

The Allen Consulting Group

QR-Coal's WACC

Response to Comments

17 May 2010

Report to Queensland Competitive Authority

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Suggested citation for this report:

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Chapter 1

Executive Summary

The Queensland Competitive Authority (QCA) has engaged the Allen Consulting Group (ACG) to comment on responses that have been made to ACG's Report of June 2009 to the QCA, *Queensland Below Rail Network – Update of Cost of Capital Parameters*. The responses are from Synergies Economic Consulting and Economics Insights Pty. Ltd.

Synergies disagrees with our analysis on the following points:

- Suitable comparator group for comparison
- Relevance of regulated energy network businesses
- Demand correlation and its impact on beta

Synergies argues that railroad and coal mining industries are more suitable and relevant for deriving an asset beta estimate for QR Network than the electricity transmission and distribution businesses used by ACG. Synergies also states that our argument that QR Coal's demand is uncorrelated with the broader economy and therefore will have a low level of systematic risk and a commensurately low beta is flawed. Synergies argues that whilst the correlation of demand with the economy may be low in the short to medium term, it is more correlated in the medium to long term.

We have provided specific responses to the above commentaries above made by Synergies Economic Consulting. We maintain our position that Australia's regulated energy network businesses provide a better beta proxy because the combination of take-or-pay contracts, uncorrelated coal demand with the Australian economy and revenue cap pricing framework that makes QR Coal's systematic risk unlikely to be distinguishable from electricity transmission and distribution.

Economics Insights (EI) claims that QR-Coal has a probability of default (PD) higher than 1.9 percent over the next 10 years or higher than zero in a one year period. The information on default rates for credit ratings suggests that a credit rating of AAA would be appropriate for QR Coal, and this in turn supports a higher gearing for QR Coal. EI also argues that the above proposal is consistent with the credit rating and gearing of GasNet, which has similar arrangements to QR Coal.

We do not agree with the approach or logic used by EI to justify a AAA or AA rating for QR-Coal. Credit rating is assessed based on a company's overall business risk profile and overall financial risk profile. The degree of a firm's business risk sets the expectations for the financial risk it can afford at any rating level. We have also provided additional analysis to support our BBB+ at 55 percent gearing recommendation.

We also do not agree that GasNet should be used as benchmark or comparator. We observed some discrepancies in GasNet's bond ratings, which make it less credible as a comparator or benchmark.

Chapter 2

Introduction

2.1 Purpose of this Report

1. This Report is a commentary on responses that have been made to Allen Consulting Group's Report of June 2009 to the Queensland Competition Authority (QCA), *Queensland Below Rail Network – Update of Cost of Capital Parameters*.
2. Particular attention in this Report to responses made by (i) Synergies Economic Consulting (consultants to QR Network) in respect of the asset beta parameter in the Capital Asset Pricing Model¹ and (ii) Economic Insights Pty Ltd (consultants to Anglo American Metallurgical Coal Pty Ltd), in respect of QR-Coals's gearing and credit rating².
3. It should be noted that the purpose of this Report is not to repeat the arguments made in our report of June 2009, which still stand. Nor is it to provide a general commentary on the submissions made by interested parties in response to the QCA's Draft Decision³.

2.2 Remainder this Report

4. Chapter 2 of this Report discusses the Synergies Report criticisms of our June 2009 Report, in particular those relating to the asset beta, and the question of whether QR's coal revenue is (or is not) correlated to the Australian economy as a whole.
5. Chapter 3 discusses the claims by Economic Insights that QR Coal's credit rating should be AAA.

¹ Synergies Economic Consulting (February 2010), *Response to QCA's Draft Decision – QR Network: Beta Assessment*

² Economic Insights (February 2010), *Cost of Capital, Stranded Asset Risk and Socialisation of Costs for QR Network – report prepared for Anglo American Metallurgical Coal Pty. Ltd.*

³ Queensland Competition Authority (December 2009), *Draft Decision – QR Network 2009 Draft Access Undertaking*

Chapter 1

The Synergies Report

1.1 Introduction

1. Synergies argues that railroad and coal mining industries are more relevant for deriving an asset beta estimate for QR Network than the electricity transmission and distribution businesses used by Allen Consulting Group (ACG) and then accepted by the QCA.
2. Synergies also claim that since there are no direct comparators for QR Network, the task is to find the best set of companies reflecting the quality of comparability. Synergies also stressed on the importance of comparability assessment using first principles assessment.
3. Our argument is that, contra to Synergies, US railroad and coal mining industries are inappropriate comparators, and that Australia's electricity transmission and distribution businesses provide the best available beta proxy.

1.2 Coal industries

4. Synergies argues that in the long run the demand for QR Coal's services will be directly linked to the demand for coal. However, in the short to medium term, the exposure would be mitigated by mechanisms such as the revenue cap (for the duration of the regulatory period) and take-or-pay provisions (for the duration of the contracts, unless they are terminated early) — but, Synergies argues, it is the long run demand for coal that is relevant for the determination of beta.
5. Synergies applied 'first principles analysis' in its 2008 report.⁴ One of the criteria for first principles analysis is by reference to the nature of the product or service under consideration, and nature of the customer. Synergies claims that QR Network and coal companies share the same demand drivers.⁵ Synergies also claims that US coal company betas are an appropriate comparator.⁶
6. We agree that QR Coal's services will be directly linked to the demand for coal. However, the nature of demand for Queensland's coal is significantly different from those in the US.
7. US coal industries produce both coking and thermal coal for domestic and export markets. The output of a number of the thermal coal producers are underpinned by long term contracts with electricity utilities for local consumption.⁷ Hence, we can deduce that US coal industries would have a high correlation with the US economy, thus a higher beta.

⁴ Synergies (February 2010), pg. 7

⁵ Synergies (August 2008), Table 12 pg. 73

⁶ Synergies (February 2010), pg. 7

⁷ Synergies (August 2008), Table 12 pg. 73

8. We also showed that Queensland's total coal exports that goes to Asia has remained relatively constant at approximately 70 percent since the late 1980s.⁸ Thus the demand for QR Network's services is not linked to the local coal market, indicating that a lower correlation with the Australian economy.
9. Furthermore, a key driver of risk in the coal mining industry is the high volatility of the coal price, which is a source of volatility that is not passed through to QR-Coal. In our 2009 report, we explained that the average volatility of Earnings before Interest, Depreciation and Amortisation (EBITDA) of the comparator groups was on average significantly higher than QR-Coal's operation. If cash flows are stable it is less likely there will be high covariance between the equity returns of a business and the returns on the market.⁹

1.3 US Railroad Companies

10. Synergies argues for referencing US railroads to assess QR Coal's beta by citing ERA and ACCC as precedents in their analysis of third party access arrangements.¹⁰
11. However, QR-Coal because of the relative certainty of its revenue stream is very different to Pilbara infrastructure and the Hunter Valley coal network.
12. Within a regulatory period, QR-Coal's revenue is protected through a revenue cap framework. This framework guarantees that QR Coal will receive the forecast revenue or a given regulatory period. In addition, 30 percent of QR-Coal's revenues are subject to take-or-pay contracts, which will cushion some of the impact of demand changes spanning regulatory periods.¹¹

1.4 Electricity Network Businesses

13. Synergies agrees¹² that the key characteristic that QR Network has in common with a regulated energy transmission and distribution business is that both are governed by revenue cap, which means both businesses will have reasonably predictable revenues (relative to forecast) during the course of the regulatory period.
14. However, Synergies argues that "Any business that is governed by a revenue cap form of regulation, irrespective of the industry it operates in, will exhibit similar characteristics."¹³ Hence, the electricity distribution businesses, as such, may not be good comparators.
15. However our argument is that it is the combination of take-or-pay contracts, uncorrelated demand and a revenue cap pricing framework that makes QR Coal's systematic risk unlikely to be distinguishable from electricity transmission and distribution.¹⁴

⁸ ACG (June 2009), pg 4

⁹ ACG (June 2009), pg viii

¹⁰ Synergies (February 2010), pg. 10

¹¹ ACG (June 2009), pg v

¹² Synergies (February 2010), pg. 9

¹³ Synergies (February 2010), pg. 9

¹⁴ ACG (June 2009), pg 28

16. It is our argument that regulated businesses with steady revenue stream provide a good reference point to assess the earnings volatility of QR Coal.
17. We maintain that electricity network businesses are the most appropriate comparators that can be used to estimate QR Network's asset beta.

1.5 Apparent inconsistencies

18. Synergies states¹⁵ that ACG, depending on the estimation method applied, deems that an equity range of between 0.65 and 0.9 is appropriate for an electricity transmission and distribution business – “As part of the AER review, the QCA's own consultant stated that it does not consider that the evidence presented to the AER was sufficiently persuasive to justify a value other than 1. ACG does not explain, and the QCA does not acknowledge, the clear conflict between this unequivocal position and its contemporaneous recommendation of an equity beta for the regulated electricity network industry between 0.65 and 0.9.”
19. This is not correct. We never directly nor indirectly state that an equity range of between 0.65 and 0.9 is appropriate for an electricity transmission and distribution business.
20. We provided empirical evidence indicating that for Australian electricity transmission and distribution firms, the average (geared to 60 percent) beta for the period 1990 to 2008 (excluding the technology bubble, which we defined as between 1 July 1998 and 31 December 2001) ranged between 0.65 and 0.90 depending on the estimation technique.¹⁶
21. We did not endorse this view. In fact, we argued that there is a great deal of uncertainty about the equity beta for regulated electricity transmission and distribution business that is currently expected by the market. The high degree of uncertainty makes it difficult to form a strong view about what is the best estimate of that equity beta. Therefore, we concluded that the evidence in the report does not provide convincing or persuasive evidence that the equity beta for a regulated electricity transmission or distribution business is different from 1.¹⁷
22. Likewise, ACG also found no persuasive evidence to change our previous recommendation on equity beta of 0.8 for QR Network, as determined in the 2006 review.

1.6 The significance of the long term

23. Synergies argues that the fundamental differences between QR Coal and a regulated energy business can be observed over the long term forward looking horizon, particularly when considering the long-run sensitivity of each business's revenue to changes in demand.¹⁸

¹⁵ Synergies (February 2010), pg. 13

¹⁶ ACG (September 2008), pg 42

¹⁷ ACG (September 2008), pg 57

¹⁸ Synergies Economic Consulting (February 2010), *Response to QCA's Draft Decision – QR Network: Beta Assessment*, pg. 10

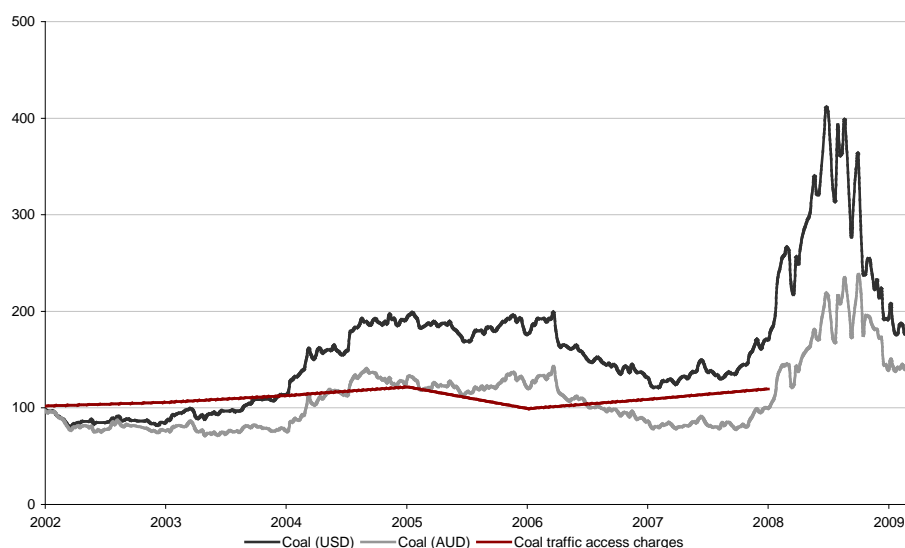
24. We do not agree with Synergies' statement¹⁹ that QR Coal and regulated energy business are fundamentally different in the long term due to differences in long run sensitivity of revenue to changes in demand.
25. QR Coal and energy transmission companies have fairly predictable revenue due to the regulatory environment, business construct and financial agreements which affect the operation of the respective businesses. Therefore, for valuation and regulatory review purposes, there is no reason to assume that the current arrangement will not continue into the longer term until there is a likely decision to steer QR-Coal away from the current regime.

1.7 Correlation with the Australian economy

26. Synergies claims²⁰ that ACG has erred by asserting QR-Coal's revenue is not correlated with market factors. According to Synergies, while a revenue cap form of regulation does provide some protection to a regulated business from the impact of market forces, the protection is only for the length of the regulatory period and does not mean that there is no correlation with market factors.
27. We believe that here Synergies has taken our argument out of context.
28. In our 2009 Report, we provided some commentaries on an index chart that plots the relative movements of coal prices, compared with QR-Coal's revenue. Figure 4.1 of the Report is reproduced below as Figure 1.1:

Figure 1.1

INDEX OF QUEENSLAND RAIL COAL REVENUE VS COAL PRICE (AUD AND USD)



Source: ACG (2009)

¹⁹ Synergies (February 2010), pg. 10

²⁰ Synergies (February 2010), pg. 15

29. We observed that all three series in the chart above display an upward trend. However, coal prices are much more cyclical than QR Coal's revenue. We explained that the downward movement in coal prices for the period between 2005 and 2006 was due to a shift from one regulatory period to another and not due to market factors.
30. Furthermore, we argued that QR Coal's revenue has a very low correlation to world GDP, Australia's stock market and Australian GDP. On the other hand QR-Coal's revenue is highly correlated to coal demand by the Asian market.
31. We wrote that the key determinant of future demand for the services of QR-Coal's below rail coal haulage services is Queensland's coal industry and changes in export coal destinations over time. In our 2009 report (pg 4), we reported that Queensland's total coal export goes to Asia and has remained relatively constant at approximately 70 percent since the late 1980s. We also wrote that the QR-Coal's systematic risk is due to the country mix of marginal demand for Queensland export coal, which will ultimately affect beta.

1.8 Demand correlation and determination of beta

32. Synergies claims that our argument that QR Coal's demand is uncorrelated with the broader economy and therefore will have a low level of systematic risk and a commensurately low beta is flawed.²¹ Synergies goes on to claim that we have failed to recognise the importance of the long term perspective that is needed in assessing beta; whilst the correlation of demand with the economy may be low in the short to medium term, it is more correlated in the medium to long term.²²
33. According to Synergies, in setting prices, and hence determining returns, investors take a long term view (even in the short run) and react currently to changes in expectations about the future. Furthermore, while investors will be interested in the 'most likely' scenario they will be concerned with the potential risks to that scenario. It is this uncertainty that will contribute to the variability of future returns.²³
34. In response, we offer the following comments.
35. First, Synergies has not provided any credible evidence to support its assertion that QR Coal's revenue will be significantly correlated with the Australian economy (or Australian stock market) in the medium to long term.
36. Second, uncertainty about, or even expected reduction, QR-Coal's future return does not necessarily bring about a change in beta as beta is a measurement of systematic risk, which by definition is not diversifiable.
37. If the risk from uncertainty is diversifiable, marginal investors cannot expect to be compensated for bearing that risk under the CAPM framework.

²¹ Synergies (February 2010), pg. 14

²² Synergies (February 2010), pg. 26

²³ Synergies (February 2010), pg. 26

38. The CAPM model used measures the sensitivity of QR-Coal's return to Australia's stock market return. As we showed previously that based on historical data, the correlation between QR Coal's EBITDA, which we used as a proxy for equity return, and Australian stock market is very low.²⁴

²⁴ ACG (June 2009), pg 12

Chapter 2

The Economic Insights Report

2.1 QR-Coal's credit rating

1. Economics Insights (EI) proposes that the low revenue volatility of QR-Coal that derives from the existing regulatory arrangements and QR-Coal's robust business prospects that reflect the strong growth prospects and competitive position of the Queensland coal industry provides the premise for a AAA or AA credit rating, along with gearing of at least 65 percent.²⁵
2. EI drew upon cumulative default rates by credit rating for global bond issues between 1981 and 2006 as supporting evidence to its claim.

Table 2.1

CUMULATIVE DEFAULT RATES BY CREDIT RATING

Year	AAA	AA	A	BBB
1	0.0	0.0	0.1	0.2
10	0.7	0.9	1.9	5.4
15	0.8	1.3	2.8	7.9

Source: Economics Insights (February 2010) Table 5

3. EI claims that it is inconceivable that QR-Coal has a probability of default (PD) higher than 1.9 percent over the next 10 years or higher than zero in a one year period. The information on default rates for credit ratings suggests that a credit rating of AAA would be appropriate for QR Coal, and this in turn supports a higher gearing for QR Coal.²⁶
4. EI also argues that the above proposal is consistent with the credit rating and gearing of GasNet, which has similar arrangements to QR Coal.²⁷ EI quoted third party information in IPART's 2009 report, which states GasNet has an S&P rating of AAA and gearing of approximately 65 percent.
5. In response, we make the following points.
6. ACG does not believe that the approach or logic used by EI to justify a AAA or AA rating for QR-Coal is appropriate. Furthermore, we do not agree that GasNet should be used as benchmark or comparator.
7. EI's subjective belief is that QR-Coal's PD will not be higher than 1.9 percent over the next ten years, and hence a AAA or AA rating can be justified.

²⁵ Economic Insights (February 2010), pg 57-58

²⁶ Economic Insights (February 2010), pg 58

²⁷ Economic Insights (February 2010), pg 60

8. However a credit rating is awarded not based on belief but based on consistent methodology. Furthermore, ascribing a forecasted probability of default to deduce a credit rating is flawed logic. The probability of default should follow from the credit rating, not the other way around.
9. The credit ratings agencies assess a company's overall business risk profile and overall financial risk profile to determine a suitable credit rating. The degree of a firm's business risk sets the expectations for the financial risk it can afford at any rating level. The analysis of industry characteristics and how a firm is positioned to succeed in that environment establish the financial benchmarks used in the quantitative part of the analysis.
10. IPART published Moody's expected financial ratio for a typical utility company which can be used to compare against QR-Coal's key financial ratios.²⁸

Table 2.2

EXPECTED FINANCIAL RATIO FOR A UTILITY COMPANY

Moody' Rating	Aa2	Aa1	A2	A1	Baa2	Baa1	Ba2	Ba1
Business risk	Medium	Low	Medium	Low	Medium	Low	Medium	Low
S&P Equivalent	AA	AA+	A	A+	BBB	BBB+	BB	BB+
FFO interest cover (x)	>6	>5	3.5-6.0	3.0-5.7	2.7-5.0	2.0-4.0	<2.5	<2
FFO/Debt	>30	>22	22-30	12-22	13-25	5-13	<13	<5
Debt/ Capital	<40	<50	40-60	50-75	50-70	60-75	>60	>70

Source: Source: IPART (2009)

Table 2.3

QR-COAL'S FINANCIALS

(\$ '000)	2009	2008
NPBT	386,266	287,706
Finance cost	336,985	304,106
Depreciation	515,166	459,805
EBIT	1,238,417	1,051,617
Short Term Debt	169	530,654
Long Term Debt	6,455,709	4,678,740
Equity	4,249,602	3,650,395
FFO interest cover	3.67	3.46
FFO / Debt	19%	20%
Debt / Capital	60%	59%

Source: QR Ltd. Financial Report 2008/09

²⁸ IPART (May 2009), Table 5.3 pg 37

11. QR Coal's financial ratios indicate that a suitable credit rating would be the borderline between BBB+ and A should it be a utility company.
12. ACG does not agree with EI on using GasNet's credit rating as proxy. The credit rating for GasNet in IPART's report²⁹ was with reference to a bullet bond that has already matured. The maturity date for the aforementioned bond was on 20 March 2009.
13. IPART's report also did not provide any information on when the ratings were awarded. There is a large discrepancy between the credit ratings awarded by S&P and Moody's. For GasNet, S&P awarded a AAA rating compared to Moody's Baa1. IPART's report did not provide any information on when the ratings were awarded. We suspect the difference was due to a takeover of GasNet by APA in 2006 and S&P credit rating was awarded after the takeover bid.

²⁹ IPART (May 2009), Table 4.2 pg 15

Appendix A

References

Allen Consulting Group (September 2008), *Beta for regulated electricity transmission and distribution*

Allen Consulting Group (June 2009), *Queensland below-rail network: Update of cost of capital parameters*

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