



Our Reference: TRO-04177

22 APR 2004

Mr E J Hall
Chief Executive
Queensland Competition Authority
GPO Box 2257
BRISBANE QLD 4001

Dear Mr ^{John}Hall

Thank you for the opportunity to comment on the independent technical review of the Authority's Cost of Capital methodology for regulated entities by Dr Martin Lally of Victoria University of Wellington New Zealand.

Treasury sought views of the Queensland Treasury Corporation (QTC) to assist in evaluating Dr Lally's paper and their comments are attached. Treasury largely endorses QTC's analysis. Queensland Transport and the Department of State Development and Innovation also endorse QTC's comments.

Before discussing two particular issues, I would like to establish Treasury's general position on the determination of the regulated Weighted Average Cost of Capital (WACC).

There is no clear consensus on the input variables which should be used in the calculation of the WACC and there are limitations with many of the approaches available. In light of this fact, Treasury endorses Lally's recommendation that, in choosing a methodology, or parameter inputs, the preferred approach should be to err on the side of higher revenues rather than lower revenues. As stated in the Lally paper, decisions which lead to lower revenues can result in underinvestment, with far greater consequences for the economy than any costs associated with slightly higher prices for consumers.

The two issues which I would particularly like to comment on are the determination of gamma and the impact of the current framework on the efficiency of debt management.

The value chosen for gamma has a significant impact on the WACC. There are strong and conflicting views on the magnitude of gamma, with no real consensus. QTC argues for a value of zero for government owned corporations on the basis the Government as owner is not able to obtain the tax benefits of dividend imputation. Treasury has sympathy for this argument or at least, given the lack of consensus over the extent to which investors in regulated entities benefit from imputation, strongly considers the Authority should choose a value towards zero. This would minimise the scope for the type of regulatory error, of understating revenues, mentioned by Lally.

In relation to the impact of the current framework on the efficiency of debt management by regulated entities, Treasury considers that setting the risk-free rate over very short periods, and locking that rate in for the regulatory period may lead to inefficient debt management. In QTC's experience, for example, regulated entities are taking the least risk approach to managing interest rate risk and are choosing to lock in 100 percent of their debt cost for the regulatory period rather than risk using the market to outperform the regulated cost of debt. Apart from producing inefficient outcomes, this approach to debt management creates a refinancing risk, exacerbated by a simultaneous refinancing of large debt portfolios by regulated entities which signals the market to increase the cost of debt significantly.

To address this problem, consideration should be given to allowing for adjustments to the cost of debt component of the WACC if a significant interest rate change occurs, as long as adjustments are symmetrical (i.e. adjustments are made downward as well as upward). It is arguable this is consistent with the regulatory objective of replicating competitive markets, where a significant shift in interest rates will be passed on to consumers by the majority of suppliers.

The contact officer with regard to this matter is Ms Louise Dunne and she may be contacted on (07) 3225 8717.

Yours sincerely



(G. Bradley)
Under Treasurer

INTRODUCTION

The Queensland Treasury Corporation (QTC) welcomes the opportunity to respond to the issues raised by Dr Martin Lally in a paper entitled "The Cost of Capital for Regulated Entities". After reviewing the paper we have chosen to limit our comments to those aspects of the current regulatory framework that continue to be of most concern. In particular, our response is focused on issues associated with the determination of the Weighted Cost of Capital (WACC).

We generally agree with Dr Lally's view that differing views on the key input parameters can lead to an overstatement or understatement of the regulated revenues. The consequences of underinvestment in a regulated business should be a key issue when deciding on the level of these inputs.

GENERAL COMMENTS

Our general concern relates to the restrictions imposed by the current framework on regulated businesses seeking to manage a range of risks in a commercially prudent manner. Although these entities operate in a unique environment, they are still expected to operate as viable commercial businesses. This ensures the business can deliver value to its shareholders but will also ultimately impact the price and quality of services received by the consumer.

All businesses seek to plan and implement strategies in the face of an uncertain environment. These strategies are monitored, reviewed and revised over time as key parameters change. Operating in a regulated environment makes this problematic as the key parameters are fixed at the start of the cycle. At the same time, the need to protect consumers from price shocks is acknowledged. It is also acknowledged that balancing the interests of consumers and the network owners can be difficult and that trade-offs will ultimately need to be made in a number of areas. However, our concern remains that these trade-offs may lead to the adoption of business practices that are commercially imprudent.

There are some risks inherent in the framework that can either be managed by the business or the customer. However, there are also exogenous risks, such as changes in interest rates, inflation or exchange rates. Whilst the framework allows for a lagged inflation adjustment through the annual CPI indexation of the revenue cap, it does not allow for changes in the other variables. This lack of flexibility can have an adverse impact on both the regulated business and consumers.

KEY DIFFICULTIES CREATED BY THE CURRENT FRAMEWORK

Interest rate risk is a key financial risk for any business, especially those with large amounts of debt. The current framework limits the ability to manage this risk in a manner that is considered appropriate or reflective of prudent risk management practices in an unregulated business. To summarise:

- The WACC-setting mechanism exposes the businesses to risks in changes in interest rates within the regulatory period, to the extent the actual cost of debt exceeds the cost of debt in the WACC set at the start of the period. This relates to not only the risk-free rate but also changes in the debt margin.

- Although it is possible to implement a strategy to manage this interest rate risk, it involves a refinancing task that is concentrated in a very short period of time. This introduces significant refinancing risk to which the business would not otherwise be exposed. In the domestic debt market, a refinancing task of this magnitude can lead to market digestion difficulties and spikes in yields that could impact other participants (and ultimately the consumer). Derivatives may have to be used to assist in implementing the strategy, which results in additional interest costs being incurred and creating counterparty credit risks.
- As a consequence of the above, a diversification strategy whereby borrowings are spread across debt instruments with a range of maturity dates cannot be effectively implemented.
- The WACC-setting mechanism also impacts on the funding of future capital expenditure, given the interest rate applying to new borrowings is not known until the time of drawdown. This can be hedged at the start of the cycle but only to the extent the capital expenditure requirements for the next regulatory period are known with certainty at that time.

Importantly, an inability to update the WACC during the regulatory cycle can lead to sub-optimal investment decisions. Evaluations may be performed using rates that are not consistent with current market conditions.

We maintain our position outlined in previous submissions, which can be summarised as:

- consideration of means by which additional flexibility could be introduced to facilitate better management of these risks,

or, if this leads to unacceptable consequences for other regulatory objectives:

- compensation to these businesses for the inability to effectively manage these risks.

RISK FREE RATE

Term to Maturity

We maintain our support for the use of the ten-year Commonwealth Bond Rate as the estimate for the risk-free rate. This is based on consistency with the investment horizon of investors. Further, it is noted that proponents of the ten-year rate view the five-year horizon as inappropriate as it assumes that the regulated assets are sold and re-bought at the end of each regulatory period.

The WACC should provide compensation to debt and equity providers for bearing the risks associated with investing in a business in this risk class over the investment horizon. Investors' views do not necessarily coincide with the term of the regulatory cycle. When evaluating an investment investors will consider:

- The risks associated with this asset class, and
- The compensation offered for bearing this risk.

The first consideration should exist independent of the regulatory cycle. The pricing of these risks is normally driven by market forces. If the price is not reflective of the risk involved, arbitrage opportunities may exist. In a regulated environment, this is more problematic as the rate of return is fixed for the term of the regulatory period. If the regulated WACC departs significantly from market levels during the regulatory period, investors may reassess their position. This will not necessarily only occur on a reset date.

Length of the Averaging Period

It is recognised that averaging over a twenty-day period is preferable to a 'rate on the day' approach, as it smoothes some of the volatility present in the market. As detailed in previous submissions, a twenty-day period still creates problems from an interest rate and refinancing risk management perspective. The theoretically appropriate strategy is to refinance the entire portfolio over the same period that the risk-free rate is calculated. This seeks to ensure the business 'locks in' the cost of debt for the term of the cycle at a rate close to the cost of debt inherent in the WACC. In QTC's experience our regulated customers have been forced to adopt this 'least risk' strategy even though it introduces additional risks that are not compensated for under the current regulatory regime.

We continue to have significant concerns with this approach for two main reasons:

- Most regulated businesses have sizeable debt portfolios. It is imprudent to completely refinance a large, non-diversified debt portfolio over such a short period of time. Similar unregulated businesses do not have such restrictions and can implement a more diversified (and therefore less risky) funding strategy.

Even if a business wished to undertake this refinancing task, the difficulties are exacerbated by the relatively small size of the domestic debt market. There is a limited supply of bonds maturing close to regulatory reset dates, which can also lead to spikes in yields. Pressures on supply will be even more significant where there is a number of regulated entities on a similar cycle under both State and Commonwealth regimes. This is a concern not only our regulated customers, but also other customers who source funding from the same parts of the yield curve.

The limited supply of physical bonds may mean that derivative instruments (such as swaps) are used to achieve the required exposure. This can give rise to an additional cost that is not necessarily reflected in the cost of debt as determined under the regulated WACC, as well as counterparty credit risk. The additional costs do not represent transaction costs, but rather reflect the increased risk associated with the derivative instrument.

- There will be capital expenditure occurring during the regulatory period, some of which will be financed from debt. In an unregulated environment hedging this exposure is a management decision that depends on the risk appetite of the business. A regulated business does not have this flexibility and is exposed to the risk of interest rates prevailing at the time of the capital expenditure exceeding the cost of debt used in the WACC.

Even if the business did look to hedge these future requirements at the start of the cycle it is practically difficult to do so. The ability to implement an effective hedging strategy presumes that the amount and timing of these requirements is known with certainty at the start of the cycle. This will not be the case, particularly over a five-year horizon. Uncertain exposures can be hedged with products such as options, however this can be cost-prohibitive.

The use of a twenty-day average is still preferred to shorter-term measures, provided the averaging dates are still (confidentially) provided in advance. However, this still encourages portfolio management strategies that are inconsistent with prudent business practice. It also does not completely remove the risk of short-term shocks influencing the risk-free rate outcome. Such shocks will ultimately flow through to the prices paid by consumers.

Possible solutions

As outlined in previous submissions, a number of alternative approaches could be investigated. The ideal solution is premised on the WACC continuing to represent a fair price for investments in this risk class. These include:

- A mechanism for more frequently reviewing the risk-free rate used in the WACC calculation. The review could occur annually or if the rate changes by a significant amount. A significant change (regardless of the timing) suggests a revision to what the market considers 'fair value' compensation for investments in this risk class. This mechanism would allow for both increases and decreases in pricing and is therefore not biased towards either the regulated entities or the consumer.
- A cashflow adjustment for adverse movements in the real rate. This is consistent with the compensation for changes in inflation as an uncontrollable risk. Alternatively, this adjustment could be expressed as an explicit margin added to the cost of debt.

The first alternative would not require the regulated business to refinance its entire debt portfolio over a very short time period every five years. Rather, they would be able to pursue a more diversified strategy that enables the refinancing task to be performed gradually over time. The strategy would also be reflective of their longer-term appetite for interest rate risk. This approach is also more aligned with how pricing in an unregulated market would adjust to significant changes in key parameters such as interest rates. More frequent adjustments to the risk-free rate would significantly benefit consumers by reducing the chance of prices being set at a market extreme.

We would be happy to work with the Authority to investigate these alternatives further.

OTHER ISSUES

Model for Determining the Cost of Equity

The use of a domestic CAPM is supported, with the use of the Officer version being preferred because it is more well known and accepted. There is no empirical evidence provided to support the further adjustments proposed in the Brennan-Lally version.

Use of a Debt Beta

We support the reasons provided for the use of a debt beta of zero, which include the difficulty in determining the beta and the minor impact of omitting a debt beta.

Estimates of Tax Parameters

Gamma

One of Lally's arguments in determining gamma is looking at the actual equity holder and their ability to take advantage of the imputation credit. Based on this argument then for an entity which has a government shareholding, it is considered that gamma should be zero as the government is a non-tax payer and obtains no benefit from imputation.

CONCLUSION

In conclusion, we have significant concerns regarding the restrictions imposed by the current framework on businesses seeking to manage a range of risks in a commercially prudent manner. Our main concerns relate to the determination of the WACC. By setting the risk-free rate over a very short period of time businesses are forced to implement a strategy that exposes them to unacceptably high levels of refinancing risk. Refinancing large portfolios of debt would become obvious to financial markets and pricing of the funding would likely be increased accordingly. This additional cost would ultimately be borne by consumers, who are already exposed to the risk of prices being set during a period of extreme market conditions. This impact on market pricing by refinancing large debt portfolios at one point in time also highlights that the concept of 'resets' is inconsistent with the regulatory objective of 'replicating' the competitive market environment.

Difficulties in managing the interest rate risk for future capital expenditure also remain. There is also a concern investment evaluation made during the course of the cycle will reference WACC inputs that are not reflective of current market conditions. We have proposed that consideration be given to allowing for some form of adjustment to the WACC if a significant interest rate change occurs, or some form of compensation for being unable to effectively manage these risks in the same way as an unregulated business.

We appreciate being able to comment on these matters and would welcome the opportunity to discuss them further with the Authority.