The weighted-average cost of capital for Seqwater

July 2017

1 Background and context

1   Seqwater's bulk water prices in South East Queensland (SEQ) are to be reviewed by the Queensland Competition Authority, with prices reset from 1 July, 2018. Prices are set to recover bulk water costs, which include a return on assets at a benchmark weighted average cost of capital WACC). Seqwater has engaged Frontier Economics to advise on this WACC, and the cost of equity component in particular. The cost of debt is to be as per estimates provided by Queensland Treasury Corporation (QTC).

2   In its submission, Seqwater has highlighted a number of areas of concern in relation to the QCA's standard approach for calculating the cost of equity and particular parameters. These concerns follow advice from Frontier Economics.

This report has been provided to Seqwater to accompany its submission to the QCA, and sets out the specific concerns in relation to the QCA's methodology for calculating the cost of equity and specific parameters, namely the risk free rate, market risk premium and gamma

2 Approach to estimating the required return on equity

3   The QCA's longstanding approach has been to estimate the required return on equity using the Sharpe-Lintner Capital Asset Pricing Model ("SL-CAPM").[1] Under the SL-CAPM, the return on equity that investors would require, r_e, is given by:

$$r_e = r_f + \beta \times (r_m - r_f)$$

where:

- r_f represents the **risk-free rate** of return. This is the return that is available to investors on an investment that is completely free of risk. Commonwealth government bonds are usually assumed to be such a risk-free investment;

- r_m represents the **expected return on the market**, which is the expected return that investors require to invest in an asset of average risk; and

- $(r_m - r_f)$ represents the **market risk premium** ("MRP"), which is the amount of extra return (over and above the return on a risk-free asset) that investors would require for investing in an asset of average risk; and

- β represents the **equity beta**, which indicates the extent to which the particular investment has more or less risk than average. For example, an equity beta of 1.2 indicates that the investment is 20% more risky than average, in which case it would require a risk premium (over and above the risk-free rate) that is 20% more than would be required for an investment of average risk.

4   We note that there is a substantial empirical literature which documents a systematic bias in relation to the SL-CAPM – the model systematically understates the returns of low-beta assets (that is, those with a beta estimate less than 1).[2]

5   Other Australian regulators have recognised this bias and have made adjustments to correct for it. For example, the Australian Energy Regulator ("AER") applies an uplift to its equity beta estimate to, in part, correct for this systematic bias in SL-CAPM estimates of the required return on equity.

6   The Australian Competition Tribunal recently considered the issue of low-beta bias, and the AER's adjustments to correct for it, in the *PIAC-Ausgrid* case.[3] In

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[1] This formula was independently derived by Sharpe (1964) and Lintner (1965). Sharpe, W., 1964, "Capital asset prices: A theory of market equilibrium under conditions of risk," *Journal of Finance,* 19, 425-442; and Lintner, J., 1965, "The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets," *Review of Economics and Statistics,* 13-37.

[2] For a summary of that literature, see, for example, Frontier Economics, 2017, *Low beta bias*, January.

[3] Applications by Public Interest Advisory Centre Ltd and Ausgrid [2016] ACompT 1.

those proceedings, the Public Interest Advisory Centre ("PIAC") submitted that the AER had erred in applying an uplift to its equity beta estimate in response to evidence that the CAPM systematically understates the returns of low-beta stocks. However, the Tribunal concluded there was no error in concluding that there was evidence of low-beta bias and that there was no error in making an uplift to the equity beta in relation to that evidence.

7   In response to PIAC's submission that there was no evidence of low-beta bias that would justify the AER departing from its starting point beta estimate, the Tribunal concluded that:

> Upon reviewing the whole of the material before the AER, the Tribunal however is not satisfied that that material does not support a conclusion that the SL CAPM provided a low equity beta bias.[4]

8   In relation to the evidence of low-beta bias, the Tribunal concluded as follows:

> It is, as the AER noted, correct that the three parameters for the SL CAPM – equity beta, risk free rate, and MRP – are recorded as giving a low beta bias for businesses with a beta (that is, the risk of the asset relative to the average asset) of less than 1.0, and that the Network Applicants are all within that group. There was also evidence that the low beta bias is exacerbated when it is combined with conditions of low government bond rates and a high MRP. Those conditions were applicable at the time of the AER Final Decisions.[5]

9   That is, the Tribunal accepted the existence of low-beta bias – that the SL-CAPM systematically understates the returns of low-beta stocks.

10   The Tribunal then determined that there is no error in:

   a.   Recognising the existence of low-beta bias; or

   b.   Making an adjustment to correct for it.

11   We note that the QCA makes no adjustment in its estimation process to correct for any bias in the SL-CAPM. Although we accept the QCA's approach for the current determination, we encourage the QCA to reconsider this issue in relation to future determinations.

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[4] *PIAC-Ausgrid*, 2016, Paragraph 779.

[5] *PIAC-Ausgrid*, 2016, Paragraph 731.

3   The risk-free rate of interest

12   The QCA's longstanding approach is to estimate the risk-free rate as the prevailing yield on Commonwealth Government Securities ("CGS") with a term matching the length of the relevant regulatory control period. For our pricing review , this would involve setting the risk-free rate to the yield of 3-year CGS.

13   We consider that a number of problems arise if the term of the risk-free rate is set to the length of the regulatory period:

   a. The QCA approach is inconsistent with commercial practice, which is to use 10-year CGS yields to estimate the risk-free rate;

   b. The QCA approach is inconsistent with the dominant regulatory practice – the vast majority of regulated infrastructure assets in Australia have their allowed return set on the basis of 10-year CGS yields; and

   c. The QCA approach implies that the regulator could reduce the return that shareholders require by increasing the frequency of its regulatory re-sets. For example, if each regulatory control period was reduced to one month, the implication is that the (lower) one-month CGS yield should be used to estimate the risk-free rate.

14   Moreover, the QCA states that it sets the term of the risk-free rate equal to the length of the regulatory control period to be consistent with its "present value principle." However, that point is the subject of contention,[6] as follows:

   a. The QCA's present value principle only suggests that the term of the allowed return should be matched to the length of the regulatory period in the case where the market value of the regulated asset at the end of the regulatory period is known for sure from the outset. This is because the asset can be valued as the present value of cash flows over the regulatory period only (one of which is the known end-of-period market value of the asset);

   b. If the end-of-period market value of the asset is *not* known for sure from the outset, the present value principle does *not* imply that the term of the allowed return should match the length of the regulatory period. This is because the asset cannot be valued as the present value of the cash flows over the regulatory period; and

   c. Where the end-of-period market value of the asset is *not* known for sure from the outset, the asset would be valued as the present value of the cash flows to be generated over the life of the asset. In this case a long-term discount rate would be used and

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[6] See for example, SFG Consulting, 2014, *The term of the allowed return*, 26 November.

therefore the allowed return should be set on the basis of a long-term rate.

15   A final point relates to the interaction between the estimation of the risk-free rate and the MRP. The MRP is estimated by subtracting the risk-free rate from an estimate of the required return on the market portfolio. For this calculation, the QCA estimates the risk-free rate as the yield on 10-year government bonds. There is a clear inconsistency in using a 3-year risk-free rate in one part of the CAPM equation and then to use a 10-year risk-free rate in another part of the same equation. We can see no justification for maintaining such an obvious inconsistency.

16   For the reasons set out above, we have concerns about the QCA's approach to estimating the risk-free rate. Although we accept the QCA's approach for the current determination, we encourage the QCA to reconsider this issue in relation to future determinations.

4   The market risk premium

4.1   The QCA approach

17   In its 2014 Market Parameters Decision, the QCA indicated that:

> …the market risk premium varies over time[7]

and so it would have to be estimated afresh at the time of each determination.

18   The QCA also indicated that it would have regard to a range of approaches for estimating the MRP at the time of each determination, including:

   a. The Ibbotson approach – the mean of excess stock market returns over a long historical period;

   b. The Siegel approach – the Ibbotson approach adjusted for an estimate of unexpected inflation;

   c. The Cornell Approach – a dividend discount model whereby the implied required return on the market is derived from current stock prices and dividend forecasts;

   d. Surveys – including academic survey responses and evidence from independent expert valuation reports; and

   e. The Wright approach – the mean real stock market return over a long historical period, adjusted for current expected inflation.

19   The QCA went on to examine the evidence at the time of its Market Parameters Decision and concluded that the evidence at that time supported an MRP of 6.5%.

20   The QCA has adopted an MRP of 6.5% in every decision since its Market Parameters Decision.

21   Having stated that:

> …the market risk premium varies over time and its relationship with the risk-free rate likely changes,[8]

the QCA has acknowledged that the effect of its persistent adoption of a 6.5% MRP, even in the face of evidence that changes over time, is that the MRP has effectively become a:

> non-time-variant parameter[9]

in its decisions.

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[7] Market Parameters Decision, p. 81.

[8] Market Parameters Decision, p. 81.

[9] QR Final Decision, June 2016, p. 49.

4.2   Methods used to estimate the MRP

22   We have some concerns over the methods that the QCA uses to estimate the MRP, specifically the Siegel and Survey approaches.

23   The QCA is unique among Australian regulators in placing any reliance whatsoever on the Siegel approach. The use of the Siegel approach has been criticised on the following grounds:[10]

   a. The Siegel approach is not used by other regulators, practitioners, or academics;

   b. The data required to implement the Siegel approach is not available, requiring strong assumptions to be made; and

   c. The Siegel paper is based on the notion that the high real government bond returns in the 1980s are expected to continue in the future. However, precisely the reverse has occurred.

24   We also have concerns about the use of responses to various surveys. The Australian Competition Tribunal has set out three conditions must be met for survey responses to be given any material consideration:[11]

   a. The survey must be timely – there must have been no change in the prevailing conditions in the market for funds since the survey was administered;

   b. There must be clarity about precisely what respondents were asked so that there is no ambiguity about how to interpret their responses; and

   c. The survey must reflect the views of the market and not a sample that is small, unresponsive, or without sufficient expertise.

25   The surveys administered by Professor Fernandez, on which the QCA relies, do not appear to satisfy these conditions.

26   For the reasons set out above, we have concerns about the QCA's use of the Siegel approach and survey responses to inform its estimate of the MRP. Although we accept the use of these approaches in the current determination, we encourage the QCA to reconsider this issue in relation to future determinations.

4.3   Use of updated evidence

4.3.1   Overview

27   We consider that the MRP is a parameter which changes over time with changes in conditions in financial markets. Therefore, the MRP should be informed by

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[10] See, for example, SFG Consulting, 2014, Estimating the market risk premium: Response to UT4 Draft Decision, 21 November, Section 4.

[11] Application by Envestra Ltd (No 2), ACompT 3, Paragraphs 162-163.

the latest available evidence and should not be fixed to a figure that was derived from evidence that is now more than three years out of date.

28   We note that a number of recent submissions to the QCA have documented changes in the relevant evidence. For example, Frontier Economics (2016)[12] report that estimates from a number of the approaches that the QCA uses to inform its estimate of the MRP have increased materially since 2014. They show that between the 2014 Market Parameters Decision and the 2016 DBCT Draft Decision:

      a. The QCA's Cornell estimate had increased from 6.9% to 8.2%; and

      b. The QCA's Wright estimate had increased from 7.4% to 8.9%.

29   Frontier Economics also notes that the QCA acknowledged an error in its calculation of the with-imputation estimate of the MRP from survey evidence, correcting its estimate from 6.2% to 6.8%.[13]

30   Indeed, they note that the only estimates that had not increased materially since the Market Parameters Decision were the Ibbotson and Siegel estimates, which are based on very long-term historical averages, and so are incapable of moving materially over the course of a few years.

31   In addition, there is more recent new evidence of further material increases to the QCA's Survey and Independent Expert estimates of the MRP, as set out below.

4.3.2 Survey evidence

The QCA's use of survey evidence

32   In its Market Parameters Decision, the QCA:

      a. noted that a number of stakeholders had submitted that survey responses suffer from a number of weaknesses and should not be used to estimate the MRP; and

      b. rejected those submissions, concluding that it would continue to rely on survey evidence when estimating the MRP.

33   The QCA's Market Parameters Decision also considers *which* surveys should be relied upon when estimating the MRP. On this point, the QCA noted that its previous practice had been to rely upon the annual surveys conducted by Spanish academic Pablo Fernandez. The QCA also noted that its advisor supported the use of the Fernandez surveys:

> Dr Lally also considered that the Fernandez surveys should be used, as they are timely and report results from other markets[14]

and the QCA concluded that:

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[12] Frontier Economics, 2016, *The market risk premium*, September.

[13] UT4 Draft Decision, p. 232.

[14] QCA, 2014, Market Parameters Decision, p. 65.

the Fernandez surveys contain relevant and useful information.[15]

34   The Market Parameters Decision also notes that a key consideration is the timeliness of a survey[16] and that there was general agreement on this point. For example:

> Dr Lally considered that surveys should be timely[17]

and the Queensland Resources Council ("QRC") proposed that only the most recent (that is, timely) survey should be considered.[18] The QCA concluded that:

> The QCA therefore concludes that surveys should be timely and assessed on a case-by-case basis.[19]

35   In summary, in its Market Parameters Decision, the QCA decided that:

   a.   It would use survey responses to inform its estimate of the MRP;

   b.   It would use the Fernandez surveys;

   c.   It would use the most recently available (timely) survey;

   d.   It would use the median estimate; and

   e.   It would adjust the estimate to include its estimated value of dividend imputation tax credits.

The Fernandez 2017 survey

36   An updated Fernandez survey was released in April 2017.[20] This new survey is clearly the most timely of the available surveys.

37   The Fernandez (2017) survey reports that:

   a.   **The median MRP for Australia is 7.6%** and the mean is 7.3%. We focus on the median to be consistent with the approach adopted by the QCA and recommended by the QRC;[21]

   b.   **The mean reported MRP increased between 2015 and 2017 for the vast majority of countries represented in the survey.** Out of the 41 countries in Table 6, the mean MRP estimate increased for 31 and decreased for 10.[22] Of the 10 countries for which the MRP estimate decreased, 9 are developing markets. This indicates that an increase in the reported MRP for Australia

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[15] QCA, 2014, Market Parameters Decision, p. 65.

[16] QCA, 2014, Market Parameters Decision, p. 63, 64, 65.

[17] QCA, 2014, Market Parameters Decision, p. 64.

[18] QCA, 2014, Market Parameters Decision, p. 64.

[19] QCA, 2014, Market Parameters Decision, p. 65.

[20] Fernandez, P., V. Pershin and I.F. Acin, Discount rate (risk-free rate and market risk premium used for 41 countries in 2017: A survey, ssrn.com/abstract=2954142.

[21] Fernandez et al (2017), Table 2, p. 3.

[22] Fernandez et al (2017), Table 6, p. 7.

is in line with the results for other markets and particularly other developed markets;

c. **The standard approach of survey respondents is to pair the MRP estimate with a risk-free rate above the prevailing government bond yield.** The authors take the 10-year government bond yield as a standard benchmark and show that respondents are pairing their MRP estimates with a risk-free rate above the benchmark rate.[23] For Australia, the average risk-free rate adopted by respondents is 3.0%, whereas the yield on 5-year government bonds during March 2017 (when the survey was conducted) was 2.3%.[24] Fernandez (2017) reports that the average return on the market used for Australia is 10.3%.[25] Since the QCA approach is to add the MRP to the prevailing government bond yield matching the term of the regulatory control period, the implied MRP is 8.0%. That is, the same estimate of the market return of 10.3% would be obtained by:

   i.   Adding an MRP of 7.3% to a risk-free rate of 3.0%; or

   ii. Adding an MRP of 8.0% to the prevailing risk-free rate of 2.3%.

   It would be wrong to conclude that the Fernandez (2017) survey supports an approach whereby an MRP of 7.3% is added to the prevailing risk-free rate of 2.3%. The survey indicates that respondents do not do that. Rather, given that a prevailing risk-free rate is to be used, the survey indicates that an MRP of 8.0% must be added to it to produce the return on the market that the respondents are currently using.

d. **As with prior surveys, the estimates would have to be adjusted to reflect the value of dividend imputation tax credits that is assumed by the QCA.** (It would certainly be quite unreasonable to suggest that survey respondents had already adjusted their MRP estimates to reflect a gamma of 0.47 so as to be consistent with the QCA's other MRP estimates). Under the QCA's approach, such an adjustment would involve the addition of approximately 80 basis points.

38   In summary:

a. The median and mean MRP estimates for Australia reported by Fernandez (2017) are **7.6%** and **7.3%**, respectively;

b. The relevant estimate increases to **8.0%** when adjusting for the extent to which those estimates are paired with a risk-free rate

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[23] Fernandez et al (2017), Table 8, p. 9. The median return on the market is not reported.

[24] Source: Reserve Bank of Australia.

[25] Fernandez et al (2017), Table 7, p. 8.

above the prevailing government bond yield (i.e., it would be disingenuous to interpret those estimates as being used in the CAPM formula with the prevailing 5-year government bond yield when the clear intention of survey respondents is to the contrary); and

c.   The relevant estimate increases further to **8.8%** when making the QCA's adjustment for its assumed value of dividend imputation tax credits.

Conclusion in relation to survey evidence

39   We have concerns about reliance on survey responses in relation to the MRP for the reasons set out above. However, given that the QCA has consistently used the Fernandez surveys to inform its MRP estimate, the most recent timely estimates must be used. However one interprets the Fernandez (2017) results, it is clear that there is a material increase in the MRP relative to previous QCA decisions.

4.3.3 Independent expert valuation reports

The QCA's approach to independent expert valuation reports

40   In its UT4 Draft Decision, the QCA included an analysis of a set of 29 independent expert valuation reports prepared in conjunction with major corporate transactions.[26] The MRP estimates used in those reports are summarised in Table 1 below.

Table 1. Independent expert report estimates of ex-imputation MRP

Estimate	Frequency
6%	59%
7%	14%
6-7%	3%
6-8%	24%

Source: Independent expert reports

41   The mean estimate from this set is 6.4% and the median is 6.0%, excluding imputation credits.[27] Frontier Economics (2016) has submitted that, for this data set, the mean is a more appropriate and reflective estimate than the median. As well as being the median estimate, 6% is also the *minimum* estimate. None of the reports that were evaluated by the QCA adopts an estimate below 6%, but 41%

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26 UT4 Draft Decision, p. 232.

27 UT4 Draft Decision, p. 232.

of them adopt an estimate above 6%, so characterising this evidence as supporting an (ex-imputation) MRP of 6% is misleading.

42   However the QCA maintains that this evidence supports an ex-imputation MRP of 6.0% and grosses-up this estimate to incorporate its assumed value of imputation credits, resulting in a with-imputation estimate of 6.8%.[28]

Updated independent expert report evidence

43   The set of independent expert reports previously considered by the QCA has become more dated and less timely with the passage of time. Table 2 below contains a set of independent expert valuation reports that were released since 2016 and which pertain to transactions in excess of $100 million.

Table 2: Recent independent expert valuation reports

Company name	Independent expert	Report date	Transaction value ($ millions)
Ethane Pipeline Income Fund	Lonergan Edwards[29]	31/03/2016	122
Pacific Brands Ltd	Grant Samuel[30]	20/05/2016	1,055
Patties Foods Ltd	Deloitte[31]	15/07/2016	197
STW Communications Group Ltd	KPMG[32]	29/02/2016	338

Source: Connect 4.

44   All four experts set the required return on equity materially above the figure that would be obtained from inserting the current government bond yield and a 6.5% MRP into the SL-CAPM formula. The independent expert reports achieve the higher estimates of the required return on equity in three different ways:

   a.   By using an estimate of the MRP higher than 6.5%;

   b.   By using a risk-free rate above the contemporaneous government bond yield; and

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[28] UT4 Draft Decision, p. 232.

[29] Lonergan Edwards, 2016, Independent Expert Report on Ethan Pipeline Income Fund, April.

[30] Grant Samuel, 2016, Independent Expert Report on Pacific Brands Ltd, May.

[31] Deloitte, 2016, Independent Expert Report on Patties Foods Ltd, July.

[32] KPMG, 2016, Independent Expert Report on STW Communications Group Ltd, March.

c. By applying an ad hoc increase to the mechanistic CAPM estimate.

45 For example, Grant Samuel begins with a mechanistic CAPM estimate of the required return on equity using the contemporaneous government bond yield and a MRP based on historical excess returns, concludes that the outcome is implausible in the prevailing market conditions, and makes a material upward adjustment.

46 Lonergan Edwards states:

> In our view, the application of the current (very low) government bond yields and long-term average MRP is inappropriate in the context of determining required equity rates of return (discount rates). Theoretically, the anomalous currently low government bond interest rates could be allowed for by increasing the MRP. However, as it is difficult to reliably measure short-term movements in the MRP, we have instead increased the risk-free rate for the purposes of estimating required rates of return.[33]

47 KPMG also uses a risk-free rate that is higher than the contemporaneous government bond yield. It specifically notes that the MRP and risk-free rate must be considered jointly and not in isolation:

> …the individual variables should not be considered in isolation but rather be viewed as components appropriate for the construction of a discount rate as a whole…Consideration of these components in isolation may result in an inappropriate discount rate being determined.[34]

48 For this reason, we consider the sum of the risk-free rate and MRP and define that to be the "required market return." We then subtract the contemporaneous government bond yield to obtain an estimate of the "effective MRP." These calculations are set out in Table 3 below.[35]

Table 3: The effective MRP used in recent independent expert valuation reports

Independent expert	Required market return	Contemporaneous government bond yield	Effective MRP
Lonergan Edwards	10.0%	3.1%	6.9%
Grant Samuel	11.2%	2.5%	8.7%
Deloitte	9.6%	1.8%	7.8%
KPMG	10.4%	2.4%	8.0%

Source: Connect 4.

49 The evidence in Table 3 is that independent experts are using estimates of the required return on equity that are materially higher than those being allowed by

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[33] Lonergan Edwards, 2016, p. 47.

[34] KPMG, 2016, p. 85.

[35] Grant Samuel applies an upward adjustment at the WACC level. To find the required return on the market, we simply strip out the return on debt component for the case where beta is set to 1.

the QCA's approach of adding a fixed 6.5% premium to the prevailing government bond yield. In our view it would be inconsistent and wrong to consider the quoted MRP estimates from the independent experts and to ignore the fact that, when implementing the CAPM, those estimates are being paired with a risk-free rate that is materially higher than the risk-free rate used by the QCA.

50   Moreover, the MRP figures set out in Table 3 are ex-imputation estimates. Consequently, before they can be compared to the QCA's 6.5% allowance, they must be grossed-up to reflect the QCA's assumed value of imputation credits, and the QCA has concluded that this adjustment requires the addition of approximately 80 basis points.

51   On the issue of imputation credits, Lonergan Edwards specifically states that its WACC parameter estimates have been derived:

> …without adjustment for imputation.[36]

and Grant Samuel concludes that:

> While acquirers are undoubtedly attracted by franking credits there is no clear evidence that they will actually pay extra for them or build it into values based on long term cash flows. Accordingly, it is Grant Samuel's opinion that it is not appropriate to make any adjustment.[37]

52   Our preferred approach is to use estimates of the risk-free rate and MRP that are commensurate with the prevailing conditions in equity markets. In our view, the MRP that is commensurate with the prevailing conditions is materially higher than the QCA's 6.5% allowance, in which case the required return on equity is materially higher than the QCA's allowance.

53   Although some independent experts take a different path, they all reach the same conclusion – in the prevailing conditions in the market for equity funds, the required return on equity is materially higher than the QCA's allowance.

Conclusion in relation to independent expert valuation reports

54   We consider that if survey evidence is to be incorporated into the QCA analysis, the evidence provided by a survey of independent expert reports is more credible than survey estimates compiled from a poll of academics and market practitioners.

55   The respondents to the poll do not need to justify their response, and it is unclear whether their responses pay particular attention to market conditions at the point in time. In contrast, the valuations provided by independent expert reports generally reflect market prices, so the joint expectations embedded in cash flow projections and discount rates will be a better approximation of market expectations than a poll.

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[36] Lonergan Edwards, 2016, p. 45.

[37] Grant Samuel, 2016, p. 11.

56   The new evidence set out above demonstrates that independent experts are
        currently using market returns that are (on average) 7.9% higher than the
        prevailing government bond yield. These estimates expressly do not reflect any
        assumed benefit of imputation credits. Adding the QCA's imputation credit
        adjustment of 80 basis points results in an MRP estimate of 8.7%. This is a
        material increase to the MRP relative to previous QCA decisions.

4.3.4 Conclusion in relation to updated evidence

57   Frontier Economics (2016) demonstrated that the QCA's Cornell and Wright
        estimates of the MRP had risen materially since the Market Parameters Decision
        in 2014 when the QCA adopted an MRP of 6.5%.

58   As set out above, the Survey and Independent Expert estimates of the MRP have
        also risen materially since 2014, and even since more recent QCA decisions.

59   The only remaining estimation approaches are the Ibbotson and Siegel
        approaches, which are based on very long-term historical averages, and so are
        incapable of changing materially over time.

60   Thus, all the QCA's methods which are capable of changing to reflect the
        prevailing market conditions now indicate a materially higher MRP since the
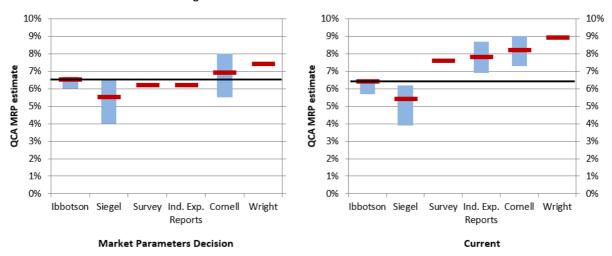   QCA first adopted the 6.5% figure, as summarised in Figure 1 below.

Figure 1: Evolution of QCA MRP evidence

Source: QCA determinations, updated estimates.

61   We are of the view that the current evidence supports a market risk premium
        above 6.5%. Although we accept the QCA's fixed MRP of 6.5% in the current
        determination, we encourage the QCA to reconsider its approach to setting the
        MRP allowance in future determinations.