



The Rating Process and the Cost of Capital for Utilities

Five Reasons why Canadian
Utilities Have Lower Ratios,
and Five Changes to
Regulation Which Should be
Introduced in Canada

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Regulation in Canada

- Regulation in Canada (non-telecommunication) has been heavily influenced by the National Energy Board (NEB)
- The NEB in Canada has the greatest resources available, and ranks among the most sophisticated regulators in Canada
- Provincial regulators have followed many of the NEB practices, including use of the formula – Canada + 325 or so basis points to set return on equity, and also a range of deemed equity near the 35% level
- Encouraging competition where returns are consistent with risk has been a practice followed in Canada and the U.S.
- Performance-based regulation has been followed where customers and the utilities often negotiated how to share the efficiencies and have avoided long arduous regulatory hearings
- Canadian regulators generally have been flexible, and unfavourable decisions can be reversed or altered when the extent of the problem is seen
- No Canadian utility has gone bankrupt due solely to the actions of the regulator
- This is not so in the U.S. with the California incident – a good example

Regulation in Canada (Cont'd...)

- PG+E went bankrupt when:
 - The state regulator forced sale of generation capacity
 - The regulator stopped PG+E from securing long-term power contracts
 - A flow-through of higher wholesale power costs was refused, and kept retail power rates rigid, resulting in the inevitable for PG+E
- Even debt levels of 30% would not have saved PG+E from bankruptcy
- Knowledge of the Regulator's policies, not quantitative ratios, were key to measuring the risk profile of PG+E
- DBRS looks at earnings past, present and future, the balance sheet and cash flows, past, present and future, and a wide range of subjective factors to arrive at a final rating. Regulation is an important component of this
- No one quantitative ratio is "magic," and the many qualitative and subjective factors are looked at in conjunction with quantitative data
- DBRS also stress tests the cash flow statement, looking at the effect different earnings, capital expenditure and dividend patterns have on future financial ratios – to get a worse case quantitative scenario – to complement the qualitative factors

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S.

(1) Higher sensitivity to seasonality in Canada than the U.S.

- Canada has extreme temperatures which result in wide swings in accounts receivable and inventories
- Areas such as gas distribution tend to have wide swings in receivables and inventories between September to April
- The swing in debt levels can be 5%-10% between peak and trough

(2) Flow-through versus normalized tax accounting used in Canada

- Canadian regulators usually permit only flow-through accounting, versus the normalized taxation method often used in the U.S.
- Thus, U.S. utilities collect the corporate tax, and have coverage ratios up to 40-50 basis points better than Canadian utilities

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(3) Lower return on equity

- Canadian utilities earn lower return on equity, which is about 200 basis points below the U.S.
- In Canada, the formula method was initiated by the NEB, and adopted by most of the Provincial Regulators
- The formula generally allows a rate of return equal to 325 basis points over Canada bonds, with some limits on how much returns may change in any one given year
- The lower return on equity reduces interest coverage in Canada by about 20 basis points

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(4) Lower deemed equity in the capital structure in Canada

- Canadian utilities are generally allowed lower deemed equity to the degree of 5%-10%
- A 10% lower debt proportion can improve interest cost coverage by 50 basis points so this can cause significant savings in interest coverage
- Typically in Canada regulators often allow deemed equity of 30%-35%
- Utilities can partly neutralize this disadvantage to a degree by issuing hybrid capital known as super subordinate debt – which is not as good as pure equity
- If four conditions are met, DBRS will give a high weighting to hybrid securities
 - How subordinated are the instrument securities?
 - Do the securities have a maturity date?
 - Does default occur if the interest payment is not made?
 - Is the intent of the Company to treat the instrument as equity?
- Long-term super-subordinate debt 30 years + which receives good equity treatment by DBRS (which means interest payments also will have to be deferred) represents a cheap way of issuing equity, and may partly but not fully, neutralize the lower deemed equity allowed

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

(5) Higher interest rates in Canada than the U.S.

- Interest rates were 100-200 basis points higher in Canada than the U.S. through much of the 1990s
- The higher interest rates in Canada had a downward effect on key coverage ratios, and much of this debt is still outstanding

Conclusion

- Quantitative ratios in Canada automatically have downward biases
 - Our colder more extreme weather automatically raises debt proportions at the peak of the cycle because of inventory/receivable peaks and troughs
 - The debt levels of Canadian utilities may swing, depending on the date chosen, due to seasonal factors
- 1) Flow-through tax accounting used in Canada costs Canadian utilities approximately 40 basis points on coverage
 - 2) The 200 basis point lower allowed return on equity costs Canadian utilities 15-20 basis points on coverage

Why Canadian Ratios for Utilities Are Lower Than Ratios in the U.S. (Cont'd...)

Conclusion Cont'd...

- 3) The 5%-10% lower deemed equity of Canadian utilities can cost 50 basis points for EBIT coverage ratios
- 4) The 1%-2% higher interest rates which prevailed in Canada through most of the 1980s and 1990s cost Canadian utilities about 20 basis points
 - Thus, Canada's climate, and the nature of Canadian regulation cost Canadian utilities about 130 basis points on average relative to the U.S.
 - About 110 basis points of the 130 basis point difference is caused by regulators
- 5) Where all five variables discussed prevail at the same time (Case 5) the difference in interest coverage is 3.15 times versus 1.54 times, assuming Canada has (a) Deemed equity of 30% versus 40% in the U.S. (b) Return on equity of 12% in the U.S. and 10% in Canada (c) Income tax rates at 43%

The Need for Change in Standards by Canadian Regulators: Reasons for Change

(1) Different standards used between Canada and the U.S. have an immense effect on differences in coverage and other financial ratios which are important in credit ratings. On the whole, in our opinion Canadian regulators should give greater consideration to the effects that their actions have on the credit rating

(2) Competition is growing, raising risk and justifying higher rates of return

Examples:

- Alliance Pipeline provides competition for TransCanada Pipelines
- Restructuring of electricity in Alberta makes the area more competitive

The Need for Change in Standards by Canadian Regulators (Cont'd...)

(3) Regulators make returns in Canada more consistent with the U.S.

- TransCanada's 9.79% return on equity on 33% equity versus PGT's 12% on 35%
- Foothills eastern leg 9.79% on 30% versus Northern Border 12% on 35%
- TransCanada's Mainline 9.79% on 33% versus Great Lakes 13.25% on 44%
- Alliance Pipeline Canada 11.3% on 30% versus Alliance Pipeline U.S. 10.7% on 30%
- Maritime Northeast Pipeline Canada 13% on 25% versus Maritime NE Pipeline U.S. 14% on 25%
- Why is there such a different return between TransCanada versus Great Lakes or Foothills versus Northern Border?

(4) Provide more consistent standards

- A 30% deemed equity gets the same return on equity as a 35% or 40% deemed equity
- The lower the equity component, the higher the risk – so this is inconsistent reasoning

(5) Less of a safety margin in financial ratios if things go wrong in Canada

Positive Factors with Canadian Regulators

- (1) Provincial regulation is quite consistent with NEB regulation. Policies usually do not clash
- (2) Less turf wars between federal and provincial regulators
- (3) (a) Canadian regulators will work with utilities to help them overcome problems.
Example: The TransCanada take or pay gas recovery – over ten years
(b) Contrast this with the California regulator and PG&E experience

Effect of Canadian Style Regulation on Ratings

- DBRS has given Canadian regulation positive marks for consistency and stability (on the downside), and has considered this in the ratings (a subjective factor)
- However, Canadian utilities have less “safety margin” than U.S., and are vulnerable to a quick downgrade if something goes wrong
- There is a significant difference in financial ratio strength between Canadian and U.S. utilities

General Changes in Regulation That DBRS Would Like to See

1. Movement to performance-based regulation, where the customers and the utility work out returns and rewards, and regulatory hearings are reduced
2. Increase the allowed return on equity in order to make it more consistent with U.S. returns
3. Increase the deemed equity component to 35%-40% ranges

Regulation Comparison of OFGEM vs. FERC vs. NEB

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Regime	Rate cap	Cost-plus	Cost-plus
Philosophy/Objectives	<p>The main objective is to protect the consumer and neutralize monopoly conditions in distribution and transmission. This includes not only establishing rates of return, but also monitoring quality of service, adequacy of capex to satisfy future demand, and measures of efficiency to determine future rates. The regulator is sophisticated, transparent, and has a good understanding of the rating process.</p>	<p>Although FERC historically employed a "laissez faire" approach to company regulation when compared to OFGEM and NEB, recent market events have prompted it to become a more active force in the marketplace. However, in general the rates of return better balance protection to the consumer and returns to the utility. The returns allowed by FERC can be 200 basis points higher than in Canada. Despite this, FERC often has to contend with lawsuits from utilities challenging its decisions. FERC is knowledgeable about the importance of ratings to a utility.</p>	<p>The NEB falls in between OFGEM and FERC in rate of return philosophy. It allows negotiated settlements between utilities and shipper, which makes possible performance-based regulation in Canada. Setting returns high enough to ensure investment-grade ratings is one of the principles followed by OFGEM and FERC. However, the NEB's policies have not strongly considered capital market access for utilities, and the NEB is the least concerned about how credit ratings affect capital access of utilities.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Consistency	One regulator prevails in the U.K. for all matters relating to onshore downstream natural gas and electricity (offshore and upstream are not regulated by OFGEM). This results in consistent decisions and only one body to conduct hearings.	Individual states have jurisdiction over matters relating to retail gas and electricity, while FERC has jurisdiction over inter-state movements. The result is inconsistency between states, and high costs preparing for many rate hearings.	As in the U.S., there can be inconsistency since the ten provinces and the federal NEB have jurisdiction. (The NEB has jurisdiction for inter-provincial movements of energy) However, practice shows that the provincial regulators work consistently with federal regulators.

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Methodology	<p>Cost of debt is calculated using risk-free rate of return and risk factor related to corporate risk. Cost of equity is calculated using a beta coefficient calculation to arrive at average cost of equity, and finally a weighted-average cost of capital.</p>	<p>Cost of equity calculation is used to arrive at weighted pre-tax cost of capital. Cost of equity return is equal to dividend yield plus growth factor to establish final return on equity. Final allowed return on regulatory assets is a composite cost of capital multiplied by regulatory assets.</p>	<p>Average risk-free return is used, plus a spread to allow for risk. The risk-free return is calculated using the three-year average yield of long-term Canada bond. The risk adjustment is calculated at 325 basis points over forecast 10-year Canada bond yields, with year-over-year adjustments capturing 75% of the movement in interest rates.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Profitability	<p>Resulting returns on regulatory assets in the real 6.25%-6.50% range are low relative to alternative investments. The regulator subjected companies to sharp rate cuts effective April 1, 2000. Then annual rate changes restricted to RPI (Inflation) minus 1.5%-3%. Finally, cost saving benefits are expected to revert to the consumer in 2005, negatively affecting long-term profitability further. In 1998, the U.K. government also levied surprise windfall profits tax on most utilities.</p>	<p>FERC had an initial conflict when gas and electricity divisions were merged at the FERC level. Returns in the electricity area were 100 basis points higher than what was allowed in the pipeline area. FERC resolved the situation by allowing higher returns for the pipelines, the company's proxy for calculating returns. The six proxy companies used in gas pipelines are now down to three companies due to mergers.</p>	<p>Use of average return on Canadian securities resulted in low returns (below 10% return on a deemed common equity). The allowed return is about 200 basis points below the U.S. utilities.</p>

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Intensity	Regulator watches and controls (with open transparency) most aspects of regulation in a hands-on procedure.	A "laissez-faire" procedure, once the rules have been set.	In between the two regulators. It does not control as intensely as OFGEM.
Lawsuits against regulatory decisions	Lawsuits are rare.	Lawsuits are common. Litigation after a regulatory decision happens quite often.	Lawsuits are rare, but could become more prevalent if there is no change.

Regulation Comparison of OFGEM vs. FERC vs. NEB (Cont'd...)

Factor	OFGEM (U.K.)	FERC (U.S.)	NEB (Canada)
Excess profits and cost savings	The decision to levy a windfall profit tax in 1998 was political, not regulator induced. The cost savings are expected to accrue to the customer after 2005, restricting future growth in profitability.	Regulation allows excess profits beyond allowed returns to accrue to the company. Once the returns have been set, (if through efficiency the company does better) the Company can keep the excess. Under performance-based regulation, the company and customers may negotiate how to share savings.	Profits remain with the company until the next rate hearing. Under performance-based regulation, the NEB has generally approved all agreements negotiated between pipelines and customers.

Examples of Effects of Coverage Ratios

Example:		
<u>Assets</u>	<u>Liabilities + Equity</u>	
1000	Debt	700
	Equity	300
	Total	1,000

Case 1

Effects of 12% return on equity in the U.S. versus 10% returns in Canada, all other things being equal

	<u>Canada</u>	<u>U.S.</u>
Income		
300 x 10%	30	
300 x 12%		36
Taxes (43%)	23	27
Total EBT	53	63
Interest (based on Canadian interest)	56	56
EBIT	109	119
Interest coverage	$\frac{109}{56} = 1.95$	$\frac{119}{56} = 2.13$

- The 200 higher return on equity gives U.S. entities 18 basis points higher interest coverage
- Interest and taxes were deemed to be the same (Canada, U.S.) to show the effect of return on equity only

Examples of Effects of Coverage Ratios (Cont'd...)

Case 2

Illustrate a higher 40% deemed equity versus 30% in Canada. Return on equity of 10% is used in both countries to highlight deemed equity effect

	Canada	U.S.
Income		
300 x 10%	30	
400 x 10%		40
Taxes (43%)	<u>23</u>	<u>30</u>
EBT	53	70
Interest (8% interest rate)	56	48
EBIT	109	118
Interest coverage	1.95	2.46

- Coverage differential is 51 basis points in the example in favour of the U.S.
- This is a major reason why interest coverage between the U.S. and Canada is so big

Examples of Effects of Coverage Ratios (Cont'd..)

Case 3

The U.S. uses normalized taxation, versus the flow-through method used in Canada.
Assume that all the tax can be tax sheltered

	<u>Canada</u>	<u>U.S.</u>
Income	30	30
Taxes (43%)	0	23
EBT	30	53
Interest	56	56
EBIT	86	109
EBIT coverage	1.53	1.95

- Taxation, with a full tax shelter results in 42 basis points difference
- If the tax shelter, due to capital cost allowances exceeding depreciation was 50%, the difference between Canada and the U.S. would be 21 basis points on the coverage ratio, but utilities can often tax shelter most income in the early years of expansion

Examples of Effects of Coverage Ratios (Cont'd..)

Case 4

Higher interest rates in Canada versus the U.S. by 1.5%

Assume 70/30 Debt to Equity

	Canada	U.S.
Income	30	30
Tax	23	23
EBT	53	53
Interest		
700 x 8% - Canada	56	
700 x 6.5% - U.S.		46
EBIT	109	99
Interest coverage	1.95	2.15

- Lower interest rates in the U.S. makes a difference of 20 basis points in coverage
- While interest rates in Canada were lower in the 1990s than the U.S. – the long-term debt issued would take at least ten years to neutralize the interest rate differential

Examples of Effects of Coverage Ratios (Cont'd..)

Case 5

Coverage – U.S. and Canada combining all four variables

	<u>Canada</u>	<u>U.S.</u>
Earnings 300 x 10 - Canada	30	
Earnings 400 x 12 – U.S.		48
Income tax	0	36 *
EBT	30	84
Interest		
Canadian 700 x 8%	56	
U.S. 600 x 6.50%		39
EBIT	86	123
EBIT coverage	1.54	3.15

* In the U.S., assumption is made that all tax is sheltered.

- When all four variables are put together the difference in interest coverage is 161 basis points
- Of the four variables, three variables are directly related to actions of the regulator, including: (1) Return on equity, (2) Capital ratios, and (3) taxation methods

Summary

Differential in interest coverage U.S. higher than Canada due to:

Higher return on equity	0.18
Higher equity base	0.30
Normalized taxation with 100% tax shelter	0.42
Lower interest rates	0.20
Interest rate differential	1.10

- Interest coverage differential between U.S. and Canada is 1.10%
- If all factors are combined at the same time, the interest rate differential becomes 1.61%
- This differential gives Canadian utilities less of a “safety” margin should anything go wrong, because their ratios are much weaker