BC Ferry Commission
MEMORANDUM 20

To: Mr. Bill Cottick
Executive Vice President and
General Counsel, BCFS

From: Martin Crilly
BC Ferry Commissioner

Date: September 17, 2006

Re: Preliminary Ruling of Return of Equity
Under Section 41(2)(b) of the Coastal Ferry Act

Purpose

This memorandum gives a preliminary ruling on BC Ferries' allowed return on equity (ROE) which the Commission must determine under section 41(2)(b) of the Coastal Ferry Act for the purpose of setting price caps for the second performance term. It does not address the estimated value of equity to which this ROE will apply, nor the estimation of the future cost or levels of debt, nor the weighted average cost of capital.

The Commission recognizes that BC Ferries is now in the final stages of preparing a comprehensive submission of information to the Commission for the price cap review for the second performance term, to a September 30 2006 deadline. BC Ferries may have made a working assumption on the allowed ROE for its submission. The use of either a working assumption or the allowed ROE as ruled in this memorandum will be acceptable.

Statutory Requirements

The Coastal Ferry Act requires the Commission to set price caps which enable BC Ferries to receive a pre-tax return on equity. This is to be calculated by adding (i) an equity risk premium equivalent to that of other regulated businesses with reasonably similar risk characteristics, and (ii) a bond yield that is consistent with Government of Canada 30 year bonds.

Process

The Commission engaged Pricewaterhouse Coopers to advise on estimating an appropriate return on equity for BC Ferries. The first work phase, completed in December 2005, examined regulated businesses with reasonably similar risk characteristics in countries with similar developed economies.

Then, using the Capital Asset Pricing Model (CAPM) for establishing equity returns for regulated businesses, the second phase of Pricewaterhouse Coopers' work, completed in April 2006, drafted a recommended equity risk premium.

BC Ferries was given the opportunity to comment on the methodology and findings throughout via face to face meetings with BC Ferries management and in written submissions to the Commission.

Considerations

Significance

The cost of capital is an important issue for BC Ferries, its investors and its customers. For example, under the price cap regulatory regime, a one percentage point higher allowed pre-tax return on equity (ROE) could, through a higher price cap, increase BC Ferries tariff revenues by $1.75 million per year (assuming FY-end 05/06 equity level), or some $7 million accumulated over the four years of the second performance term. For ferry customers, on the other hand, the same one percentage point increase in ROE could increase fares by 0.5%, other things being equal.

Variation In Estimates

The Commission's review to date shows that there is significant variation in the estimates by Pricewaterhouse Coopers and BC Ferries of an appropriate return on equity for BC Ferries. Underlying data from other countries used for estimating values show high variances. Some input quantities cannot be directly observed and must be inferred. It is open to question how much BC Ferries is a special case, how comparable other regulated businesses are to BC Ferries, and how similar are their operating environments to that experienced by BC Ferries.

Best Practice

We have aimed to employ best practice in arriving at the two statutorily required components of the return on equity, i.e. the risk-free rate and the equity risk premium.

Investment Needs

The Commission recognizes that investment for renewal of its fleet, facilities and equipment is a priority for BC Ferries. The governance framework limits the company to debt financing. Its ability to raise debt on reasonable terms rests on both the amount of equity in the company and on its earnings, both of which are a function of the allowed ROE. A higher allowed ROE makes the company more creditworthy and its bond issues more marketable. By itself, this suggests that it would be better to err on the side of setting the ROE too high rather than too low given the considerable uncertainty in determining it. BC Ferries has argued for a higher ROE than that calculated by Pricewaterhouse Coopers..

However, it is worth noting that, if adverse events occur, such as a significant rise in interest rates, BC Ferries can challenge the price cap after it has been set by applying for an extraordinary mid-term increase. This suggests that the Commission can safely set a tighter cap. In addition, a higher cap penalizes ferry customers, at least for the duration of the second performance term, until the next cap-setting for the third period.

Income Tax Exemption

BC Ferries' earnings are exempt from corporate income tax and the Coastal Ferry Act requires the Commission to set a pre-tax return on equity. The procedure used for determining the ROE first provides an after-tax result. This is then "grossed up" to give a pre-tax return that would result in BC Ferries earning the after-tax figure if it were taxable. We have assumed that BC Ferries' earnings would be taxed as general active business income for a Canadian-controlled private corporation, at the 2009 combined federal and B.C. provincial income tax rates.

An alternative position is that, with an effective zero tax rate, the after- and pre-tax return figures should be the same, meaning no gross-up. The effect would be to pass the benefit of BC Ferries' non-taxable status directly to ferry customers through a lower price cap.

Behind the decision to gross-up the after-tax figure is the presumption that legislators (in establishing the governance framework) and the government (in its application of tax policy) intended that the benefit of BC Ferries' non-taxable status should go first to the company and not directly to ferry customers. This interpretation makes it considerably easier for BC Ferries to achieve target levels of earnings and build equity, to meet its undertakings for maximum leverage and debt service coverage agreed with its financiers, and thereby to finance its capital investments.

Trade Offs

Accordingly, trade offs have to be made. The Commission's ruling must provide the right incentives to BC Ferries in meeting its fleet renewal requirements in an efficient fashion. The Commission has to balance setting the price cap high enough to ensure an efficient and adequate capital investment level with keeping the price cap tight enough to prevent an excessive burden on ferry customers who are, for the most part, effectively captive to BC Ferries.

Preliminary Ruling

The Commission has made a preliminary ruling as follows:

- The risk-free premium will be forward-looking and, in the absence of forecasts of long bond yields for the period 2008-2012 will be estimated by adding 0.40% to the forecast of 10 year Government of Canada bond yields. The preliminary ruling on the **risk free rate is 5.10%**, which will be finalized by March 31, 2007 after reference to relevant yield forecasts from Consensus Economics or other generally accepted sources which may become available in the meantime.
- The equity beta is 0.5. The market risk premium is 5.50%. Accordingly the **Equity Risk Premium is 0.5 x 5.50% = 2.75%.**
- The net effect between the small-cap premium and the BC Ferries company-specific premium/deduction is +1.55%.
- Therefore the after-tax ROE is 5.10% + 2.75% + 1.55% = 9.40%.
- The income tax rate is 32%.
- Accordingly the pre-tax ROE is 9.40%/(1-0.32) = 13.82%, which is rounded to a **pre-tax return on equity of 14%.**

References

1. BC Ferries Response to the PWC Equity Risk Premium Report, Created May 25 2006
2. BC Hydro Revenue Requirement Application 2004/05 and 2005/06 Volume 1 Chapter 10. Rate of Return on Equity, undated.
3. British Columbia Utilities Commission Decision In The Matter Of Terasen Gas Inc. And Terasen Gas (Vancouver Island) Inc. Application To Determine The Appropriate Return On Equity And Capital Structure And To Review And Revise The Automatic Adjustment Mechanism dated March 2, 2006
4. Civil Aviation Authority (UK) Economic regulation and the Cost of Capital Annex dated November 2001
5. KPMG 2008 and 2009 Combined Federal and Provincial/territorial Income Tax Rates for Income earned by a Canadian Controlled Private Corporation dated June 10 2006
6. Pricewaterhouse Coopers Draft Memorandum to the Commission on BC Ferries Response to the PWC Equity Risk Premium Report dated August 25 2006
7. Pricewaterhouse Coopers Regulated Return on Equity for BC Ferry Services Inc. – Discussion Paper Confidential Draft April 12, 2006