not to be lower during the crisis fall It is considered that an even larger increase in the premium should be expected in line with intuition that the cost of equity should rise during a crisis. It is noted that the AER has proposed simultaneously *lowering* the MRP at the same time that it uses a historical low risk free rate in its CAPM calculation.

[9] Sydney Morning Herald, GFC II on its Way: Norris, 25 November 2011.
[10] Sydney Morning Herald, GFC II on its Way: Norris, 25 November 2011.

Professor Robert Officer described the risk for error when the MRP and RFR are not set over the same time period:[11]

> *"If MRP is set at an 'average or normal level' which is representative of a long run mean or expected value over the long term and R_{ft} is at a low level, such as exists at the moment, this will under-estimate the return to equity $E(R_e,t)$ and penalise the regulatory entity, and conversely when R_f is at a 'high level'. Therefore, setting the parameters on the basis of different time periods when one is set at the current time may lead to greater error than if they were both set on the basis of the current same or 'normal' time period even though this is not representative of the current period."*

Professor Officer describes three outcomes for the cost of equity based on the way the MRP and RFR are estimated.[12]

> *"Noting the comments above, in estimating the parameters of the CAPM and having regard to the evidence of current MRP and R_f, there are three possible outcomes:*
>
> *a) if the MRP and the R_f were both estimated in current market conditions, then the estimated cost of equity would reflect the likely cost of equity over the next regulatory period and is likely to be much higher than the long term average …;*
>
> *b) if the MRP and the R_f are both estimated over the a long term, or reflect, a more "normal" period, then they will result in a cost of equity that is comparable to the long run cost of equity, which is believed to be below the current required return to equity …;*
>
> *c) if the MRP is based on a long term average and the R_f is set reflecting current conditions where R_f are at abnormally low levels then the resulting cost of equity will be set below average or normal market conditions and well below what is likely to be required in the current market for returns on equity …"*

Professor Officer went on to say:[13]

> *"Regarding my conclusion in paragraph (c) above, I do not consider that such an estimate is likely to provide an unbiased value for the current cost of capital for a company. I do not think that current market conditions are requiring a below average cost of capital, in fact, quite the reverse when we look at the discount being required for rights and similar attempts at raising equity capital."*

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[11] R.R.Officer, (16 February, 2009), Expert Report prepared in respect of certain matters arising from the AER'sNew South Wales Draft Distribution Determination 2009-10 to 2013-14, Prepared for Energy Australia, para.25.
[12] R.R.Officer, (16 February, 2009), Expert Report prepared in respect of certain matters arising from the AER'sNew South Wales Draft Distribution Determination 2009-10 to 2013-14, Prepared for EnergyAustralia, para.33.
[13] R.R.Officer, (16 February, 2009), Expert Report prepared in respect of certain matters arising from the AER'sNew South Wales Draft Distribution Determination 2009-10 to 2013-14, Prepared for EnergyAustralia, para.34.

A similar view has recently been put forward in the Joint Expert Report that the ENA commissioned on WACC matters in response to the AER's current rule change proposal:[14]

> *"In our opinion, when applied during periods of extreme uncertainty, the combination of a MRP determined by reference to long term historical data and a risk free rate determined by reference to present day market conditions results in a return on equity value that does not meet the overarching principle of being commensurate with the current market conditions. Rather, in such circumstances, a material increase in the present date MRP would be predicted. This conclusion is consistent with the observations of the RBA in its March 2009 Financial Stability Review:*
>
> > *The global financial system has continued to experience significant stress. … A notable feature of the current crisis has been a marked increase in the price of risk, after risk had been underpriced in many markets for a number of years. This repricing of risk has resulted in large falls in the price of many financial assets, often by considerably more than can be explained by changes in the expected underlying cash flows."*

Similar sentiments were expressed by Professors Franks and Myers in their advice to the New Zealand Commerce Commission on whether it should change its estimate of the MRP as a result of the GFC:[15]

> *"Professor Myers recommends that the Commission sets a range for the MRP. The bottom of the range for the MRP should be 5%. The top of the range should be a long-term historical arithmetic average MRP over long-term government bond returns. This range for the MRP implies a range for the TAMRP. The Commission should use the top of the range for the TAMRP until the world economy returns to normalcy and stable growth… Professor Franks recommends that the Commission consider a small increase of 0.05% to 1% to the TAMRP estimate but it would take the form of a temporary surcharge."*

Further, the potential for the use of a measure of the RFR drawn from an unrepresentative period to lead to an incorrect estimate of the cost of capital has been observed by the Australian Competition Tribunal:[16]

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[14] Balchin, J., Dermody, C. and G. Houston, 2011, Joint Expert Report on WACC issues – Report for the ENA, pp.18-19 (quoting RBA, Financial Stability Review, March 2009, page 1).

[15] J. R. Franks, M. Lally and S. C. Myers, 2010, Recommendation to the New Zealand Commerce Commission on whether or not it should change its previous estimate of the tax adjusted MRP as a result of the recent global financial crisis, pages 4 and 8. The acronym 'TAMRP" refers to the tax adjusted MRP. The form of CAPM that is common in New Zealand differs from the version the AER applies (the New Zealand version, referred to as the Brennan Lally CAPM, incorporates capital gains tax and imputation tax assumptions) and as a consequence the MRP input requires modification.

[16] Application by Telstra Corporation Limited ABN 33 051 775 556 [2010] ACompT 1 (10 May 2010), para 422.

> *"The Tribunal notes that the use of the WACC formula is only a means to an end, which is to estimate the required rate of return for an investment with certain characteristics of riskiness and debt. That rate of return is unlikely to vary greatly over the short to medium term, and should not therefore be overly subject to the vagaries of short-term movements in parameters such as market interest rates. Both the access provider and the ACCC should keep these facts in mind to ensure that they do not, by lighting on parameter values that are unrepresentative, end up with a rate of return that is inappropriate for its purpose." [emphasis added]*

By proposing a long term MRP of 6.0 per cent, and the currently observed (short term) RFR, the AER will underestimate the rate of return required in the market place for funds during a period of severe disruption in financial markets. By applying the CAPM mechanistically with the proposed MRP and this short term RFR, the AER will provide a significantly lower return on equity to Aurora, relative to the same class of Australian assets. This is simply due to the timing of this decision coinciding with a period of high market volatility and the lowest observed risk free rate since the lowest point reached during the global financial crisis. This would create a distortion in the market. It would distort investment decisions, as the appropriate rate of return would not be achievable in Tasmanian electricity distribution relative to the returns being earned in the same activity in other jurisdictions. The AER in fulfilling the National Electricity Objective, should allow Aurora to earn a similar return to equity that was provided in decisions relating to other DNSPs, as Aurora has a similar mix of assets and is subject to a similar degree of non-diversifiable risk as the other DNSPs.

Aurora notes that in a recent decision, IPART recognised that current events in world financial markets are affecting Australia's CGS market. IPART indicated that this has depressed the risk free rate relative to the long term average, and that an adjustment must be made to the risk free rate (or equivalently to the WACC as a whole) to compensate for the effect. IPART's key deliberations on this matter were as follows:[17]

> *"We determined the values for the parameters of the WACC based on market conditions over the 20 days to 28 October 2011. The risk free rate and debt margin have been affected by market volatility and the prolonged weak market following the credit crisis of 2008. The change in these factors has potentially created a disparity between these parameters (for which we use short term average data) and the MRP (for which we use long term average data).*
>
> *However, the effects of this disparity are mitigated by our decision to use a point estimate of 6.7%, which is 80 basis points higher than the midpoint of our estimated WACC range. In doing so, we had strong regard to the calculated WACC using longer term averages for market parameters."*

It further elaborated upon its approach as follows:[18]

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[17] IPART (2011), Review of water prices for Sydney Desalination Plant Pty Limited: Final Report, December, p.80.
[18] IPART (2011), Review of water prices for Sydney Desalination Plant Pty Limited: Final Report, December, pp.93-94.

> *"For this review, we consider that the value of the risk free rate is currently well below long term averages and that there is a high level of market uncertainty. We consider the risks in setting a 5-year determination in the current conditions are more significant than under normal market conditions.*
>
> *We acknowledge the argument that there may be greater stability in the sum of the market risk premium and the risk free rate (ie, the expected market return) than in the individual components. In the current market circumstances, there is some evidence, as SDP noted, to support the view that expectations for the market risk premium have risen as bond yields have fallen. However, it is difficult to measure these short term variations in expectations for market risk premiums. SDP's advisors have developed an approach for addressing this which is interesting, but we consider it requires further testing and observation over time. An alternative approach is to look at the long term averages as a reference point for the sum of the market risk premium and risk free rate.*
>
> *Therefore, to guide our decision-making on the point estimate for the WACC, we estimated the long term averages of the risk free rate, inflation rate and the market risk premium. We found that using these long term averages, the WACC range would be 5.9% to 7.8% with a midpoint of 6.7% (Table 9.5). This midpoint is 80 basis points higher than the midpoint of the range we determined for the WACC using short term averages for these parameters, but still within this range."*

It is noted that the long term average that IPART adopted for a 5 year Commonwealth Government Security was 5.4 per cent.

3.4. Proposed approach

Aurora considers it appropriate for protections to be put in place to ensure that its WACC is not biased away from the true value on account of this market uncertainty.

The implication of the discussion above is that there is a choice between two equivalent measures to ensure that the cost of equity that is estimated during a period of market uncertainty is appropriate.

- **Option 1: Current MRP and current risk free rate**

  Adopt an MRP that reflects the current market environment. This 'current value' would be expected to be higher than the 'normal market' value by an amount that is at least sufficient to correct for the drop in the risk free rate compared to its long term average. Intuition suggests that it should be somewhat higher, reflecting the expectation that the cost of equity would be higher during times of market uncertainty.

- **Option 2: Long term MRP and long term risk free rate**

  Adopt a risk free rate value that reflects a long term average value, as IPART recently has done. A higher MRP could also be adopted under this approach to reflect the fact that the cost of equity in times of market uncertainty is likely to be higher than in a more stable environment.

As a practical matter, Aurora proposes the second of these approaches, using a RFR that is at least equal to the long term average value for this parameter. As noted above, the long term average between the start of 2000 to the GFC was approximately 5.5 per cent, which Aurora considers is an appropriate value to apply. It is noted that this value is also consistent with that adopted by IPART in its recent decision (noting that IPART's long term value of 5.4 per cent was for a five year risk free rate).

The RFR for Aurora's *Revised Regulatory Proposal,* estimated in the manner described in option 2, is 5.5 per cent.

4. Market Risk Premium

4.1. AER draft decision

In its draft decision, the AER has concluded that there is persuasive evidence to reduce the MRP from the value that the AER adopted in its SORI of 6.5 per cent to 6 per cent. As noted above, the AER has decided on this change notwithstanding that the RFR of return during the averaging period used for the its *Draft Distribution Determination* is at a level commensurate with what was observed during the 'flight to quality' that was observed during the worst of the GFC.

Aurora also notes that the AER has stated that Aurora has not providing material in its regulatory proposal in support of adopting the value the AER determined in the SORI value. Aurora considers that this is an unusual and surprising statement given that the intention of the SORI process is to reduce the administrative cost of regulation by avoiding the need for each parameter to be reargued at each review. Indeed, the AER has criticised DNSPs for seeking to reopen SORI values during price reviews and referred to that behaviour as 'cherry picking':[19]

> *"For many parameters, the current rule framework in chapter 6 provides for the AER and DNSPs to be in continual 'WACC review' mode where considerable resources are spent at every determination process re-examining issues. The incentive for DNSPs to argue with the AER has also resulted in reviews by the Australian Competition Tribunal in pursuing a level of precision which can only be considered spurious in the context of many WACC parameters. Moreover, where the AER has undertaken a thorough review in the context of chapter 6A and made an overall decision which reflects the views and interests of all stakeholders, it remains open for DNSPs to cherry pick those component parameters of the WACC which they consider unfavourable for them. This process detracts from the AER's ability to adequately consider the resulting overall rate of return."*

The core proposition of the AER's analysis is that the weight of evidence suggests that financial markets have returned to normal since the GFC. The AER has also referred to a regulatory consensus for a MRP of 6 per cent, and has referred to more recent evidence This more recent 'evidence' stems from excess returns (including the AER's apparent decision now to also look at geometric averages of returns, thus contradicting its SORI decision) and dividend growth measures. Aurora considers that some of this evidence is not new and cannot justify a change, or otherwise contains errors and cannot be considered 'persuasive'. The reasons for this are set out below.

[19] AER, 2011, Economic regulation of transmission and distribution network service providers Rule change proposal, p.65.

4.2. The AER's evidence for a change is not persuasive

4.2.1. Evidence on financial market outcomes

Aurora notes that the recent Joint Expert Report that the ENA commissioned on WACC matters in the context of the AER's current rule change proposal set out in some detail evidence and secondary opinions about the ongoing effects of the GFC (with the current incarnation reflecting the ongoing European debt crisis).[20] Aurora incorporates that evidence into this submission.

In the case of the AER's *Draft Distribution Determination*, most of the evidence the AER relies upon to demonstrate that financial markets have returned to normal relates to observations about the real economy. That is, matters such as economic output, employment levels, and so forth. It is the case that the Australian *real economy* (at least in aggregate) weathered the 'GFC storm' better than probably any other industrialised economy, in large part attributable to the boom of the commodities sector and the continued growth of China.

However, this evidence on the *real economy* that the AER has introduced is largely irrelevant. What matters, and what the rules require the AER to consider when determining whether there is 'persuasive evidence' for change, is evidence relating to the state of *financial markets*. Clause 6.5.4(e)(1) of the *Rules* makes this intention clear (in the context of a review of WACC parameters and methods) when it requires regard to be had to:

> *"the need for the rate of return calculated for the purposes of clause 6.5.2(b) to be a forward looking rate of return that is commensurate with prevailing conditions in the market for funds and the risk involved in providing standard control services" [emphasis added]*

It is noted that the AER does assert that financial markets are now comparable with normal market conditions, as follows:[21]

> *"The AER does not consider that (short-term) market conditions now are identical to the (short-term) market conditions just before GFC began (that is, the 2006–07 financial year). However, the present market conditions are comparable to the market conditions that generally existed across the fluctuating business cycles through the last fifteen years."*

However, this statement is inconsistent with the evidence. The figure below reproduces a chart from the Joint Expert Report on WACC referenced earlier, showing the yield on 10 year CGS since the Reserve Bank was provided with monetary policy independence and given an explicit inflation target.[22] What it clear from this figure is that the current yields are very different to what has been observed "across the fluctuating business cycles through the last fifteen years". That is, the current yield on CGS is substantially lower than any rates observed during that preceding period.

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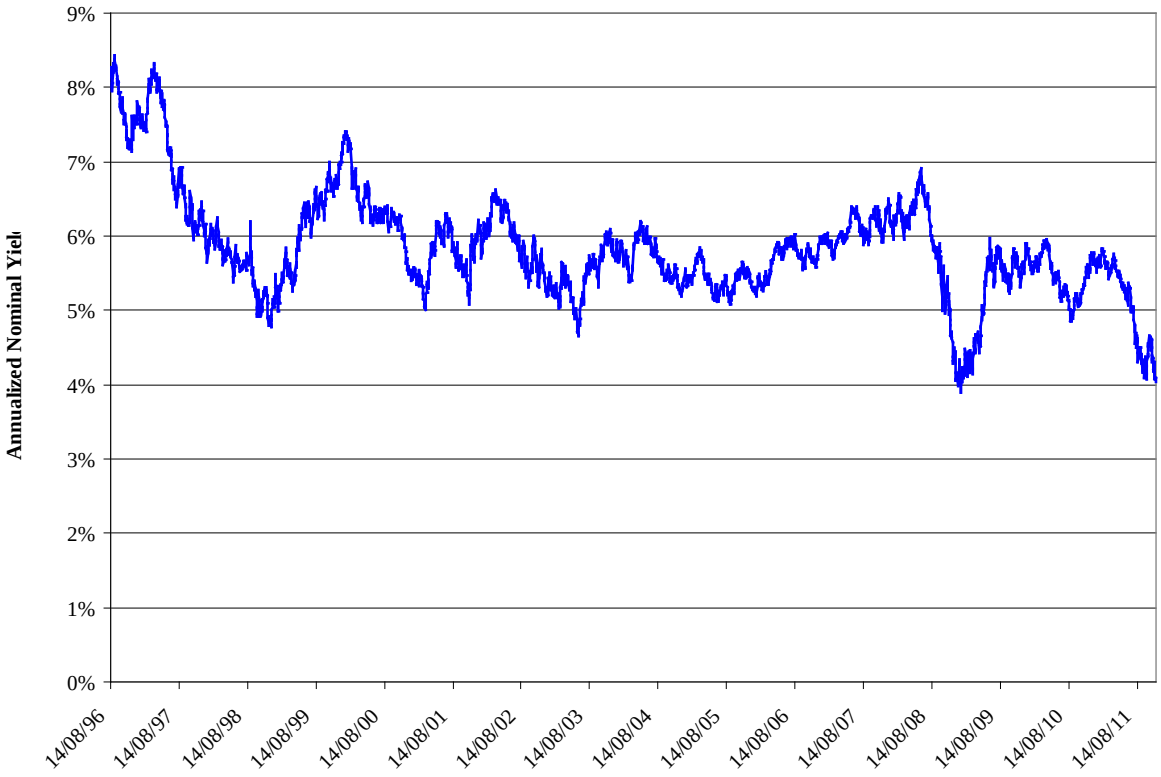
[20] Balchin, J., Dermody, C. and G. Houston, 2011, Joint Expert Report on WACC issues – Report for the ENA, Chapter 3.
[21] AER (2011), Aurora Draft Decision, p.225.
[22] Balchin, J., Dermody, C. and G. Houston, 2011, Joint Expert Report on WACC issues – Report for the ENA, p.14.



Similarly, the current debt risk premia are substantially higher than observed prior to the GFC, with margins rising by more than required amount to 'fill in the gap' left by the falling risk free rate, as shown in the figure immediately below.[23] That is, the risk premium on debt has not merely risen to compensate for the fall in the risk free rate compared to pre-GFC times, rather the premium has risen by substantially more, implying a higher current total cost of debt compared to pre-GFC. As noted earlier, the risk free rate was about 5.5 per cent prior to the GFC, and at that time the 'going rate' for the DRP was 120 basis points. This implied a total cost of debt of 6.7 per cent. In contrast, the current DRP (calculated using the AER's method, but corrected) is approximately 364 basis points, implying a total cost of debt of 783 basis points, a gap of 122 basis points.

[23] Balchin, J., Dermody, C. and G. Houston, 2011, Joint Expert Report on WACC issues – Report for the ENA, p.15. The figure shown is the DRP predicted by the Bloomberg fair value curve for 7 year debt in the BBB credit rating band.

This chart shows that the risk premium that investors currently require for holding long term risky assets that are in the form of bonds is substantially higher than prior to the GFC. The same outcomes would be expected for long term risky assets that are held in the form of equity. The only difference between debt and equity in this regard is that the required returns for debt are much easier to observe. It has been empirically well documented that debt risk premia are driven by the same systematic risk factors that drive equity risk premia, and would therefore be expected to move together.[24]

It is noted that the current figure for the Bloomberg 7 year fair value curve is very similar to that obtained from the AER's preferred method for deriving the DRP (when corrected, as discussed earlier).

[24] For example, see: Elton, E.J., Gruber, M.J., Agrawal, D, Mann, C., 2001, 'Explaining the rate spread on corpoprate bonds,' Journal of Finance, Vol. 56, pp. 247 -77; and Huang, J.Z. and M. Huang,
'How Much of Corporate-Treasury Yield Spread Is Due to Credit Risk?: A New Calibration Approach.' 14th Annual Conference of Financial Economics and Accounting (FEA); Texas Finance Festival.

Aurora is also concerned that the AER has again quoted as evidence "surveys" on the MRP that practitioners currently apply in Australia without analysing the quality of that evidence. As Envestra pointed out, the Fernandez 2010 survey was based on the results of only 7 anonymous email responses, which is not a representative (nor deep) sample.[25] In the AER's *Draft Distribution Determination*, the AER provides further background to the series of surveys that Fernandez and others have conducted. However, looking across those surveys, the most striking feature is that the results present ranges that are wildly divergent from one survey to the next, with no explanation of what may be causing this. The most reasonable view of this evidence is that it is not sufficiently reliable to place weight upon when setting regulated prices for an essential service.

Moreover, the AER has not reported any survey of how market practitioners have measured the RFR during the times when it has been unusually low, nor the assumption that market practitioners make about "gamma". Aurora understands that the adjustment to the risk free rate as proposed above has been applied by a number of valuations practitioners, and that the majority of market practitioners apply a classical CAPM (that is, do not ascribe a value to franking credits). Truong, Partington and Peat reported that 78 per cent of Australian survey respondents (corporate finance executives) apply an MRP of 6 per cent or more, and 83 percent of respondents do not make an adjustment for imputation credits in project evaluation.[26]

In summary, the clear evidence suggests that conditions in financial markets are no less uncertain now than when the AER determined an MRP of 6.5 per cent in its SORI document, and hence there is no persuasive evidence for change.

4.2.2. New methods of estimating the historical excess returns to equity

By its nature, the long term average historical excess return to equity cannot change materially over the space of two or three years, and hence it is implausible for this source of evidence to provide persuasive evidence for change.

However, Aurora notes that the new evidence the AER has presented is not new market evidence, but rather is a new opinion about how the premium should be measured. In particular, in the SORI, the AER concluded that it should consider the long term *arithmetic* average of past returns.[27] The AER now considers that it should consider some form of blend of *arithmetic* and *geometric* averages, with the geometric average much lower than the arithmetic average.

[25] Envestra, 2011, Revised Access Arrangement Proposal, Attachment 9.9.
[26] See Giang Truong, Graham Partington and Maurice Peat, 'Cost-of-Capital Estimation and Capital-Budgeting Practice in Australia', Australian Journal of Management, Vol. 33, No. 1, June 2008, pp.111 and 115.
[27] AER, 2009, WACC Parameters Review, p.200.

Aurora considers that it is not appropriate for the AER to seek to introduce new refinements to the theory of estimating the MRP in the context of an individual DNSP's determination. The periodic, industry-wide review is the appropriate forum for such innovation to be raised and properly tested by all stakeholders.

The AER is not unbounded in its ability to depart from the SORI statement values or methods. Rather, the *Rules* require the following:[28]

> In deciding whether a departure from a value, method or credit rating level set in a *statement of regulatory intent* is justified in a distribution determination, the *AER* must consider:
>
> (1) the criteria on which the value, method or credit rating level was set in the *statement of regulatory intent* (the underlying criteria); and
> (2) whether, in the light of the underlying criteria, a material change in circumstances since the date of the statement, or any other relevant factor, now makes a value, method or credit rating level set in the statement inappropriate.

Aurora considers that the use of an arithmetic average was a key part of the underlying criteria that supported the SORI decision, and that the AER's proposal amounts to a change to that criterion, which is not permitted:[29]

> The AER considered there was some merit in the alternatives proposed by Blume, Dimson et al and other experts. However the AER acknowledged that there is no one alternative that is universally accepted and that each involved a certain level of complexity. Therefore on balance, the AER considered that use of an arithmetic average was reasonable. However the AER considered historical estimates based on arithmetic averages should be interpreted with the understanding that they may to some degree overestimate a forward looking MRP.

Regarding the merits of the AER's new "theory", Aurora has not been able to properly test the AER's proposal in the very short space of time provided to submit a *Revised Regulatory Proposal*. A matter that, the above quote shows, the AER itself has characterised as complex. Furthermore, the AER did not challenge one of the assumptions underpinning the use of an arithmetic average:[30]

> …that investors 'think' in terms of arithmetic, rather than geometric, averages and therefore investors' expectations will be influenced by arithmetic averages of historical returns.

It is to address such complexity that the current periodic, industry-wide WACC review process exists. Assessing the AER's proposals comprehensively through that process is all the more important in light of the AER's own recognition that its new theory of returns would be inconsistent with the definition of returns that influence investors (i.e. that investors are influenced by arithmetic averages).

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[28] NER, r.6.5.4(h).
[29] AER, 2009, WACC Parameters Review, p.199.
[30] AER, 2009, WACC Parameters Review, p.198.

4.2.3. Ex ante estimates of the MRP

Aurora notes that the AER has presented ex ante estimates of the MRP using the dividend growth model. The assumptions the AER uses are:

- A theta value of 0.35,
- A dividend growth rate of 6 per cent (nominal), and
- A range for the dividend yield of 4 to 5 percent.

The AER asserts that adopting these assumptions delivers an ex ante MRP of 4.5 to 5.6 per cent. The AER has not disclosed the calculations that gave rise to this figure. However, on first inspection, the results are difficult to confirm.

If the dividend growth rate is assumed to be a perpetual growth rate (and noting that a long term real growth rate for the economy of 3.5 per cent is reasonable), then even if the value of imputation credits are ignored, the following range for the ex ante return on the market portfolio is created:

—

where the "curly" brackets are used to denote the range of values. If these results are combined with the risk free rate that is used in the AER's *Draft Distribution Determination* (4.28 per cent), then a range for the ex ante MRP *ignoring the value of franking credits* of between 6 and 7 per cent results. Adding on the value of franking credits would raise this range further. These results do not provide any basis for varying the MRP from that set out in the SORI.

4.3. Proposed approach

From the analysis presented, it is clear that there is no evidence, nor persuasive evidence, for reducing the MRP from the SORI value of 6.5 per cent to 6 per cent in the current market environment. Rather, when the evidence regarding current conditions in *financial markets* is analysed objectively, it is clear that conditions remain as uncertain as they were during the worst of the GFC.

Moreover, retaining the MRP of 6.5 per cent and using a long term average risk free rate are not substitutes. Rather, if the long term average risk free rate of 5.5 per cent is paired with the pre-GFC MRP of 6 per cent, it would merely imply an estimated cost of equity that is the same as required in normal market conditions. In contrast, the only possible conclusion from an objective examination of the evidence is that the cost of equity for long term assets has risen since the commencement of the GFC. For this result to be achieved, there needs to be an increase in both the long term risk free rate and a higher MRP, which using a rate of 6.5 per cent achieves.

Aurora proposes to adopt the value of 6.50 per cent for the market risk premium, consistent with the SORI.

5. Confidentiality

Aurora does not consider any section of this document to be confidential.