Weighted Average Cost of Capital for WestNet Rail

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WestNetRail

Synergies ECONOMIC SOLUTIONS

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1 Introduction

The Economic Regulation Authority (ERA) commissioned the Allen Consulting Group (ACG) to review the existing WACC calculation for WestNet Rail (WestNet) and to recommend any changes. ACG made a number of recommendations concerning the CAPM parameters for the freight business. Submissions were called for and a draft determination was made on April 4 2008. The ACG recommendations, draft determination values and Synergies recommendations are reproduced in table 1 below.

Table 1 – Draft determination Values

CAPM or WACC Parameter	ACG recommendation	Draft determination	Synergies recommendation
Nominal risk free rate (%)	5.99	6.3	Bias adjustment
Inflation (%)	3.0	2.5	2.5
Real risk free rate (%)	2.9	3.71	Same method of calculation
Debt proportion (%)	35	35	30
Equity proportion (%)	65	65	70
Market risk premium (%)	6	6	6.76
Asset beta	0.6	0.6	0.8
Equity beta	0.92	0.92	
Debt margin (%)	1.55	2.10	Same method of calculation
Debt issuance costs (%)	0.125	0.125	0.125
Taxation rate (%)	30	30	30
Gamma	0.5	0.5	0.5
Real pre-tax (Officer) WACC (%)	8.25	9.30	Same method of calculation

WestNet has requested Synergies Economic Consulting (Synergies) to respond to the Authority's comments regarding specific parameters used in the weighted average cost of capital (WACC). This report is structured as follows:

- section 2 reviews the systematic risk, asset and equity betas appropriate for WestNet;
- section 3 reviews the assumptions regarding equity issuance costs; and
- section 4 considers the calculation of the debt margin; and
- section 5 is the conclusion.

2 Systematic Risk

There are a number of approaches available for estimating the cost of equity capital. The most commonly applied approach and that recommended by ACG is using the CAPM.

2.1 Synergies approach

In undertaking a comparable companies analysis, we:

- considered WestNet's business;
- critiqued the sample of comparable companies developed by ACG;
- developed a representative sample of comparable companies; and
- estimated a beta derived from the comparable companies.

The Authority was critical of our analysis, in respect of:

- the reliance upon non-Australian firms in the sample,
- filtering comparators on the basis of sampling error; and
- our first principles analysis.

In addition, the Authority made an arbitrary downward adjustment to its own assessed range of beta values.

Each of these will be discussed in turn.

2.2 Comparable firms

Comparable companies need to be considered as proxies for WestNet as WestNet is not listed on the ASX. ACG used seven international rail firms, four international transport sector firms and four Australian transport firms. They state in their report: [1]

> Comparable listed business are considered to comprise:
>
> - listed rail infrastructure businesses in the United States and Canada; and

[1] Railways (Access) Code 2000: Weighted Average Cost of Capital, Report to the Economic Regulation authority October 2007, ACG.

- listed transport infrastructure and services firms in Australia and New Zealand."

Firms that Synergies considered for analysis were the firms suggested by the Authority's consultant, that is, the listed rail infrastructure business in the United States and Canada. Contrary to ACG's recommendation, the Authority considered: [2]

> that regard should be had to beta estimates for a set of comparable Australian businesses.

The sample non-Australian firms suggested by the Authority's consultant and also analysed and used by Synergies seems to have been discounted by the Authority. The remaining firms in the sample are four Australian businesses that are analysed below. However, before considering this issue, we note that the Authority does not indicate which companies it did in fact rely upon to form its sample for the purposes of assessing WestNet's beta. This means that the Authority has not been transparent in its decision making on this issue which makes it more difficult for stakeholders to comment on its approach.

Caution does need to be exercised when using betas from overseas firms as there is an implied assumption that the relationship between firm returns and the market is constant across countries. In submissions in other Australian regulatory regimes, an upward adjustment to US and UK beta estimates has been suggested.[3]

Synergies does not suggest to adjust the beta estimate but contends that the Authority should recognise that an unadjusted beta estimate derived from the US comparable firms will be in fact a conservative estimate for a comparable Australian based entity. The Authority should consider the comparable firms and treat them as being a conservative estimate of the beta for WestNet. Table 2 provides the summary data for the conservative asset beta estimate.

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[2] Draft determination, 2008 Weighted Average Cost of Capital for the Freight (WestNet Rail) and Urban (Public Transport Authority) Railways Networks. April 4 2008, ERA

[3] Gray. S., 1999, response to consultation Paper No. 4: Cost of Capital Financing, pp. 12-14

Table 2 Asset Betas

Company	Gearing	Equity Beta	t statistic	Asset Beta
Burlington Northern Santa Fe	22%	1.18	4.18	0.83
CSX Corporation	30%	1.13	3.90	0.63
Canadian National Railway Company	18%	0.91	3.57	0.71
Kansas City Southern	43%	1.34	3.37	0.76
Norfolk Southern Corporation	25%	1.43	2.98	0.89
Canadian Pacific Railway	24%	0.76	2.73	0.51
Union Pacific Corporation	22%	1.34	4.97	0.95
Average				0.75
Range				0.51 – 0.95

Source: Bloomberg

There exists a trade-off between comparable Australian business operations and the fact the beta is calculated in a different market. One difficulty is finding comparable businesses. Synergies agrees with previous ACG approaches where fundamental principles underlying the sample firms need to be considered. As stated by ACG in another report:

> …the task of identifying the group of comparable entities implies identifying the group of companies considered to have similar sensitivities to economy-wide events….There is a large empirical literature on the characteristics of assets that may affect their level of non-diversifiable risk. Some of the most important of which would include the following: presence of regulation, nature of the firm's output, degree of monopoly power, duration of contracts, operating leverage etc.[4]

This fundamental principles or first principles approach was adopted by Synergies in analysing comparable companies. The Authority did not indicate which firms (Australian or overseas) it relied on for the purposes of determining its beta range. Accordingly, we comment on those Australian firms that comprised the sample developed by the Authority's consultant. ACG used four Australian firms and the risk profile of these businesses were analysed by Synergies. A brief summary of the original analysis is provided below.

Macquarie Infrastructure Group: The group consists of 11 businesses which are mainly toll roads. Of the total revenue only 9% is generated in Australia[5]. Synergies expects that a toll road would exhibit a materially lower beta than a freight railway as

[4] Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities, Report for the ACCC, July 2002, ACG

[5] Macquarie Infrastructure Group Annual Report 2007

the majority of movements on a toll road are passenger movements that are unlikely to co-vary with economic activity to any material extent. In reality, Macquarie Infrastructure Group is best characterised as a company that, whilst listed in Australia, derives very little of its revenue from Australia and therefore would be expected to have a disproportionately low covariance with the Australian market relative to an entity such as WestNet which derives *all* of its revenue from Australian operations.

Adsteam Marine Limited: A group of companies generating revenue from mainly harbour towage and related services. The systematic risks of harbour towage need not be highly positively collated with freight rail when passenger shipping, salvage, emergency response and ship's agency type work is considered in the revenue base.

Toll Holdings: Australia's largest logistics and transport group. Pacific National (rail business) only contributed 2.5% of the total revenue in 2006[6]. Toll Holdings do offer services by road, rail and air but the structure of the industry is completely different to regulated rail freight. Given the nature of the Toll Holdings business, we believe that it represents a good comparator for only the inter-modal component of the WestNet operation.

Patrick Corporation Ltd: Patrick is Australia's leading provider of port-related services to importers, exporters and shipping lines. Again given the nature of the Toll Holdings business, we believe that it represents a good comparator for only the inter-modal component of the WestNet operation.

None of the Australian businesses is directly comparable to WestNet. Of the four businesses, the least comparable business Macquarie Infrastructure Group was also used as a comparable firm for the passenger rail business, a business with a completely different risk profile again. The resultant asset beta for the urban network was 0.3 being half that of the freight network.

If Macquarie were to be excluded from the sample, the average asset beta for the Australian sample would be 0.8 (rounded), the figure suggested by Synergies.

Table 3 Australian Comparator Firms

Company	Equity Beta	Asset Beta
Adsteam Marine Limited	1.238	0.65
Patrick Corporation	1.056	0.99
Toll Holdings Limited	.869	0.71
Average		0.78
Range		0.65 – 0.99

[6] Toll Holdings Annual Report 2006

When developing a comparator set one is searching for relevant information from which one can conclude the appropriate value of WestNet's beta. Naturally we would prefer to rely on a large sample of comparable Australian companies. Unfortunately, a large sample of comparable Australian companies simply does not exist. Consequently, one must go beyond Australian companies.

A poor comparator with WestNet due to a fundamentally different commercial exposure remains a poor comparator even if it is an Australian comparator. Using firms that are neither in the same line of business nor are listed on the Australian market have little/no reason to be considered as being comparable.

The result of the comparable company analysis using either Australian firms or overseas firms suggests that 0.8 is a reasonable estimate for an asset beta for WestNet.

2.3 Filtering technique

The Authority stated that:[7]

> Synergies has selected comparator businesses on the basis of a high correlation coefficient and the statistical significance of beta values. This may not be a valid basis for selection of comparator businesses, as statistical analysis of beta values is characterised by low correlation co-efficients and absence of statistical significance due to the limited extent to which systematic risk explains variations in stock returns.

This taken by itself is incorrect – whilst it is true that we applied the statistical filters that are routinely applied, the firms that were considered were selected on the basis of their comparability with WestNet.

As Synergies explained in its report, a sample of Australian rail companies operating in a similar fashion to WestNet would be the preferred sample of comparable firms. As there is no suitable listed sample of Australian rail companies, then it was necessary to expand the sample to include possible overseas comparators.

The global analysis provided a large sample of firms and it was necessary to determine which of these best informed a comparable assessment of WestNet's systematic risk. A filtering of the sample was required. The filtering consisted of a number of layers being:

[7] Ibid page 19.

- ensure the sample consisted of companies exhibiting comparable systematic risk - compare business descriptions to ensure that, at a high level, the sample used had:
  - similar business operations
  - there existed a similar presence of regulation
  - that the nature of the firm's output was similar,
  - there was a similar degree of monopoly power, and
  - similar operating leverage to WestNet Rail;
- ensure the sample consisted of companies whose beta measures contained useful information to inform the analysis - this required:
  - the removal of dual listings,
  - availability of capital structure measures,
  - 60 monthly observations, and
  - the application of well accepted techniques to ensure that the betas being relied upon were statistically meaningful – both in terms of correlation co-efficient and standard error of the beta estimate.

The Authority appears to have focused on our rejection of the firms from the sample based upon the statistical significance of the beta estimate. One of the many filters (see above) we applied used the standard error of the beta. The beta divided by the standard error is the t statistic. A low t statistic implies a high standard error and a beta estimate that, as a matter of fact, does not contain relevant statistical information. The calculated beta is 'a comparatively unreliable estimator'.[8]

Put simply, a high standard error associated with the beta estimate would mean that if a beta was calculated over a 60 month period ending September 2007 and then recalculated again using 60 months but ending October 2007, the beta estimate could be very different. Both would be unreliable estimators of the true beta. Which one is the true beta and neither are. There is a broad range within which the changing beta estimate would fall.[9] We are not aware of any Australian regulator that has ignored the reliability of information

Take a simple illustration. A firm (ABC) has a beta of 0.5 and a t statistic of 2 (being the filter used) and another firm (XYZ) has a beta of 0.5 and a t statistic of 1. With ABC, one could be confident that beta falls within a range between 0.0 to 1.0. With XYZ, one

[8] Wionnacott, R, Wonnacott, T., Econometrics, John Wiley and Sons, 2nd edition page 30.

[9] The confidence interval is very large meaning that the true beta can be very different from the estimated beta. This is a fundamental and universally accepted tenet of statistical inference.

could only be confident that the beta falls in the range -0.5 to 1.5. How meaningful is the estimate for XYZ when beta calculated again on a different day, could be 1.4 or equally -.2. It is therefore essential that regard is had to the reliability of beta information when drawing inferences from that data for the purposes of estimating the cost of capital.

Using historic data to derive a forward looking estimate requires a meaningful estimate of beta in the sense that it actually contains information that is of statistical relevance. The standard error helps determine the meaningful estimate. The standard error approach is not a stringent approach that only removes low beta estimates. Both high and low estimates with high sampling error are removed.

Importantly, the firms were not only selected on the basis of statistical significance. Firms were selected on the basis of the comparability of their operations as established by the first principles analysis. To then derive a meaningful beta estimate, considerations were given to other issues that statistical reliability of the beta estimate. One of these other issues was the ability to derive an economically meaningful beta estimate that could be used in a forward looking application.

In summary, a literal interpretation of the Authority's statement in its draft decision could be interpreted as ignoring the fundamental principles of statistical inference. Simply put, the only valid approach to statistical estimation of beta is to have regard to the reliability of the data from which inferences are being made.

2.4 First Principles Analysis

Synergies conducted a detailed first principles analysis of the operations of both WestNet and the comparable firms. The analysis used the same approach that the Authority's consultant has used and recommended on other occasions. As stated by ACG, the approach requires and analysis of: [10]

> Some of the most important of which would include the following: presence of regulation, nature of the firm's output, degree of monopoly power, duration of contracts, operating leverage etc.

This first principles approach was adopted by Synergies in both selecting comparable companies and also in helping to determine where WestNet would sit within a range of possible betas. The first principles analysis considered the following factors:

[10] Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities, Report for the ACCC, July 2002, ACG

1. nature of the product or service;
2. nature of the customer;
3. duration of contracts with suppliers and customers;
4. regulation;
5. degree of monopoly power;
6. growth options;
7. operating leverage.

The Authority disagreed with the assertions made with respect to the nature of the customer and growth options.

Nature of Customer

The Authority maintains that there is no necessary connection between the profit risk of customer firms and the volume of use for the infrastructure provider.

WestNet is part of the supply chain for the customers that it services. If the customer is sensitive to economic shocks, then a downturn in the economy may well affect the quantity of goods shipped by the customer. Customers affected by economic shocks will result in the shipping of more or less goods – with the consequence that WestNet will also be affected to some degree.

The extent to which WestNet will be affected relative to the customer will be a function of the operating leverage of the parties – given that the marginal cost of providing rail access is very low (as little as 10% of the revenue that is earned from access) it is by no means clear that customers will be more affected by economic shocks than WestNet.

The asset betas of the customers for WestNet were reflective of high systematic risk[11] as illustrated in Table 4.

[11] WestNet has other customers who have betas that are not statistically significant. It is not possible to meaningfully interpret an insignificant result.

Table 4 Customer Risks

Firm	Gearing	Rating	Asset Beta
Alcoa	19%	BBB+	1.7
BHP	9%	A+	1.5
Iluka Resources	27%	NR	.9
Mt Gibson	7%	NR	2.9
Mid West Corp	0%	NR	2.9
Portman	4%	NR	1.6

Synergies did not suggest that WestNet must have as a high level of systematic risk as its customers – a simple average of firms comprising Table 4 reveals an asset beta of 1.9. Synergies does think it reasonable to assume that when looking at comparative rail firms with a range of betas, the high level of systematic risk of WestNet's customers compared with the comparable firm's customers would suggest that a beta estimate higher than the mean of the comparable sample would be appropriate.

Growth options

The Authority stated that growth options is not a reason for a higher asset value. This contradicts statements made by their consultants where ACG have stated

> "The existence of real options permitting expansions of the firm (adopting a new product, expanding existing operations) should increase the firm's sensitivities to real income shocks.."[12]

Synergies suggested that the existence of growth options (such as the ability to extend the network, or to handle more traffic) increases WestNet's sensitivity to market changes[13]. Growth options have been found to be positively correlated to changes in the market and therefore have the effect of increasing a firm's beta.

A good example of the real options values in the WestNet Rail network arises in the Mid-West. WestNet Rail's existing alignment is used to carry grain to Geraldton. However, this corridor may well prove to be crucial in developing the MidWest, particularly for those mines in the south (such as Gindalbie Metal's iron ore and iron concentrate). This highlights the unusually significant growth options that exist for WestNet Rail relative to its comparator sample.

[12] Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities, Report for the ACCC, July 2002, ACG, page 17.

[13] Between 1999 and 2006, the volume of freight hauled increased from 29 million tonnes to 50 million tonnes.

In particular:

- WestNet has spare capacity whereas the US experience suggests that the days of excess rail capacity on critical corridors or locations are over; and[14]
- the nature of WestNet's regulatory environment is such that it is capable of securing the full benefit of growth options given that none of its route sections are currently being priced at the regulatory ceiling.

Having greater growth options than the comparator firms would suggest that an asset beta estimate higher than the mean for the sample would be appropriate.

First Principles Conclusion

To arrive at a point estimate for beta, WestNet was compared to companies. From the comparable companies, an average and range of betas was calculated. The first principles analysis helped determine where WetNet would sit within the range. The effect on the asset beta estimate as a consequence of the first principles analysis is summarised in the following table.

Table 5 Summary of First Principles Assessment

Factor	Assessment of range
Nature of the product or service	Sample average
Nature of the customer	> Average
Duration of contracts	Sample Average
Regulation	Sample average
Market power	Sample average
Growth options	> Average
Operating leverage	> Average

2.5 Arbitrary Adjustment

The betas for the comparable firm sample were calculated using current market data reflecting the conditions under which the firms are operating today. The Authority adjusted the average beta to reflect,

> 'a suspected low systematic risk of the rail network's bulk minerals and grain business and the significance of this business in the total business of the freight network'[15]

[14] Association of American Railroads, 'Overview of US Freight Railroads' January 2007

[15] Ibid page 20

The comparator firms have similar characteristics to WestNet, hence the inclusion of the firm into the comparable sample. To adjust the average beta on the basis of one first principles issue that other firms in the sample also experienced seems odd. Generally, the assessment of whether to move towards a point in a sample (as opposed to arbitrarily changing the sample itself) is conducted with reference to a first principles analysis.

The Authority did not comment on our first principles analysis and does not appear to have conducted one itself. We contend that a proper first principles analysis of WestNet relative to the entities that formed the sample suggested that WestNet's estimate should be at the upper end of the range.

This contrasts with the Authority's approach to shift the entire range – rather than moving to a point in its range – based on the assertion (not backed by any analysis) of a "suspected" low systematic risk of elements of the business. The Authority does not provide any analysis to support this position – we refer to our original submission and the material contained in this submission to clearly indicate that WestNet's minerals business exhibits significant systematic risk – one need look any further than WestNet's (favourable) exposure to the minerals boom in Australia to see the covariance between WestNet's returns and those of the Australian economy more generally.

The arbitrary selection of one factor that is also experienced by the comparator firms does not warrant any downward adjustment to the estimated beta.

2.6 Systematic Risk Conclusion

Synergies derived a sample of comparable firms. The sample was determined on the basis of fundamental economic principles and the ability to calculate a meaningful beta estimate. The result of the analysis was a comparable sample of US and Canadian firms that had an average beta of 0.75 and a range from 0.51 – 0.95.

The Authority was critical of the sample as it only included overseas firms. Synergies does recognise that the comparable sample consisted of only US and Canadian firms that results in a conservative estimate of an asset beta. The asset beta estimate from the Australian sample derived by the Authority's consultant (removing the duplicated sample firm Macquarie Infrastructure) results in an asset beta of 0.8. The Australian sample has a mean of 0.8 and the conservative overseas sample has a mean of 0.75.

A first principles analysis suggested that WestNet results in an asset beta estimate above the mean of the conservative sample. An asset beta of 0.8 is reasonable and conservative.

3 Equity Issuance Costs

3.1 Introduction

When an organisation acquires assets, one of the costs is the transaction cost associated with obtaining the required funds to purchase or construct the asset. The asset owner must be compensated for the transaction cost (both equity and debt raising cost) or an investment in the asset would not occur as the investment would have a negative NPV on average, in a competitive market. Therefore, it is common to include an allowance for the notional costs of raising additional debt and equity to finance new investments, where these 'notional costs' represent the typical costs incurred by an efficient benchmark firm.

There exists two issues relating to these legitimate costs and these are:

- The quantum of the costs. This is a question that can only be answer by empirical evidence; and
- The treatment of the cost. Are the costs included in the regulated asset base (RAB), or are they a WACC adjustment or even are they treated inconsistently i.e. debt issuance costs in the WACC and equity issuance costs in the RAB.

3.2 Draft Determination

The Authority is of the view that an allowance of 12.5 basis points be included in the WACC as an appropriate allowance for debt raising costs. Equity raising costs if appropriate are considered to be best treated as being a capitalised cost in the RAB.

There are two issues relating to the legitimate equity raising costs and these are:

- The quantum of the costs. This is a question that can only be answer by empirical evidence; and
- The treatment of the cost. The inconsistency in the treatment of the two financing costs.

3.3 Size of Direct Equity Raising Costs

Equity raising costs are a legitimate cost of running a business. The owner must be compensated for such costs or business investments would not be undertaken in a competitive market. A key issue is the quantum of the costs.

Synergies has examined the direct costs of raising equity. Synergies notes that the total cost of raising equity includes indirect costs associated with under-pricing equity issues. That is, when raising equity firms have a choice between the blend of under-writing and under-pricing in order to ensure that the capital raising is successful. The lower the price at which equity is issued (the higher the under-pricing) the lower the risk of under-subscription and, therefore, the lower the under-writing fee.

This means that the direct cost estimates reported below are lower bound estimates of the cost of raising equity. We understand that CEG has provided a report to WestNet's majority owner, Babcock & Brown Infrastructure (BBI), which surveys the finance literature for the cost of under-pricing. The report has been provided separately to the ERA as part of a submission from BBI.

The ACCC analysed five Australian equity raisings for infrastructure businesses. They found that the equity raising cost percentage varied with the size of the proceeds being raised and the average cost was 3.548%. This cost is the basis of Australian regulatory decisions where 3.55% is the allowance where the equity raising costs have been accepted.

As the Australian study had a sample size of only five, the results of the study should not be considered definitive. We undertook our own study. We analysed 75 equity issues concluding in October 2007 (going back in time). The costs that were available to be analysed were the direct equity costs associated with the underwriter. Therefore these costs were only the selling, underwriting and management costs. They did not include the legal or accounting costs required with an equity issue. ACG have previously estimated that the legal and accounting costs amount to approximately 60 basis point[16].

We found that for the total sample of 75 firms, the direct equity costs (excluding accounting and legal costs) amounted to 4.27% of the capital raised. Importantly we segmented the sample to extract infrastructure type firms. As infrastructure firms newly listed on the ASX are limited in quantity, we used capital intensive industries as a suitable proxy. We wanted a reasonable size sample to improve the accuracy of the results. The larger the appropriate sample, the more confidence in the results as volatility reduces dramatically.

Our study was based on an initial number of 75 observations, with the segmented capital intensive sub-sample being 23. The results of the findings are displayed in table 6. For capital intensive industries, the direct costs of raising equity (excluding legal and

[16] ACG Report 'Debt an Equity Raising Transaction Costs' 2004, prepared for the ACCC

accounting costs which are equivalent to 0.6%) are 5.1%. The total direct equity raising costs which are legitimate costs of running an efficient business are therefore 5.6%.

Table 6 Equity Raising Costs

Industry	Costs
Engineering & Construction	3.5%
Mining	5.8%
Iron/Steel	5.0%
Oil & Gas	4.5%
Coal	4.0%
Average	**5.1%**

3.4 Treatment of the Cost

There is an inconsistency in the treatment of debt raising costs and equity raising costs. With debt raising costs being included in the WACC, the infrastructure owner is compensated for the legitimate costs of running the business. If legitimate equity raising costs are included in the RAB, only one of the costs is compensated at present.

WestNet should be compensated for the direct costs of raising equity capital estimated to be 5.6%. The 5.6% needs to be applied for the period commencing 30 June 2008.

3.5 Equity Raising Costs Conclusion

The equity raising costs are a legitimate cost of operating a business. The infrastructure owner should be compensated for the costs. The equity raising costs have been estimated to be 5.6% of the funds raised. WestNet should be recompensed these costs going forward. The costs could be recompensed in the WACC or the RAB but if not included in the RAB then they should be included in the WACC. Inclusion in the WACC will treat equity raising costs in a consistent manner when compared with debt raising costs.

4 Determining the debt margin

4.1 Introduction

The cost of debt capital is normally calculated as the risk free rate plus a margin for the risk of the debt.[17] Recognising the costs in the WACC gives the following formula for estimating the cost of debt capital:

$$R_d = R_f + \text{Debt Margin}$$

where the parameters are the cost of debt (R_d), the risk free rate (R_f), and the debt margin. The debt margin is the spread of a rated bond above the risk free rate of return.

4.2 Draft Determination

The Authority has determined that the cost of debt be calculated as the margin of the BBB+ rated bond above the risk free rate of return. As the margin or spread changes over time for a variety of reasons, it is imperative that the Authority determine the margin close to the date of the final determination.

For consistency purposes the debt margin should be calculated the same way that the risk free rate is estimated. As the risk free rate is the 20 day average prior to the determination, the debt margin should also be calculated as the 20 day average prior to the determination. This consistency in approach has been recognised in other recent determinations. For example,

> "The AER notes that SP AusNet and the EUCV agree with the AER's draft decision that for internal consistency within the WACC the debt risk premium and nominal risk free rate should be calculated over the same averaging period."[18]

4.3 Debt Margin Conclusion

For a debt margin to be reflective of the cost of debt it needs to be estimated at a point in time near to the date of the determination. The figure below illustrates the changing spread over time. Calculating the spread at a different time to the application of the determination would result in a margin not reflective of the cost of debt.

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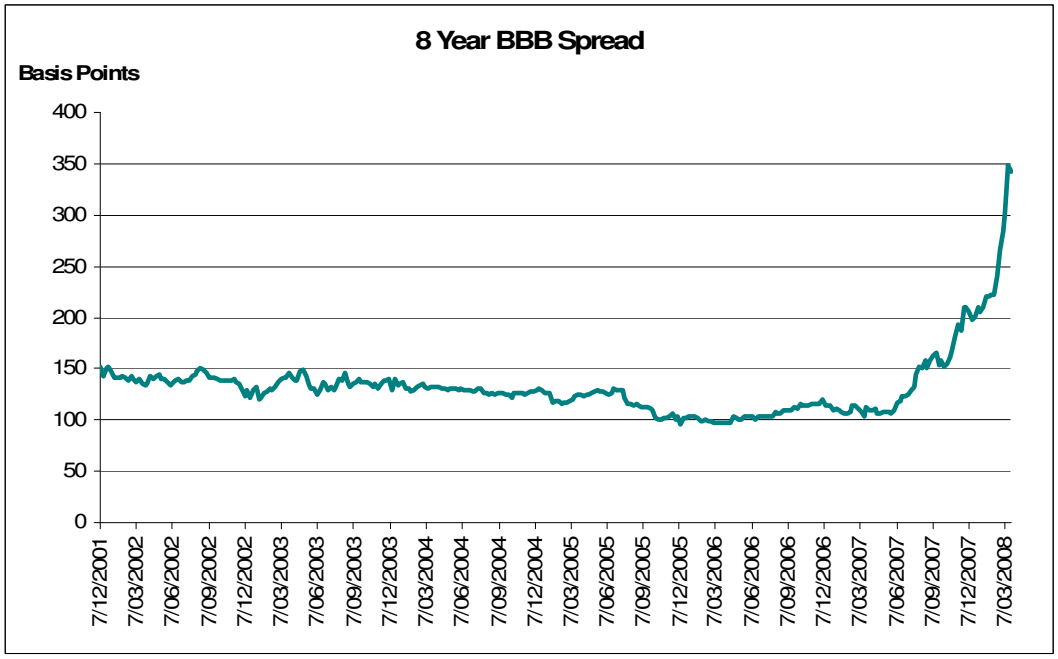
[17] The issuing of debt can have significant transactions costs. While adjusting the debt margin for debt issuance costs is sometimes undertaken, they are more appropriately reflected in the cash flows.

[18] Final Decision, SP AusNet transmission determination January 2008. AER page 95



For internal consistency within the WACC calculation, the debt margin should be averaged over the same period of time as the risk free rate.

5 Conclusion

This report clarifies some of the issues raised in the draft determination. The report addresses the issue of the asset beta, how it is estimated and the estimated value. Synergies used a sound fundamental approach to calculate a meaningful conservative point estimate of 0.8.

The equity raising costs need to be compensated. The costs are 5.6% of the funds raised and they can be compensated for in the WACC or the RAB. While the costs are not included in the RAB, non inclusion in the WACC means the costs are not being compensated. This inequity needs to be addressed.

The debt margin is estimated to determine the cost of debt. The margin should be estimated in the same manner as the risk free rate, that is, a 20 day averaging approach. For the estimate to be reflective of cost, the averaging should occur near the time of the final determination.