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Natural Resources and Mines

29 APR 2004

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Mr E J Hall
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Dear Mr Hall

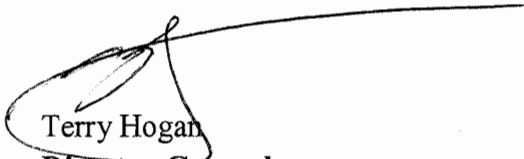
**Request for comments –
Technical Review of the Authority's Cost of Capital Methodology.**

Thank you for your letter of 5 March 2004 requesting comments on Dr Lally's review of the Authority's Cost of Capital methodology. The Department of Natural Resources, Mines and Energy (the Department) has prepared a response (attached) to Dr Lally's paper.

Due to the very technical nature of the subject being considered and the period allowed to respond, the Department would welcome the opportunity to discuss its views and Dr Lally's paper with the Authority in greater detail.

If you have any further queries regarding the Department's response, please contact Mr Mark Brosing, Principal Analyst, Office of Energy on telephone 3224 6926.

Yours sincerely


Terry Hogan
Director-General

Encl.

The Cost of Capital for setting Regulatory Returns

This paper has been produced by the Department of Natural Resources, Mines and Energy (the Department) in response to Queensland Competition Authority (QCA) calls for comment on *Cost of Capital for Regulated Entities*, by Dr Martin Lally. The Department would welcome the opportunity to discuss its concerns and Dr Lally's proposed methodology with the Authority in greater detail.

Introduction

The Weighted Average Cost of Capital (WACC) is the long term rate that a firm must earn after tax to satisfy its capital providers. One component of the WACC is the after tax return on debt, which due to the deductibility of interest, is lower than the average corporate borrowing rate. The second component is the after corporate tax return to equity providers, which is a residual claim and is therefore more risky. These two components are weighted according to the capital structure of the firm.

In setting a regulated rate of return, the goal is to set an efficient rate with a transparent methodology, which is easily understood by the market. The fact that Lally justifies his methodologies on the basis that they result in returns similar to the existing methodology, appears inappropriate and may raise the suggestion of 'mining' methodology to achieve a desired outcome. It should be of no concern if a more correct methodology results in a stepwise change to correct capital allocation inefficiencies. While resulting price shocks need to be addressed, these should be dealt with in the implementation of the methodology, rather than its structure.

Cost of Equity

Imputation

An individual investor will make decisions on what shares to buy, sell or hold, based upon the total return those shares will provide, compared to other investments. Since each individual has different circumstances and preferences, the relative attractiveness of shares is different for various investors. For example, those investors able to use imputation credits would be expected to value them highly. However, this will vary according to the marginal tax rate of the investor. Similarly, investors seeking capital gains will not value dividends or franking credits.

The relative attractiveness of shares to each investor on average, will be reflected in the share prices. Therefore, regressing the share against the market will arrive at beta values incorporating the average relative attractiveness of each share.

Utilisation rate

Similar to the argument on imputation, the average utilisation of franking credits should be fully reflected in the share prices of traded companies. Therefore, the proxy beta adopted should already account for the average investor's ability to make use of franking credits. Any method of allowing for utilisation of franking credits separately, will double count.

Capital Gains Tax

As with imputation, an investor's ability to make use of capital gains tax advantages is dependant on the individual investor's circumstances and preferences. Therefore, the average investor's view should already be reflected in the share price. Betas proxied on these shares will, therefore, include the average ability to make use of tax advantages.

If the beta was not reflective of the average investor, it would be virtually impossible to account for average circumstances in the WACC formula. For example, how would the calculation account for different investors' marginal tax rates, or the average amount of carried forward capital losses?

Risk Free Rate

The risk free rate should be set according to the investment horizon matching the asset life. It is standard practise in Australia to use the ten year Commonwealth bond rate for long lived assets because this is the longest liquid bond available. This means that the risk free rate used is probably understated. However, since the ten year bond is almost universally used as a proxy, capital allocation between investments should not be greatly affected.

It follows from above, that if a rate matching the regulatory cycle is used (3-5 years), not only does it further understate the lifecycle of the regulated assets, it creates a disparity between regulated and unregulated firms' returns on a risk adjusted basis.

Similar to the argument for a long-dated bond as a proxy for the risk free rate, there could also be an argument that the measurement of the rate should be a long-term average, rather than the 20 day average currently applied by the Authority.

Market Risk Premium

The Department advocates the use of a 10 – 20 year average market risk premium. The use of the 10 year Commonwealth bond rate should be used to determine the risk premium (that is, return of the market less the risk free rate), for the same reasons mentioned above.

Cost of Debt

Risk Free Rate

The Department advocates the use of a cost of debt based on a benchmark debt duration for a benchmark credit rating yield curve.

A benchmark credit rating, with a minimum of investment grade (BBB), should be set for regulated firms in order that more efficient firms are rewarded with a margin over debt.

Lally recommends the use of the same risk free rate used to calculate the cost of equity. However, he advocates using two different rates within the CAPM. This inconsistency aside, there is no reason to expect that the debt duration should match that of equity.

Firms make use of debt products with a variety of maturities. The weighted average yield of these products provides the actual cost of debt faced by firms. Over the longer term, firms manage their debt portfolios so as to balance cost versus risk. Therefore, debt durations should gravitate towards an efficient duration and remain fairly stable over time. This suggests that if an efficient benchmark duration can be calculated, this more closely aligns to the efficient cost of debt for a firm.

However, since regulated entities tend to have a high proportion of long-lived assets, it is possible that average durations will gravitate towards the long bond. If this is the case, it is probably a complication the methodology could do without.

Implementation

Price Shocks

Lally argues in favour of two models on the basis that the implementation will not depart much from the existing methodology (thereby avoiding price shocks). This argument is irrelevant in deciding what form the WACC model takes. The more correct methodology should be determined in isolation, with price shocks addressed in the course of implementation.

Adequate Compensation

If the revenue of a regulated firm is slightly higher than is economically efficient, there will be a small impact on the allocative efficiency of its customers, as their consumption decisions are altered by the slightly higher prices faced. However, competition between customers of the regulated entity will not be greatly affected, because they are all faced by the same, slightly higher, price levels (assuming they face similar marginal rates of allocation preference).

On the other hand, if revenues are below the efficient level and this leads to service interruptions, customers can face significant losses. On this basis there seems to be asymmetry of the consequences¹. Therefore, to allow slightly higher revenues would constitute a 'Type I' error, which is preferable to allowing insufficient revenue, or a 'Type II' error.

¹ The consequence of a failure to deliver for a regulated entity will have different impacts depending on the type of service. For example the consequences could be expected to be greater when the service is subject to instantaneous delivery, such as electricity. Customers of other industries, such as transport may face the additional cost of delays or alternate modes of delivery.