ECONOMIC REGULATION AUTHORITY – ISSUES PAPER:
DETERMINATION OF THE WEIGHTED AVERAGE COST OF CAPITAL FOR THE PILBARA INFRASTRUCTURE'S RAILWAY FROM THE CLOUD BREAK IRON ORE MINE IN THE PILBARA TO PORT HEDLAND

ARTC SUBMISSION

INTRODUCTION

The Western Australian Economic Regulation Authority ('Authority') has released an issues paper as the first stage of determining the weighted average cost of capital (WACC) for the Pilbara railway built and operated by The Pilbara Infrastructure Group (TPI), a subsidiary of Fortescue Metals Group Ltd.

The Railways (Access) Code requires the Authority to make an annual determination of the WACC to be applied in the calculation of floor and ceiling costs for each of the covered rail networks.

The Authority is undertaking a public consultation process in determining the WACC as the TPI railway is the first new, (greenfields) railway to be included in the State's rail access regime.

TPI has provided a submission to the Authority outlining its views on the key risks associated with the railway and an overview of possible methodologies for quantifying these risks, which forms a part of the Authority's issues paper.

ARTC has actively participated in the consultation processes conducted by the Authority (or its predecessor) and the NCC in relation to the WA Rail Access Regime and the regulatory supervision of the track manager in WA, including:

- The WA Government's Certification application to the NCC;

- Segregation Arrangements, Costing Principles, Overpayment Rules, Train Management Principles, Train Path Policy, Key Performance Indicators and Rate of Return to apply to WestNet Rail ('WNR');

- Floor/Ceiling Determination on the freight network (WNR).

ARTC is the manager of a substantial part of the national interstate rail network of which the standard gauge network between Perth (including its ports) and Kalgoorlie is an important part. ARTC has no direct interest in the TPI railway as an adjoining infrastructure manager, nor as a potential applicant for access.

ARTC is generally supportive of the proposed approach to determining WACC and suggests that the return should be at the higher end of the scale of feasible returns given the current markets and risks.

ECONOMIC REGULATION AUTHORITY DISCUSSION

General Methodology

CAPM

The Capital Asset Pricing Model (CAPM) is the most commonly used approach for estimating the cost of equity. While the CAPM does have a number of deficiencies, there is no alternative approach to date which has proven superior. One key deficiency relevant here is that it assumes that returns are normally distributed where regulated infrastructure owners are commonly subject to an asymmetric risk profile (upside is limited whereas downside is potentially unlimited). Also, under a CAPM methodology, risks such as stranding risk are not compensated through the rate of return. Such risks could be recognised through setting a rate at the upper end of a feasible range or through some other risk mitigation strategy.

However, until there is an alternative approach that produces a more appropriate outcome, ARTC supports the use of CAPM.

Taxation

Under nominal post tax WACC, adjustments for inflation, taxation and dividend imputation are represented in the cash flows for each year, rather than through adjustments to the cost of capital. ARTC recognises that the use of post tax nominal is more common, being the method applied by most other regulators, however understands the simplicity and transparency of the use of pre-tax rates of return, plus the desire to have consistency with the 2008 Freight and Urban Railway Networks determination.

Risk Free Rate

The yield on a long-term Australian Commonwealth Government bond is considered best for estimating the risk an investor would expect from an asset with zero volatility and default risk.

The main issue in with the risk free rate is determining the appropriate bond maturity. Most commonly, companies will match bond maturity with average asset lives, or in the case of long life assets, the longest dated traded bond, which enables the company to service its debt from the revenue which is generated by the assets without exposure to interest rate risk. A 10-year (nominal) Commonwealth Government bond is therefore typically considered the most relevant.

Taking an average yield calculated over a relatively short period, will avoid the problem of the yield being unusually high or low, for whatever reason, on the date of valuation.

Financial Structure

Financial structure is a measure of the proportion of total assets funded by debt. For WACC purposes, it is common to base this on a firm's 'optimal' long term target financial structure given its profile and the relevant industry. This long term approach is taken as the current financial structure may not be representative of the 'efficient' long term target that would be maintained by the firm given its risk profile.

For the coal industry, relevant rail regulatory decisions show a range for financial structure of between 50% and 60%. The most recent decision by the QCA assumed 55% with respect to Queensland Rail's central Queensland coal network.

ARTC notes that the Authority has chosen a lower gearing for the WNR general freight network. ARTC does not, in general, oppose this decision but notes the ACCC electing to use a much higher gearing on ARTC's similar interstate network. Normally regulators consider a higher gearing more appropriate for bulk networks, but ARTC considers it is reasonable for the Authority to factor in any specific risks associated with the TPI network, compared to other bulk networks, in making its assessment.

Cost of Debt

The cost of debt capital is commonly calculated as the risk-free rate plus a debt margin to reflect credit or default risk. The typical approach to determining the debt margin involves:

- For an unrated firm, assuming an appropriate 'notional' credit rating reflecting the risk of default; and

- Determining an appropriate margin based on the difference between the current cost of debt for a firm of that credit rating, and the risk free rate. This should be estimated over the same time period as the risk-free rate.

For most regulatory decisions, credit ratings of between BBB and A have been adopted.

The methodology now used by the Australian Energy Regulator takes the difference between and 8 year BBB- rated bond and the ten year Commonwealth Government bond. The debt margin is then adjusted by the difference in the yields of an 8 year and 10 year A-rated bond.

Market Risk Premium (MRP)

The MRP is the amount that an investor can expect to earn from a diversified portfolio of investments above the return of a risk-free investment. Determining the MRP is difficult as it is based on expectation, but a number of studies have attempted to estimate the historical MRP. Results for Australia have tended to fall within a 6%-8% range.

Historical analysis shows that the long-run MRP has been at least 6.8%. ARTC supports a MRP at least around the middle of the above range as there appears to be no clear justification for a lower MRP value given more recent investigations.

Systematic Risk (Beta)

Systematic risk is the risk that is impacted by changes in general economic activity and investors will only be rewarded for bearing systematic risk via the rate of return.

TPI's systematic risk is strongly linked to the iron ore mining industry and beta should therefore reflect this, as opposed to the risk associated with the general rail industry. TPI is dependent on revenue from iron ore traffic which is sensitive to the global economy. The Chinese resource demand has had positive impacts for the industry, however, currently, Chinese steelmakers are slowing production and requesting that suppliers delay shipments impacting on iron ore prices, share prices, and potentially, the Australian economy.

Rail regulatory decisions on beta range from 0.32 to 0.65. In 2005, Queensland Competition Authority's determination for Queensland Rail was 0.5 for the central Queensland coal network. In 2008, the Authority took the view that the cost of equity

for the freight network should be based on an asset beta of 0.65. The ACCC used an asset beta of 0.65 with respect to ARTC's interstate network. ARTC is of the view that an asset beta that adequately recognises the market in which the TPI railway will operate would be in the range of 0.5 - 0.6.

Taxation Imputation (Gamma)

Gamma reflects the value of personal tax credits and is the product of the estimated following inputs:

- The proportion of tax paid that has been distributed to shareholders as franking credits (the distribution rate); and

- The value the marginal investor places on $1 of franking credits (value of franking credits)

The value of franking credits cannot be directly observed but rather determined at the level of the investor and influenced by the investor's tax circumstances. Regulators have adopted a value of 0.5 however there is now evidence to suggest that the value of gamma has fallen significantly and should now be zero. The decisions to use 0.5 were made prior to the introduction of the 45 day rule which has resulted in a major structural change which has fundamentally impacted the value of franking credits.

Since the introduction of the 45-day rule, recent reputable studies and consultant analysis shows franking credits are now worthless to the marginal foreign investor. If 0.5 is used, ARTC suggests that gamma would be overestimated.

Debt and Equity Raising Costs

Debt

A firm will usually incur transaction and administration costs in raising and managing debt. It is now quite common to include a separate allowance for these costs by way of an increment to the debt margin (or included in the cashflows). An assumption of 12.5 basis points is now consistently applied in regulatory decisions. ARTC considers that an assumption of 12.5 is appropriate.

Equity

For equity raising costs, ARTC considers that this is best included in the cashflows rather than the WACC.

In the GasNet decision (November 2002), the ACCC analysed five recent Australian equity raisings for infrastructure businesses. The average cost was 3.548% and the ACCC, based on this figure, allowed equity raising costs of 3.55%. Since this decision, Australian regulators have accepted this benchmark of 3.55% where equity raising costs have been included.

In 2004, Allen Consulting Group's report to the ACCC had equity raising costs of 5.25% for 22 Australian IPOs from 2001-2004. Synergies Economic Consulting conducted an extension to this study out to 2007. Here, the average equity raising cost for new capital for existing businesses (63 firms) was 6.26%. The larger the equity raising, the lower the average cost due to both fixed and variable costs involved. For raisings in excess of $100 million (this was the case for 36 firms out of the 63), the average cost was 5.01%.

It must be noted that these estimates reflect only the direct costs of raising equity and not any associated indirect costs. Therefore, the above figures should represent the lower bound of estimates of equity raising costs.

TPI SUBMISSION

The return profile for a regulated entity tends to be asymmetric where regulation has a tendency to limit the potential upside gain benefits for an entity, while at the same time, providing no protection from downside risk.

The cost of regulatory error can be high and it is widely recognised that it tends to have asymmetric consequences. The Productivity Commission states:[1]

- Over compensation may sometimes result in inefficiencies in timing of new investment in essential infrastructure (with flow-ons to investment in related markets), an occasionally lead to inefficient investment to by-pass parts of the network. However, it will never preclude socially worthwhile investments from proceeding.

- On the other hand, if the truncation of balancing upside profits is expected to be substantial, major investments of considerable benefit to the community could be foregone, again with flow-on effects for investment in related markets.

In the Commission's view, the latter is likely to be a worse outcome.

Setting WACC too low will discourage efficient investment in essential infrastructure and this is considered worse than setting it too high.

When an entity is considering its decisions with respect to investment, it will make an assessment based on the expectations of a reasonable rate of return in relation to risk. The case of the Dalrymple Bay Coal Terminal (DBCT) in 2005 is an example where, until the QCA provided an uplift to the proposed WACC, the terminal expansion was not going to proceed. QCA approved the uplift because the cost of under-investment to industry outweighed any potential for over-compensation to the access provider.

Estimating WACC always involves a level of estimation, i.e. in determining the underlying parameters, and the probability of regulatory error tends to be high. It is also not possible to assess whether a WACC has been set either too high or too low, even retrospectively. It is often better to err in favour of the access provider to avoid under investment such as in the case of DBCT. This case highlights the importance of WACC in terms of providing an infrastructure owner adequate incentive to invest.

In the case of TPI, if investment occurs at a lesser level, the public detriment could be the value of any lost export volumes. Having said this, however, TPI is the main user of the network and likely to be most affected by under investment in early stages.

ARTC supports Commonwealth position in the Competition Principles Agreement which states:[2]

6(5)(b) Regulated access prices should be set so as to:

(i) generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services and include a return on investment commensurate with the regulatory and commercial risks involved;

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[1] Productivity Commission (2001), Review of the National Access Regime, Report no. 17, AusInfo, Canberra, p.83.
[2] Competition Principles Agreement – 11 April 1995 (As amended to 13 April 2007). Section 6,5(b)(i).

A key message here is that a third party access provider should be able to obtain compensation for commercial risks, for example, stranding risk.

ARTC recognises that truncation of returns to a particular level can result in long term under recovery of an appropriate return for investors particularly where sub-optimal returns can only be realised during early stages of a project.

In the Hunter Valley, ARTC has proposed an approach it calls a 'loss capitalisation' approach that permits investors to earn returns in excess of the conventional building blocks returns for a period sufficient to recover earlier losses capitalised from the project, so that a reasonable long term return can be achieved, thus encouraging market based investments.

ARTC recognises other approaches exist, such as accelerated depreciation, but would support a loss capitalisation approach in such circumstances. Other approaches such as selecting returns at the higher end of feasible ranges of returns as described earlier, an uplift factor, or endeavouring to quantify truncation, can understate such risks in ARTC's view.

ARTC has previously indicated that whilst TPI railway shares the greenfields nature of the Tarcoola - Darwin railway, ARTC considers the foundation markets (iron ore/bulk) available to TPI as less risky than those associated with the intermodal markets initially faced by the Tarcoola- Darwin railway. However, as mentioned earlier in this paper, Chinese steelmakers are currently slowing production. This has direct impacts in terms of shipment delays, iron ore prices, and ultimately, returns for the infrastructure owner.