BEFORE THE NEWFOUNDLAND AND LABRADOR BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

EVIDENCE OF DR. SEAN CLEARY, CFA,

BMO PROFESSOR OF FINANCE

SUBMITTED ON BEHALF OF:
THE NEWFOUNDLAND CONSUMER ADVOCATE

REPORT ON CAPITAL STR UCTURE & RELATED ISSUES

September 25, 2018

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Qualifications

This evidence is prepared by Dr. Sean Cleary, CFA of Queen's University. I am currently the Director of the Master of Finance program and the BMO Professor of Finance at the Smith School of Business at Queen's University. I earned my Ph.D. in Finance at the University of Toronto in 1998 and earned my CFA designation in 2001.

I served as an expert witness on behalf of the Newfoundland Consumer Advocate in cost of capital hearings in 2015-2016. I have served in this capacity on several occasions on behalf of the Office of the Utilities Consumer Advocate of Alberta (the "UCA"), including generic cost of capital ("GCOC") proceedings in 2017-18 (Proceeding 22635), 2017 (Proceeding ID 22570), and 2013-2014 (Proceeding ID 2191). I also served on behalf of the UCA in regulated rate option ("RRO") proceedings in 2017-18 (Proceeding 22635), 2017 (Proceeding 22357), and (Proceeding ID 2941) in 2014.

In addition to this consulting work, my research has extensively involved examining corporate finance and cost of capital matters, consisting of 30 publications. My work has been cited close to 3,200 times. Most of this work has dealt directly or indirectly with capital markets, capital structure, and cost of equity issues. I have authored or co-authored 13 finance textbooks, all of which deal with capital markets, capital structure, cost of equity, and cost of capital analysis. I examine capital market conditions and estimate the cost of capital for actual companies on a regular basis, which I use for teaching purposes. In addition, I previously worked as a commercial lender.

My CV is attached as Appendix A to my evidence.

1.2 Purpose of Testimony

The Consumer Advocate of Newfoundland and Labrador has requested that I recommend an appropriate capital structure (i.e., equity ratio) for Newfoundland Power during the 2018 General Rate Application (GRA) proceedings.

1.3 Summary of Capital Structure Recommendations

The Canadian economy is forecast to grow steadily throughout 2019 and 2020, while the Newfoundland and Labrador economy is expected to display flat economic growth during 2018, but positive growth in 2019.

My qualitative analysis confirms that NP continues to be a *low business risk* electric distribution utility operating in a very supportive regulatory environment, similar to the conclusions reached by the Board in previous decisions, and also consistent with the analyses of credit rating agencies of NP. My quantitative analysis provides strong verification of these qualitative conclusions, as NP is shown to display much lower volatility in operating income than the U.S. and Canadian utilities included in Mr. Coyne's proxy groups. As such, I conclude that NP continues to be a very low business risk firm.

My analysis shows that NP has *lower financial risk* than other Canadian utilities based upon a combination of an allowable ROE which is about average, and an equity ratio that is much higher than average – almost 20% higher. Given this attractive ROE to equity ratio combination, as expected, NP displays superior credit metric ratios relative to its Canadian peers. Not surprisingly, my analysis confirms that NP has *low total risk* as reflected in its ability to earn its allowed ROE, and in terms of the variability of its earned ROE.

I do not believe it is necessary for a low risk utility like NP to maintain a 45% equity ratio which is approximately 20% relatively higher than the 38% average and 37% median for Canadian electric distributors, while at the same time being allowed to earn an ROE that is around average. I recommend that the Board reduce the equity ratio to 40%, which would bring it in line with, but still slightly above, Canadian utility averages. The additional "above average" 7-8% equity thickness that NP currently is allowed is not warranted based on NP's business risk, nor is it required to maintain its' credit metrics, which are well above average. I provide an estimate of the cost of maintaining this excessive equity thickness which is borne by NP's customers.

2. ECONOMY OVERVIEW

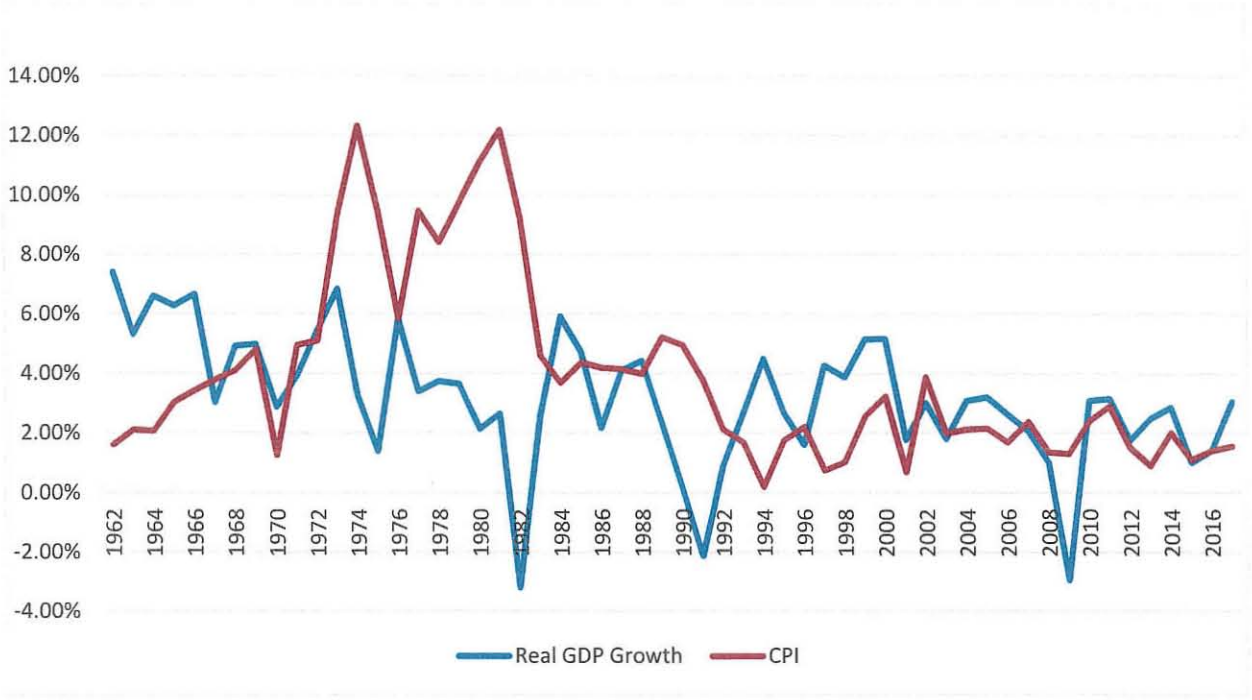
2.1 The Canadian Economy

2.1.1 Historical Evidence

The figure below shows Canadian real GDP growth (%) and total inflation as measured by the Consumer Price Index (CPI) over the 1962 to 2017 period. The graph shows that real GDP growth has generally been in the 2 to 6 percent range, with the exceptions of the three recessionary periods that occurred in the early 1980s, the early 1990s, and during our most recent financial crisis. Table 1 reports summary statistics that show the average for GDP growth over the entire period was 3.2% (median 3.1%). It is interesting to note that GDP growth declined to an average of 2.5% (median 2.7%) over the 1992 to 2017 period. This represents the period "following" the Bank of Canada's initiation of a 2% inflation target in 1991, giving a year's grace period until its implementation had begun to take solid footing. This decline in average growth is accompanied by reduced volatility which is obvious from the figure, and also as measured by the standard deviation reported in Table 1.

FIGURE 1

REAL GDP GROWTH AND CPI – CANADA (1962-2017)



Data Source: Statistics Canada.

TABLE 1

REAL GDP GROWTH AND CPI SUMMARY STATISTICS – CANADA (1962-2017)

	1962-2017 (%)		1992-2017 (%)	
	Real GDP	**CPI**	**Real GDP**	**CPI**
Average	3.16	3.92	2.51	1.80
Median	3.07	2.97	2.67	1.72
Max	7.41	12.33	5.18	3.88
Min	-3.20	0.20	-2.95	0.20
Std Dev.	2.19	3.10	1.63	0.83

Data Source: Statistics Canada.

Figure 1 also reports annual changes in CPI, which averaged 3.9% (median 3.0%) over the entire period. These summary stats are obviously driven by the high rates of inflation during the 1970s and 1980s. Inflation rates have generally been within the Bank of Canada's 1 to 3% target range since the policy's adoption in 1991, being in line with the 2% target as evidenced by the average of 1.8% (median 1.7%). CPI growth has also been very stable during this latter period, which is obvious from the graph, and also by the huge decline in standard deviation from 3.1% to 0.8%. Obviously, forecasting inflation is much easier today than it was in previous years.

2.1.2 Global Economic Activity

The global economy has faced several challenges since 2008, but is expected to grow at a solid pace in 2018 and 2019. For example, Table 2 shows the April 2018 Consensus Economics Inc. Forecasts for average global real GDP growth figures of 3.3% and 3.2% respectively, while the Bank of Canada's July 2018 Monetary Policy Report (MPR)[1] estimates were higher at 3.8% and 3.5%. Table 2 shows that the expected global improvements are based partly on expectations that the U.S. economy will continue to grow steadily over 2018 and 2019 in the 2.5-3.1% range, while the Euro zone will continue to rebound back close to normal growth levels with expected growth rates of 1.6-2.4% for 2018-19.

[1] Source: https://www.bankofcanada.ca/wp-content/uploads/2018/07/mpr-2018-07-11.pdf.

TABLE 2

REAL GDP GROWTH GLOBAL FORECASTS (2018-2019)

Real GDP Growth (%)	2018		2019	
	Consensus	Bank of Canada	Consensus	Bank of Canada
World	3.3	3.8	3.2	3.5
U.S.	2.8	3.1	2.6	2.5
Euro Zone	2.4	2.2	1.9	1.6

Source: Consensus Economics Inc. (April 2018) and Bank of Canada MPR (July 2018).

The Bank of Canada notes in its' July 2018 MPR that global growth will remain solid, with trade tensions posing a risk to this outlook through their potential influence on trade and investment. The factors driving growth include the robust U.S. economy and accommodative global financial conditions, despite recent movements by the U.S. in particular to reduce monetary stimulus. The Bank further notes that other economies continue to grow, albeit at a slower pace than the U.S., and with some economies being affected adversely by recent increases in oil prices. They also expect strong growth in emerging market economies, albeit with rising risks in some of them. With respect to China, the Bank stated that "Economic growth is still anticipated to moderate from around 6 1/2 per cent in 2018 to around 6 per cent in 2020, as part of the continued transition to more sustainable growth."

2.1.3 Today's Outlook

The Bank's July 2018 MPR notes that "the Canadian economy continues to operate close to full capacity, and GDP is expected to expand somewhat faster than potential." The Bank expects the contribution from consumer spending to moderate in response to higher interest rates and new mortgage rules, despite support from rising wages and strong employment levels. The Bank notes that there is an ongoing shift from consumer spending to business investment and exports. This growth in investment and exports is occurring despite the risks posed by escalating trade tensions, including ongoing NAFTA negotiations. The growth in investment is supported by the results of the Bank's "Business Outlook Survey – Summer 2018," which reported an increase in the summary BOS Indicator to near record highs, reflecting business

optimism.[2] Economic growth is being supported by accommodative monetary conditions and foreign demand, while oil price increases have helped some industries and jurisdictions. However, trade policy uncertainty and tariffs have served to dampen this potential growth.

Taking all of these factors into consideration the Bank forecast real GDP growth of 2.0% in 2018, 2.2% in 2019 and 1.9% in 2020. Table 3 shows that the 2018 and 2019 forecasts are in line with the April 2018 Consensus Economics' forecasts (2.0% and 1.9%), and with those of the IMF (2.3% and 2.0%) and the OECD (2.2% and 2.0%).

TABLE 3

REAL GDP GROWTH FORECASTS – CANADA (2018-2019)

Conf. Board of Canada	1.9	2.2
CIBC World Markets	2.1	1.6
IHS Markit	2.4	2.3
Citigroup	2.1	2.1
BMO Capital Markets	2.0	1.8
Desjardins	2.1	1.9
Econ Intell Unit	2.0	1.7
EconoMap	2.1	1.9
Oxford Economics	1.8	2.1
JP Morgan	1.9	1.7
National Bank	2.5	1.8
RBC	1.9	1.6
TD Bank	2.0	1.9
University of Toronto	1.6	2.1
Scotia Econ	2.2	2.1
Informetrica	2.2	1.8
Stokes Econ Consulting	2.3	2.0
Inst Fiscal Studies	1.9	1.8
Capital Economics	1.5	1.3
Average	**2.0**	**1.9**
Median	**2.1**	**1.9**
Max	**2.5**	**2.3**
Min	**1.5**	**1.3**
IMF (Jan 18)	**2.3**	**2.0**
OECD (Mar 18)	**2.2**	**2.0**
Bank of Canada (July 2018)	**2.0**	**2.2**

[2] Source: Bank of Canada "Business Outlook Survey": https://www.bankofcanada.ca/2018/06/business-outlook-survey-summer-2018/.

Source: Consensus Economics Inc. (April 2018) and Bank of Canada MPR (July 2018).

The Bank notes that "labour market conditions remain healthy, but growth of employment and average hours worked has slowed from last year's strong pace (Chart 7). Likewise, after declining notably in 2017, the unemployment rate to date this year has remained relatively steady, near its 40-year low." Further, they note that core inflation remained close to 2%, "consistent with an economy operating near potential." They forecast that total CPI inflation would hit 2.5% in the last two quarters of 2018 reflecting the impact of "higher gasoline prices in recent months, the impact of minimum wage increases, newly imposed tariffs and exchange rate pass-through."

Based on the discussion above, the Bank predicts inflation rates of 2.4% in 2018, 2.2% in 2019, and 2.1% in 2020, all within range of its target rate. The Bank's total inflation projections for 2018 were slightly above, but in line with the Consensus Economics' forecasts of 2.2% and 2.0%, as well as with those of the IMF and OECD, all of which can also be found in Table 4.

TABLE 4

CPI FORECASTS – CANADA (2018-2019)

CPI Forecast	2018	2019
Conf. Board of Canada	2.0	1.9
CIBC World Markets	2.4	2.0
IHS Markit	2.1	2.0
Citigroup	2.1	2.0
BMO Capital Markets	2.2	2.1
Desjardins	2.4	2.0
Econ Intell Unit	1.9	1.8
EconoMap	2.2	2.1
Oxford Economics	2.2	2.0
JP Morgan	2.1	2.0
National Bank	2.3	2.1
RBC	2.6	1.9
TD Bank	2.3	2.0
University of Toronto	2.5	2.1
Scotia Economics	2.2	2.3
Informetrica	2.1	2.1
Stokes Econ Consulting	1.9	2.0
Inst Fiscal Studies	2.1	1.9
Capital Economics	2.3	1.5

Average	**2.2**	**2.0**
Median	**2.2**	**2.0**
Max	**2.6**	**2.3**
Min	**1.9**	**1.5**
IMF (Jan 18)	**2.3**	**2.0**
OECD (Mar 18)	**2.2**	**2.0**
Bank of Canada (July 2018)	**2.4**	**2.2**

Source: Consensus Economics Inc. (April 2018) and Bank of Canada MPR (July 2018).

The Bank states that "The ongoing shift toward protectionist global trade policies remains the most important source of uncertainty surrounding the outlook." The associated risk can affect not only investment and exports, but also global economic health and consumer spending from those working in affected industries. Noting this, the Bank identified the following key risks that could impact its' inflation forecasts: (a) weaker Canadian investment and exports; (b) sharp tightening of global financial conditions; (c) stronger real GDP growth in the United States; (d) stronger consumption and rising household debt in Canada; and, (e) a pronounced decline in house prices in overheated markets in Canada.

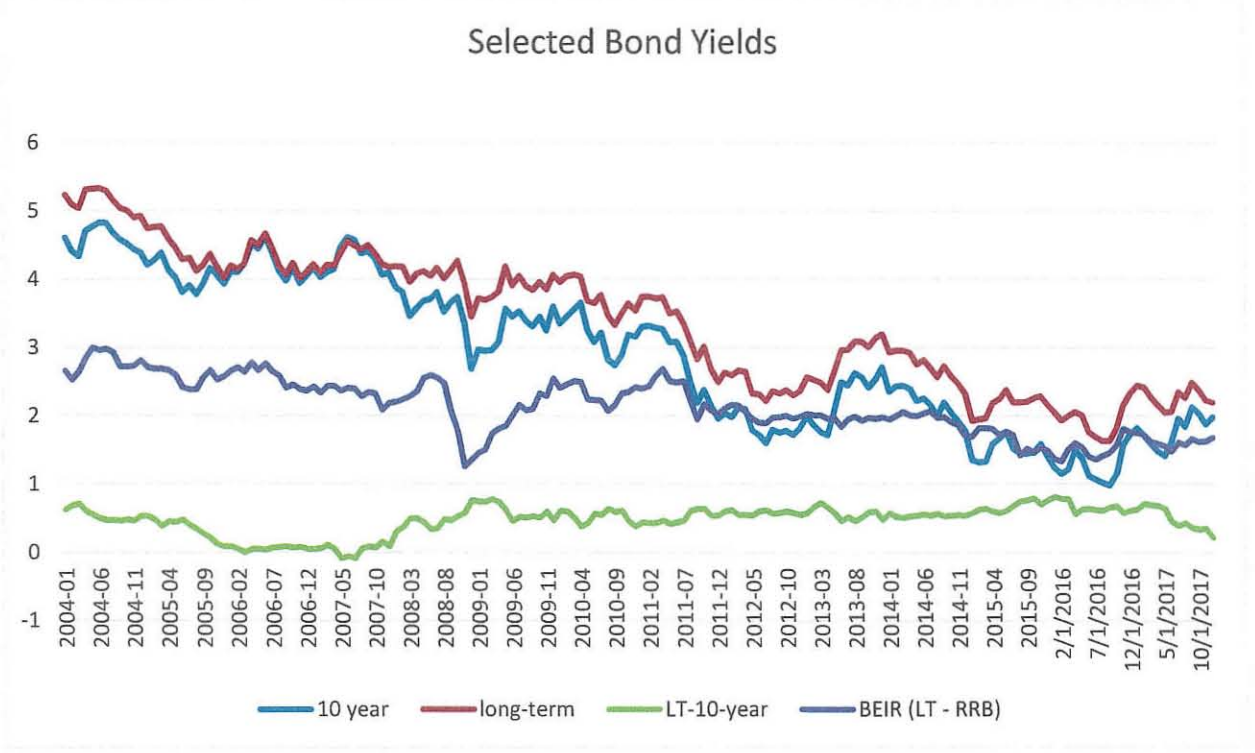
2.1.4 Interest Rate Levels

Interest rates in Canada have remained low over the past decade. Figure 2 shows 10-year and long-term bond yields in Canada over the last 14years, which have moved in tandem for the most part, with a correlation coefficient of 0.99 over the period. The graph also shows the spread between the two rates, which had an average (median) of 0.47% (0.53%) over the entire period. It is obvious from the graph that this spread increased during the last half of 2015, finally hitting a high of 0.81% in January of 2016. This spread declined steadily throughout 2017, hitting 0.22% in December 2017.[3] The graph also shows the break-even inflation rate (BEIR), which is the difference between the yield on long-term Canada bonds and the yield on Canadian Real Return Bonds. The BEIR can be viewed as an indicator of future inflation rates. This rate remained within the Bank's target band for inflation over the entire period, peaking at 3.0% in 2004, hitting a trough of 1.26% in November of 2008 around the peak of the crisis, and averaging 2.1% overall, slightly above the Bank's target. It sat at 1.68% at the end of 2017.

[3] This spread continued to decline through 2018 and sat at 0.02% as of September 12, 2018.

FIGURE 2

SELECTED BOND YIELDS – CANADA (2004-2017)



Data Source: Bank of Canada website at http://www.bankofcanada.ca.

The view today is that bond yields will increase slowly in the coming months; although this is far from a given. This seems to be the consensus view of most economists in April of 2018, as can be seen in Table 5. The April 2018 Consensus Economics' Forecast for 10-year Canada bond yields was 2.7% for the end of April 2019 – up from the September 12, 2018 level of 2.32%. I say that such an increase is "far from a given" based on the fact that the Consensus Economics' forecasts for 10-year yields have consistently been well above the subsequent resulting actual 10-year yields since 2011, over-estimating the yield by more than 2% for 2012 and 2015, and by more than 3% for 2016. Finally, it is worth noting that as of September 12, 2018 the spread between 10-year Canada yields of 2.32% and 30-year Canada yields of 2.34% was a mere 0.02%, well below the long-term average spread between the two rates of 0.5% noted previously.

TABLE 5

10-YEAR YIELD FORECASTS – CANADA (2018-19)

10-Year Canada Yields	July-18	April-19
Conf. Board of Canada	2.4	2.7
CIBC World Markets	2.4	2.4
IHS Markit	NA	NA
Citigroup	2.3	2.8
BMO Capital Markets	2.3	2.7
Desjardins	2.4	2.8
Econ Intell Unit	NA	NA
Oxford Economics	2.3	2.9
EconoMap	2.2	2.7
JP Morgan	NA	NA
National Bank	2.5	2.8
RBC	2.4	3.0
TD Bank	2.4	2.6
University of Toronto	2.4	3.1
Scotia Bank	2.3	2.6
Informetrica	2.3	2.9
Stokes Econ Consulting	NA	NA
Inst Fiscal Studies	2.5	2.7
Capital Economics	2.4	2.0
Average	**2.4**	**2.7**
Median	**2.4**	**2.7**
Max	**2.5**	**3.1**
Min	**2.2**	**2.0**

Source: Consensus Economics Inc. (April 2018).

2.2 The Newfoundland and Labrador Economy

Table 6 provides forecasts of real GDP growth for Newfoundland and Labrador (NL) for 2018 and 2019. The private sector average forecasts (which includes the six big banks and the Conference Board of Canada) are for 0.3% real GDP growth in 2018 (with a maximum of 1.5% and a minimum of -2.0%), and 2.2 percent in 2019 (with a maximum of +3.5% and a minimum of 0.5%). The Department of Finance forecasts a decline of 0.8 percent in 2018, followed by growth of 1.1 percent in 2019. So there is general

agreement that the economic growth will be negligible for NL in 2018 and will be moderately positive in 2019.

TABLE 6

NEWFOUNDLAND AND LABRADOR REAL GDP GROWTH FORECASTS (%) - 2018-19

		2018	2019
CIBC World Markets	22-Mar	-0.9	1.5
Scotiabank Group	3-May	0.5	1.4
TD Economics	15-Mar	1.5	1.7
BMO Nesbitt Burns	11-May	0.0	0.5
Royal Bank of Canada	12-Mar	-2.0	3.4
National Bank	1-May	1.5	3.5
Conference Board of Canada	8-May	1.4	3.3
Private Sector Average		**0.3**	**2.2**
Department of Finance	7-Mar	**-0.8**	**1.1**

Forecasts as of May 11, 2018

Source: http://www.economics.gov.nl.ca/frcstGDP.asp, September 14, 2018.

Table 7 shows that the summer 2018 provincial outlook provided by the Conference Board of Canada (CB) forecasts 0% real GDP growth in 2018 for the NL economy, which is the result of "declines in fishing, construction, and consumer demand." However, they forecast the NL economy would lead all provinces with 4.9% in growth during 2019, which would be primarily due to increasing oil production at Hebron.[4] The CB also notes additional good news for the oil industry, as "the provincial government recently came to an agreement with two international companies to develop what would be the province's first deep-water production plant, the $6.8-billion Bay du Nord initiative." While this initiative is not expected to move ahead for a few years, the CB notes that "there will be further exploration and development work in the meantime." The CB notes that, despite the positive developments in the oil industry, the NL economy faces challenges in the form of declining business investment, high unemployment rates, and an aging population.

[4] The CB real GDP forecasts for NL for 2018 and 2019 in this summer forecast of 0% and 4.9% differ from the CB forecasts made in May 2018 of 1.4% and 3.3% included in Table 6. The CB does not explain these differences, but it is reasonable to assume they are related to "timing differences," since the forecast growth over the two-year period is similar in magnitude.

TABLE 7

CONFERENCE BOARD OF CANADA ECONOMIC FORECASTS FOR NL - 2017-2019

Growth (%)	2017	2018	2019
Real GDP	1.9	0.0	4.9
Household Disposable Income per capita	1.4	0.3	2.2
Employment	-3.7	-0.8	-0.7
Unemployment Rate (Actual %)	14.7	15.1	15.1

Source: Conference Board Provincial Outlook, Summer 2018.

3. CAPITAL STRUCTURE CONSIDERATIONS

3.1 Background

I begin my discussion with a review of the risk assessment of Newfoundland Power (NP) in previous hearings. In Order No. P.U. 19 (2003), the Board stated (on page 33) that they did "not anticipate a change in the business risk of NP in the foreseeable future and concurs with the assessment of NP and the cost of capital experts that NP is of average business risk compared to other utilities." On page 30, the Board noted that NP stated "All experts agreed that Newfoundland Power has an approximately average utility risk." The Order also notes (on page 32) an October 2002 report by S&P confirming an "A" rating for NP's first mortgage bonds, wherein S&P noted (bold added for emphasis):

> *"Newfoundland Power's relatively **low risk profile** is supported by cost of service/rate of return regulation; the ability to flow through all power costs; a weather normalization mechanism; and no exposure to cyclical industrial consumers, which are serviced directly by the provincial government-owned utility, Newfoundland and Labrador Hydro."*

Recent debt rating reports (as provided in Exhibit 4 of NP's evidence) suggest that DBRS and Moody's continue to share S&P's 2002 opinion that NP possesses low business risk. For example, in its' September 5, 2017 debt rating report, DBRS confirmed NP's "A" rating and noted the following strengths: stable and supportive regulatory environment; solid financial profile; and, stable customer base. Similarly, in its' January 31, 2018 rating report, Moody's confirmed NP's "Baa1" rating, while noting the following three

"credit strengths": low risk regulated utility; supportive regulatory environment; and, stable cash flow metrics." These conclusions are supported by the following statements (bold added for emphasis):

> *"Newfoundland Power Inc.'s (NPI, Baa1 stable) credit profile reflects the company's* ***low business risk*** *as a vertically integrated cost-of-service regulated utility with no unregulated business activities. Approximately 93% of NPI's power requirements are purchased from provincially owned Newfoundland & Labrador Hydro (Hydro), the cost of which is passed through to ratepayers. NPI's allowed Return on Equity (ROE) is 8.50% for 2016-2018, and we view the Newfoundland and Labrador Board of Commissioners of Public Utilities (PUB) as* ***one of the more supportive regulators*** *in Canada because regulatory decisions are timely and balanced, deferral accounts reduce the risks from factors beyond management's control and* ***NPI's 45% equity capital is among the highest authorized levels in Canada.*** *"*

Similar to the 2003 decision, the Board concluded that NP continued to be an average risk Canadian utility on page 13 of Order No. P.U. 43 (2009). On page 12 of this 2009 Order the Board noted that:

> *"The evidence shows that Newfoundland Power operates in a* ***low risk environment****. It is accepted that the regulatory regime is supportive with a range of mechanisms in place to mitigate risk... "*

The Board also noted on page 12 that Mr. Cicchetti suggested NP "operates in a low risk market under supportive regulation," and that he had characterized the regulatory regime under which NP operates as "exceptional."

On page 17 of Order No. P.U. 13 (2013), the Board suggested that at that time, they considered that "Newfoundland Power continues to be an average risk Canadian utility." The Board noted on page 14 of this Order that "Newfoundland Power argues that it continues to be an average risk Canadian utility," while the Consumer Advocate argued that NP was "at most, of average business risk and lower financial risk compared to other Canadian utilities."

In its' most recent decision, the PUB confirmed its position that NP continues to be an average risk Canadian utility as noted on page 19 (lines 26-33) of Order No. P.U. 18 (2016) below:

> *"The Board agrees with the opinions of Drs. Booth and Cleary that the risks associated with Muskrat Falls and the negative economic outlook have not increased Newfoundland Power's business risk from average to above average at this time, compared to other Canadian utilities.*
>
> ***The Board concludes that Newfoundland Power's financial and business risk have not materially changed since the last general rate application. The Board finds that***

Newfoundland Power continues to be an average risk utility."

The quote from Order No. P.U. 18 (2016) above refers to both business and financial risk, where business risk includes an assessment of regulatory risk. The combination of business risk and financial risk determines a firm's total risk. This point is commonly accepted by expert witnesses, regulators, and by the debt rating agencies which make their overall risk (and rating) assessment by giving significant weight to both business and financial risk. In similar fashion, I will consider business risk, including regulatory considerations, financial risk, and total risk. I conclude by providing resulting recommendations regarding NP's capital structure.

3.2 Business Risk

The Board noted on page 11 of Order No. P.U. 43 (2009) the following summary of NP's risk position according to the Consumer Advocate (Transcript, October 14, 2009, page 25/11-20):

> *"Newfoundland Power has been and will continue to be a very well protected, stable, predictable, conservative, low risk utility operating in a very supportive regulatory environment where the company enjoys moderate, yet fairly steady customer growth, free from significant competition. With only a small amount of generation, Newfoundland Power is predominantly poles and wires. In essence, it is very low risk."*

This is an excellent summary of NP's operating environment and its resulting business risk, and is consistent with the views expressed by debt rating agencies. Hence, it seems reasonable to consider that NP continues to possess low business risk (which is consistent with the views of the debt rating agencies), unless compelling and material evidence demonstrates that NP's operating or regulatory environment has changed materially since 2016, or as far back as 2003 for that matter. My analysis below leads to me to conclude that such material changes have not taken place. Further, I provide empirical evidence which confirms *quantitatively* - what has generally always been agreed upon by NP, expert witnesses, and the Board, based on extensive *qualitative* analysis – NP is a low business risk utility.

3.2.1 Regulatory Risk

Newfoundland Power operates in an extremely supportive regulatory environment, which represents a big strength in terms of minimizing its business risk. This is reflected in evidence provided in previous decisions, and by the evidence provided by Mr. Coyne, who rates the Newfoundland regulatory environment well above the Canadian average, and among the top four.[5] This point is also front and centre in credit rating reports for NP, both past and present. For example, the September 4, 2017 DBRS Rating Report lists a "stable and supportive regulatory environment" as the #1 strength among its "Rating Considerations." DBRS notes the effectiveness of the following mechanisms, stating that NP "continues to benefit from the use of regulatory deferral accounts such as the rate stabilization account (RSA) and the weather normalization reserve (WNR), which significantly reduce volatility in the Company's earnings and cash flows." The comments in the 2017 DBRS report are consistent with previous DBRS conclusions regarding NP's regulatory environment. For example, in the August 15, 2015 DBRS report, it concluded that NP operates in a regulatory framework that "allows Newfoundland Power to recover all prudently spent operating expenses and earn a reasonable return." I will verify the validity of this statement quantitatively later in my evidence.

In its January 31, 2018 Credit Opinion Moody's echoed the sentiment of DBRS, citing a "supportive regulatory and business environment" as one of three "Credit Strengths." In support of their conclusion, Moody's notes the pass through mechanisms mentioned by DBRS above and also notes that they consider the Public Utility Board (PUB) to be supportive (bold added for emphasis) "with a track record of reasonably timely and balanced decisions that **enable NPI to generate stable cash flow and earn its allowed ROE** which has not been directly subject to political interference." They also note that the "PUB's review and approval of NPI's capital spending plans and long-term debt issuances significantly reduce the risk of cost disallowances and support NPI's ability to fully recover costs on a timely basis." Once again, I will provide empirical evidence later in this report to support the validity of these statements regarding NP's cash flow stability and their consistency in earning profits.[6]

3.2.2 Operating Environment

NP operates a virtual monopoly in a low business risk environment. As a result, revenue growth has been slow but steady, as one would expect for a company operating in a mature market with virtually no competition. Figure 3 verifies this steady growth in NP's revenue for the years 1995-2017. Annual revenue

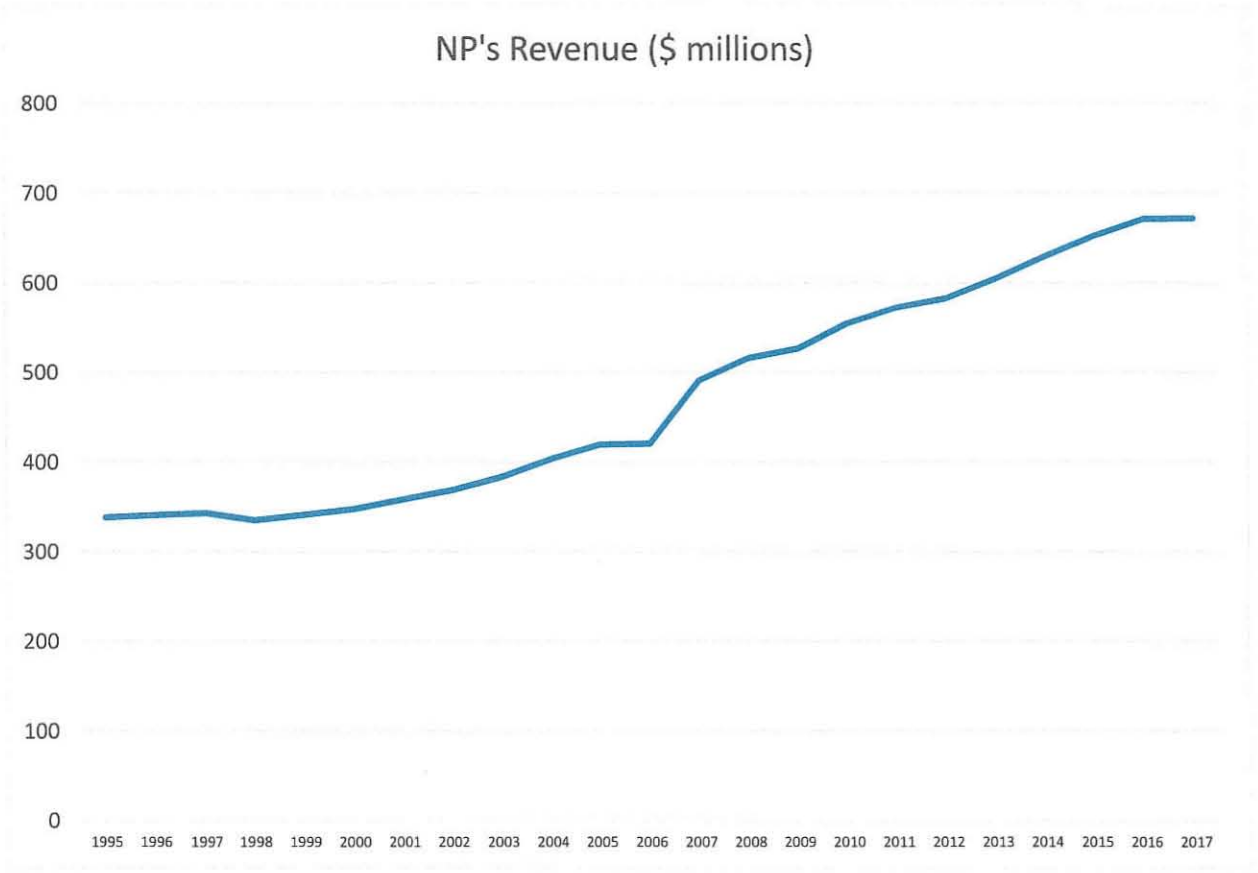
[5] Refer to Figure 29 of Mr. Coyne's evidence.

[6] For example, Table 1 in the response to information request CA-NP-019 shows that NP has earned an ROE above the allowed ROE in 22 straight years, averaging 46 basis points above the allowed ROE over this period.

growth averaged 3.4% over this period, and growth was only negative in one year, 1998, when revenue declined 2.3%.

FIGURE 3

NP REVENUE (1995-2017)



Data Source: Newfoundland Power's annual reports, 1996 to 2017.

The CB economic forecast for NL for 2018 is for zero growth, rebounding to grow at 4.9% in 2019, while the private sector forecasts provided in Table 6 averaged 0.3% in 2018 and 2.2% for 2019. It is worthy of note that NP has survived previous declines in economic activity, with their sales and operating income figures continuing to grow steadily. In other words, NP is less affected than companies operating in cyclical industries such as real estate or consumer durables. Indeed, the historical record confirms that NP has weathered economic "storms" in the past and managed to maintain growth in sales and operating income,

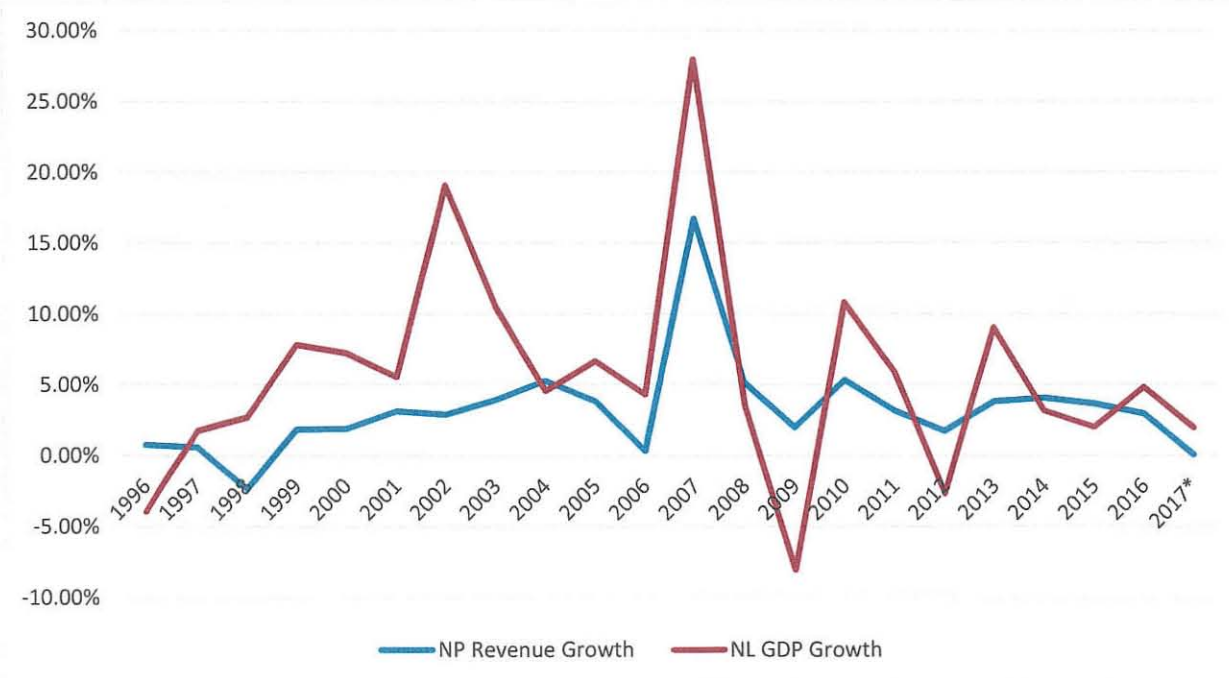
and earn ROEs at or above the allowed ROEs. For example, Figure 3 plots the annual growth rate in NP revenue versus the real GDP growth rate for Newfoundland and Labrador over the 1996-2017 period. As noted previously, NP experienced only one decline in revenue growth over this period, and grew in all six of the years when the real GDP growth rate was negative.

Over this period, the average annual growth rate in NP's sales was 3.4%, versus 2.5% for real GDP growth. The volatility of NP's sales growth was much lower, as measured by its standard deviation of 3.6% versus 5.7% for NL's real GDP growth. While the minimum sales growth for NP was -2.3%, the minimum for real GDP growth was -10.1%. Further, the correlation coefficient between NP's sales growth rates and real GDP growth rates over this period was positive as expected, but low at 0.31 - reflecting the fact that NP's sales are more resilient than NL's real GDP growth rates. In other words, the evidence suggests that NP's sales have been resilient to economic decline.

FIGURE 4

NP REVENUE ANNUAL GROWTH VERSUS

NL REAL GDP GROWTH (%) - 1996-2017



Data Source: Newfoundland Power's annual reports, 1996 to 2017, and CANSIM database.

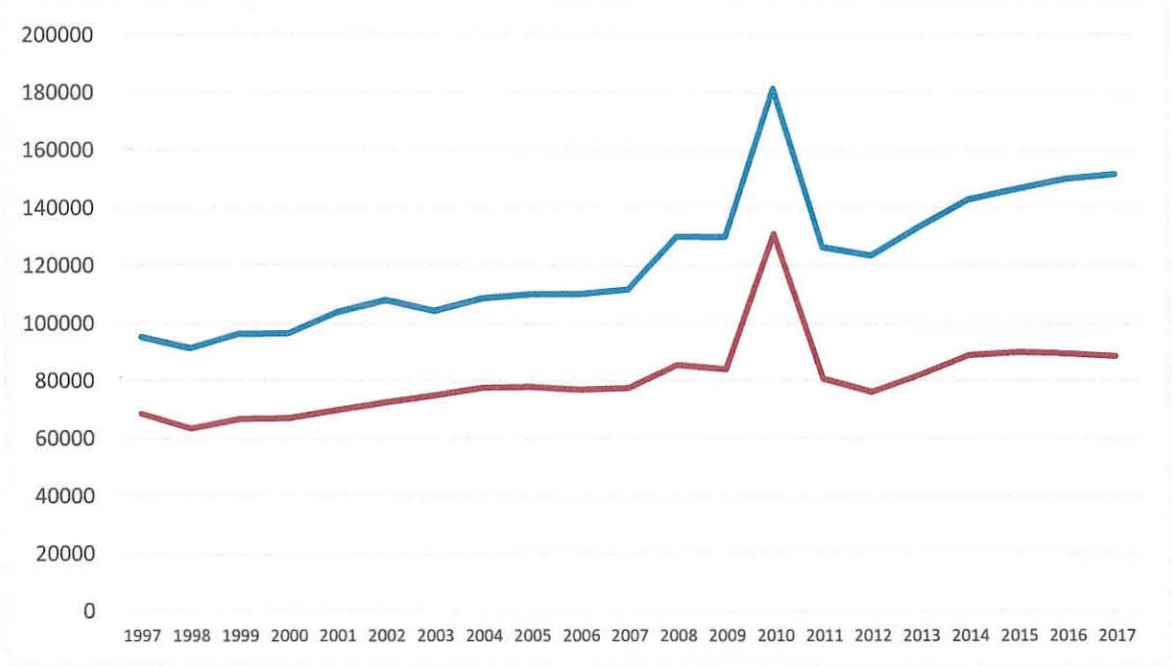
NP serves as a low-risk distributor, with almost all of their energy generation needs provided by Newfoundland and Labrador Hydro (NLH). As mentioned above, since capital expenditures and long-term debt issues are reviewed and approved by the PUB, the risk of cost disallowances is very low. The RSA, WNR, DMIA and PEVDA all serve to minimize variance in operating income related to supply costs, the impact of abnormal weather conditions, as well as other costs to NP. Hence NP faces very little risk that it will not be able to pass legitimate expenses on to customers and earn an adequate rate of return in such a supportive regulatory and business framework.

The points above are consistent with the beliefs expressed in previous hearings and with those expressed by rating agencies. For example, in its January 19, 2015 Credit Opinion, Moody's notes NP's "low-risk business model" as the # 1 rating consideration. Moody's notes that NP is "effectively protected from potential competition," and that sales have grown "at a relatively low and predictable rate of 1-2% annually," and that "growth has not taxed NPI either operationally or financially due to the relatively timely recovery of capital and operating costs." In other words, NP has low business risk because it is operating a virtual monopoly with revenue growing slowly but steadily where it is able to pass reasonably incurred costs onto consumers due to various pass through mechanisms.

It is not surprising that when we combine all of these factors with the stable growth in revenue documented previously, that we also find that NP displayed slow but steady growth in operating income over the 1997-2017 period as proxied by either EBIT or EBITDA, with EBIT (EBITDA) growing at an average annual rate of 2.5% (3.1%). The steady growth of EBIT and EBITDA displayed in Figure 5 is similar to that portrayed for revenue in Figure 3. All of the empirical observations evident in Figures 3 to 5 are consistent with a company that has low business risk. Not surprisingly, NP has been able to earn its allowed ROE or higher for 22 consecutive years, as will be discussed later.

FIGURE 5

NP'S EBIT AND EBITDA (1997-2017)



Data Source: Newfoundland Power's annual reports, 1996 to 2017.

3.2.3 A Quantitative Assessment of NP's Business Risk

My examination of NP's operating and regulatory environment above suggests that NP possesses low business risk. The same can likely be said for most other regulated utilities, especially those that are distributors and that operate virtual monopolies in supportive regulatory environments. Certainly, it is easy to see that regulated utilities such as NP have very low business risk when compared to companies operating in other non-regulated industries that face greater demand variability, greater competition, and that do not have as great an ability to pass through increases in their costs to their customers. As noted in Section 3.2.1 there has been general agreement in previous hearings that NP is at worst an average risk regulated Canadian utility. Finally, rating reports consistently suggest that NP and most other regulated Canadian utilities have low business risk.

Most experts assessing "business risk" would agree that it refers to some variation of factors that cause uncertainty, or volatility, in operating income. For example, the following definition of business risk can be found in the CFA Institute's on-line Glossary of definitions: "The risk associated with operating earnings. Operating earnings are uncertain because total revenues and many of the expenditures contributed to produce those revenues are uncertain" This definition is consistent with the definition of business risk

proposed by Dr. Roger Morin in the 2003 GRA proceedings, as noted in Order No. P.U. 19 (2003), quoted below:

> **"Business Risk**
>
> Refers to the relative **variability of operating profits** induced by the external forces of demand for and supply of the firm's products, by the presence of fixed costs, by the extent of diversification or lack thereof of services, and by the character of regulation.[7]"

This definition was accepted by the PUB at that time:

> "The Board feels the above definitions are consistent and reasonable. The Board accepts these definitions and sees no particular conflict in terms of the evidence presented during the hearing.[8]"

In this section, I use two variations of a commonly used measure of operating income volatility, the coefficient of variation of EBIT (hereafter CV-EBIT), to *quantify* a firm's level of business risk. The first CV measure (CV(EBIT)) is estimated by dividing the standard deviation (SD) of EBIT by the *expected* EBIT level. The rationale for using the CV as a measure of EBIT volatility rather than simply using the SD of EBIT, is that the SD is affected by the size of EBIT. In other words, firms with larger EBITs will have higher SDs of EBIT, even if they have less volatility, simply because the level of the EBIT figures used to determine the SD are much higher. The CV is more appropriate in such instances and is commonly used to measure volatility since it effectively "scales" the SD of EBIT when it is divided by the expected (or average) level of EBIT.

I use two variations of CV-EBIT described below:

(1) **CV(EBIT)** is calculated as the standard deviation of EBIT for a given utility over my sample period (1995-2017) divided by the expected EBIT next year (which is determined by multiplying the most recent EBIT figure times one plus the median growth rate in EBIT for that firm).

(2) **CV (EBIT/Sales)** is calculated as the standard deviation of the EBIT/Sales ratio (1995-2017) divided by the average of the EBIT/Sales ratio over this period.

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[7] Order No. P.U. 19 (2003), In the Matter of the 2003 General Rate Application filed by Newfoundland Power, page 31, source: http://www.pub.nl.ca/nfpower03/order/pu19-2003.pdf

[8] *Ibid.*

Measure (1) uses expected EBIT as the denominator in determining the CV of EBIT, which is one common approach used to estimate CV-EBIT, as in Petty et al (2011) for example.[9] Notice that this approach estimates the standard deviation using all available EBIT observations. Another common approach uses the average EBIT as the denominator, as in the 2013 CFA curriculum (Reading 28, page 351). However, as discussed previously EBIT has continued to grow steadily for NP and has also done so for the other utilities I use for comparison purposes. This implies that using a long-term average that will by nature be well below current EBIT levels may be inappropriate. The second measure of CV-EBIT that I use adjusts for growth in EBIT by using the EBIT/Sales ratio rather than the expected level of EBIT. This measure is preferable if there are significant differences in growth rates in EBIT across the different firms being compared. It is a valid measure of business risk, since it measures volatility in the operating profit margins for firms. It also has the advantage that, as a ratio, the expected value and past average values will often coincide since these *profitability margins often tend to gravitate to some long-term average*.

I will now compare the level of business risk for NP to Mr. Coyne's U.S. and Canadian proxy groups using the two measures of business risk described above. Figure 6 depicts a summary of the main results of this analysis. The evidence clearly shows that the average U.S. utility has higher volatility in EBIT according to CV(EBIT), relative to the Canadian comparable group (i.e., 0.244 versus 0.187). Both proxy groups used by Mr. Coyne have much higher volatility in EBIT according to this measure than NP, which has a CV(EBIT) of 0.157. We obtain the same message when we examine volatility in the EBIT/Sales ratio as measured by the CV(EBIT/Sales). This ratio is highest for the U.S. proxy group at 0.299, followed by the Canadian proxy group at 0.286, and with the ratio for NP being over 40% lower at 0.170. This evidence confirms that NP is very low business risk – confirming empirically, the conclusions made above in my qualitative assessment of NP's business risk. The EBIT/Sales chart in Figure 6 demonstrates that the average EBIT/Sales ratios are similar for the U.S. firms and NP, with the average being slightly higher for the Canadian proxy group. So, in essence, NP generates similar operating profit margins to U.S. utilities, and slightly lower margins than the Canadian proxy group, but with much, much less volatility in operating income. This of course, suggests U.S. utilities have much higher business risk, which has often been argued in previous Canadian hearings. It also confirms that the Canadian utilities included in Mr. Coyne's proxy group are riskier than NP. This is also not surprising given that his Canadian proxy group is comprised of holding companies that have international exposure, exposure to generation, pipelines, etc.[10]

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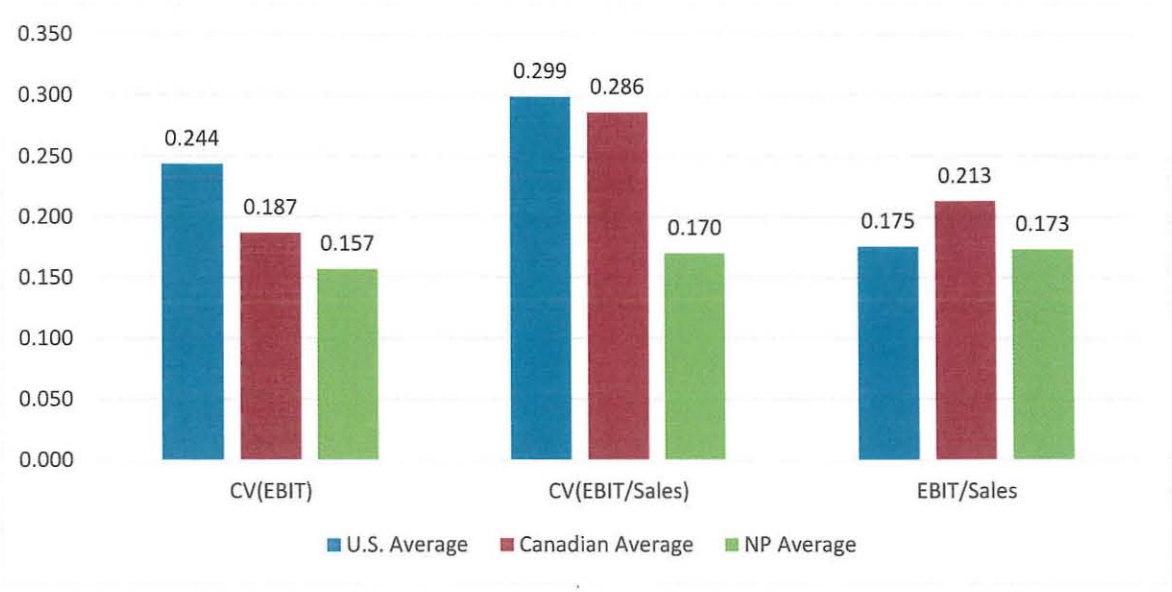
[9] Source: Financial Management: Principles and Applications, 6th edition, by J. William Petty, Sheridan Titman, Arthur J. Keown, Peter Martin, John D. Martin, Michael Burrow, Hoa Nguyen, 2011, Pearson Higher Education.

[10] The exposures of the companies included in Mr. Coyne's Canadian proxy group can be seen in the response to CA-NP-111.

FIGURE 6

COEFFICIENT OF VARIATION OF EBIT ESTIMATES (1995-2017)



Data Sources: U.S. and Canadian proxy group data was obtained from the Compustat database. Valener was not included in the Canadian proxy group due to data unavailability for 2012-2017. Data for NP was obtained from annual reports from 1995-2017.

Table 8 confirms that the patterns displayed in Figure 6 are not driven by the use of averages, as it reports the results for all U.S. and Canadian utilities used in the comparison groups. Table 8 shows that both CV-EBIT measures are higher for all of the Canadian utilities in Mr. Coyne's proxy group than for NP. This is also true for each utility in Mr. Coyne's U.S. proxy group, with the exception of the CV(EBIT) figure for Pinnacle West (i.e., 0.143 versus 0.157), and the CV(EBIT/Sales) figures for Allette Inc. (0.118), Aliant Energy (0.139), and Southern Company (0.094), which were lower than the NP figure of 0.170. These results confirm that NP has very low business risk, much lower than those in Mr. Coyne's two proxy groups. Since Mr. Coyne's North American proxy group is simply a combination of these two groups, the same comment applies to this proxy group.

TABLE 8

AVERAGE CV-EBIT ESTIMATES FOR ALL FIRMS (1995-2017)

U.S. Firms		CV(EBIT)	CV(EBIT/Sales)	EBIT/Sales
	Allette inc.	0.205	0.118	0.151
	Aliant Energy Corp.	0.221	0.139	0.154
	American Elec. Power	0.215	0.249	0.181
	Duke Energy Inc.	0.237	0.351	0.192
	Edison International Inc.	0.505	0.514	0.186
	Eversource Energy	0.280	0.556	0.131
	OGE Energy	0.246	0.369	0.153
	Pinnacle West.	0.143	0.217	0.224
	PNM Resources Inc.	0.225	0.381	0.143
	Southern Company	0.162	0.094	0.239
	U.S. Group Average	**0.244**	**0.299**	**0.175**
Canadian Firms				
	Canadian Utilities	0.185	0.189	0.267
	Emerea Inc.	0.183	0.244	0.233
	Enbridge Inc.	0.193	0.425	0.140
	Canadian Group Average	**0.187**	**0.286**	**0.213**
Newfoundland Power	**NP**	**0.157**	**0.170**	**0.173**

Data Sources: U.S. and Canadian proxy group data was obtained from the Compustat database. Valener was not included in the Canadian proxy group due to data unavailability for 2012-2017. Data for NP was obtained from annual reports from 1995-2017.

3.2.4 Concluding Remarks Regarding Business Risk

The qualitative analysis above confirms that NP continues to be a low business risk electric distribution utility operating in a very supportive regulatory environment, similar to the conclusions reached by the Board in previous decisions, and also consistent with the analyses of credit rating agencies of NP. My quantitative analysis provides strong support for these qualitative conclusions, as NP is shown to display much lower volatility in operating income than the utilities included in the U.S., Canadian, and North American proxy groups used by Mr. Coyne. As such, I conclude that NP continues to be a very low business risk firm.

3.3 Financial Risk

In this section, I examine the financial risk of NP by reference to a:

(1) comparison of allowed ROEs and equity ratios with other Canadian utilities; and,

(2) comparison of NP's credit metrics to other Canadian utilities.

My analysis concludes that NP has considerably lower financial risk than its Canadian counterparts.

3.3.1 Allowed ROEs and Equity Ratios

Table 9 provides data on allowable ROEs and equity ratios for Canadian electric distributors in 2018. I did not compare NP to the U.S. utilities included in Mr. Coyne's U.S. and North American proxy groups since the analysis above shows that U.S. holding companies are poor comparators for NP, because they have significantly higher business risk – partly due to their holding company structure and business holdings, and partly due to operating in the U.S. and not in Canada. Similarly, the three Canadian utilities included in Mr. Coyne's Canadian and North American proxy groups that have financial information available are all holding companies that have international exposure, exposure to generation, pipelines, etc.

TABLE 9

ALLOWED ROES AND EQUITY RATIOS (%)

	ROE	EQUITY RATO
Canadian Electric Distributors		
ATCO Electric Ltd.	8.5	37.0
ENMAX Power Corp.	8.5	37.0
EPCOR Distribution Inc.	8.5	37.0
FortisAlberta Inc.	8.5	37.0
FortisBC Inc.	9.15	40.0
Hydro-Quebec Distribution	8.2	35.0
Maritime Electric Company Limited	9.35	40.0
Nova Scotia Power Inc.	9.0	37.5
Fortis Ontario and Other Ontario Electric Distributors[11]	9.0	40.0
Saskatchewan Power Corp.	8.5	40.0

[11] Including Hydro One Inc.

Average	**8.72**	**38.05**
Median	**8.50**	**37.25**
Newfoundland Power	**8.50**	**45.0**

Data Sources: Mr. Coyne's evidence (Figures 21 and 22) and NP's responses to CA-NP-118 and 119.

Table 9 shows that NP's allowable ROE is slightly below the average, but equal to the median, of other Canadian electric distributors. At the same time, we can see that NP's allowed equity ratio of 45% is well above the mean (38%) and median (37.2%) of other Canadian electric distributors. In fact, the next highest equity ratio is 40%, and 7 of the 10 utilities listed in this table have equity ratios below 38%. Relatively speaking, NP's equity ratio is more than 18% higher than the average equity ratio (i.e., 7/38 =18%), and 21% higher than the median equity ratio (i.e., 7.8/37.2 = 21%).

The analysis above shows that NP has lower financial risk than the average Canadian electric distributor based solely on allowed ROEs and equity ratios. While NP's allowed ROE is very close to the average and equals the median, the allowed equity ratio is much, much higher, indicating lower financial risk. It is worthy of note at this time that this lower financial risk does not seem warranted due to higher business risk for NP versus similar Canadian utilities based on the discussion in the previous section, which demonstrated that NP had below average business risk.

3.3.2 Credit Metric Comparisons

In this section, I compare the credit metrics of NP to those for some comparable Canadian utilities.[12] Table 10 provides the statistics for the three main ratios used by DBRS that were obtained from the most recent DBRS reports for the Canadian utilities examined in the previous section. Using the ratios as calculated by one source should enhance the consistency in the calculation of such ratios. The most recent DBRS report for NP is from September 2017, so I calculate averages for both 2017 and 2018 for the utilities that do have 2018 reports available.

[12] I do not consider the U.S. and Canadian utilities included in Mr. Coyne's proxy groups for the same reasons I excluded them when examining allowable ROEs and equity ratios.

TABLE 10

DBRS DEBT RATINGS AND CREDIT METRICS – 2017-18

Canadian Regulated Utilities	Date	Issuer Rating	Total Debt to Capital (%)	CF/Debt (%)	EBIT Interest Coverage
1. CU Inc.	July 2018	A (high)	61.6	17.8	3.32
	July 2017	A(high)	61.4	15.4	2.94
2. Enbridge Gas Distribution Inc.	Sept 2017	A	58.0	14.2	2.54
3. ENMAX Power Corp.	May 2018	A(low)	45.1	17.1	2.22
	May 2017	A(low)	42.0	21.7	2.97
4. EPCOR Distribution Inc.	Sept 2017	A(low)	43.4	19.6	2.87
5. FortisAlberta Inc.	Nov 2017	A (low)	60.5	15.3	2.24
6. FortisBC Inc.	July 2018	A (low)	59.4	13.8	2.58
	June 2017	A	59.2	13.1	2.01
7. Hydro One Inc.	April 2018	A(high)	55.6	13.2	2.65
	April 2017	A(high)	57.3	13.6	2.77
8. Hydro-Quebec	July 2018	A(high)	66.6	12.1	2.15
	June 2017	A(high)	67.5	11.5	2.11
9. Nova Scotia Power Inc.	Jan 2018	A(low)	62.9	18.9	2.21
	Dec 2016	A(low)	62.4	17.5	2.15
10. Saskatchewan Power	Nov 2017	AA	75.2	8.9	1.49
2017 Average			58.69	15.08	2.41
2017 Median			59.85	14.75	2.39
2017 Average (excl. ENMAX, EPCOR, Hydro-Quebec, and Sask. Power)			59.80	14.85	2.44
2017 Median (excl. ENMAX, EPCOR, Hydro-Quebec, and Sask. Power)			59.85	14.75	2.39
2018 Average			58.53	15.48	2.52
2018 Median			60.50	15.45	2.40
2018 Average (excl. ENMAX, and Hydro-Quebec)			59.88	15.93	2.69

2018 Median (excl. ENMAX, and Hydro-Quebec)			60.50	15.80	2.62
Newfoundland Power	Sept 2017	A	**54.3**	**18.8**	**3.07**

Data Source: Various DBRS reports.

The results provided in Table 10 are consistent with what one would expect based on the discussion in the previous sub-section – namely, according to analysis of credit metrics provided by DBRS, NP has lower financial risk than its Canadian counterparts. In particular, NP has a debt-to-capital ratio of 54.3% which is well below the 8 group averages and medians which range from 58.5% to 60.5% for 2017 and 2018 ratios.[13] This confirms that NP possesses leverage that is well below average. Similarly, NP's interest coverage ratio of 3.07 in 2017 is well above the group average and median figures of that range from 2.39 to 2.69, and is higher than the coverage ratio for each utility in Table 10, with the exception of the ratio for CU Inc. in July 2018. This indicates that NP has much stronger interest coverage (i.e., ability to service debt) than other similar operating utilities. Finally, NP's 2017 CF/Debt ratio of 18.8% is well above the averages and medians which range from 14.8 to 15.9.

The analysis above shows that NP possesses superior DBRS credit metrics to the average Canadian electric distributor. This is consistent with Mr. Coyne's response to CA-NP-134 (Attachment B), which shows that NP had superior credit metrics to the three Canadian utilities he included in his Canadian proxy group according to S&P credit metrics. In particular, according to S&P credit metrics, NP had: a below average Debt to Capital ratio (49% versus 61%); an above average EBITDA to Interest Coverage ratio (4.67 versus 3.57); an above average FFO to Interest Coverage ratio (4.03 versus 3.60); an above average FFO/Debt ratio (17.8% versus 11.1%); and, a below average Debt to EBITDA ratio (3.65 versus 6.34). Even though I have argued that these three utilities are not the best comparators to NP, it does provide further support for the fact that NP has superior credit metrics.

Table 11 provides the ranges for the metrics used in assessing utilities' financial risk by DBRS (for low business risk firms – which is what DBRS uses in assessing utilities such as NP). NP's debt-to-capital ratio of 54% lies below the cut-off point of 55% between an A and AA rating for low business risk firms,

[13] Average and median ratios are calculated for all of the utilities for both 2017 and 2018, before and after excluding the crown corporation and municipality owned utilities (i.e., ENMAX, EPCOR, Hydro-Quebec and Saskatchewan Power).

according to DBRS criteria. The EBIT coverage ratio for NP is well above the 2.8 cut-off value for a AA assessment, while their CF/Debt ratio of 18.8% also exceeds the 17.5% AA cut-off point. Therefore, it is not surprising their A rating was confirmed in September 2017, since its metrics suggest NP falls in the AA category, and even if the metrics deteriorated somewhat they would be well in the "A range." The average debt-to-capital ratio for the other Canadian firms lies firmly in the middle of the A category (i.e., 55-65%). The interest coverage and CF/Debt ratios for the sample group also fall squarely in the A range, also consistent with their range of A(low) to A(high) ratings. It is noteworthy that NP has an A rating, falling in the middle of the range of ratings for the firms in this group, despite the fact that the NP possesses stronger credit metrics than the average Canadian electric distributor. This implies that even if NP's metrics were weaker they would probably maintain their A rating status, given their below average business risk discussed previously.

TABLE 11

CREDIT METRIC CRITERIA
(Low Business Risk)

DBRS Metrics	**AA**	**A**	**BBB**
Cash flow to debt	above 17.5%	12.5 to 17.5%	10.0 to 12.5%
Debt to Capital	below 55%	55 to 65%	65-75%
EBIT to Interest	Above 2.8	1.8 to 2.8	1.5 to 1.8

3.3.3 Concluding Remarks Regarding Financial Risk

The discussion in Section 3.3.1 shows that NP has lower financial risk than other Canadian utilities based upon a combination of an allowable ROE which is about average and equity ratios which are much higher than average. Given this attractive ROE to equity ratio combination, it is not surprising that NP displays superior credit metric ratios to its Canadian peers, as discussed in Section 3.3.2. Clearly, NP has below average financial risk, which reflects its ability to earn an average ROE, while maintaining below average leverage. NP successfully issued $75 million of 40-year bonds during 2017 at an attractive coupon rate of 3.815%, which is also reflective of its' solid credit ratings.

3.4 Total Risk Assessment for NP

One compelling way to assess the total risk (i.e., after accounting for both business and financial risk) of NP is to examine their ability to earn their allowed ROE on a consistent basis. This is a bottom line measure

of the total risks faced by NP – "where the rubber hits the road," so to speak. Table 12 provides such a comparison of the reported ROEs by NP with the respective allowed ROEs. Table 12 shows that NP has earned above its allowed ROE every year since 1996 – 22 straight years! The average difference between the earned ROE and allowed ROE has been 0.24% since 1990, and 0.46% since 1996. This is clear and strong bottom-line evidence that NP is a low-risk business.

TABLE 12

NP'S ALLOWED ROES AND EARNED ROES (%)

Year	Approved ROE (%)	Earned ROE (%)	Difference (%)
1990	13.95	13.71	-0.24
1991	13.95	13.29	-0.66
1992	13.25	13.47	0.22
1993	13.25	12.79	-0.46
1994	13.25	12.03	-1.22
1995	13.25	12.07	-1.18
1996	11	11.21	0.21
1997	11	11.14	0.14
1998	9.25	9.58	0.33
1999	9.25	9.81	0.56
2000	9.59	10.8	1.21
2001	9.59	11.35	1.76
2002	9.05	10.65	1.6
2003	9.75	10.22	0.47
2004	9.75	10.12	0.37
2005	9.24	9.6	0.36
2006	9.24	9.46	0.22
2007	8.6	8.66	0.06
2008	8.95	9.13	0.18
2009	8.95	8.96	0.01
2010	9	9.21	0.21
2011	8.38	9	0.62
2012	8.8	8.98	0.18
2013	8.8	9.16	0.36
2014	8.8	9.15	0.35
2015	8.8	8.98	0.18
2016	8.5	8.9	0.4
2017	8.5	8.93	0.43

Average	**10.13**	**10.37**	**0.24**
Median	**9.25**	**9.71**	**0.22**
Avg. (since 96)	**9.22**	**9.68**	**0.46**
Med. (since 96)	**9.03**	**9.34**	**0.36**

Sources: 1990-2014 figures are from the response to CA-NP-019 during the NP 2016 GRA proceedings. 2015-2017 figures are from Exhibit 3 (page 1) of Newfoundland Power's 2019/2020 General Rate Application.

One effective way to compare overall riskiness of NP to the utilities included in Mr. Coyne's U.S. and Canadian proxy groups would be to compare their ability to earn their allowed ROEs, as I did for NP in Table 12. Unfortunately, it is not practical to compare the earned ROEs to allowed ROEs for Mr. Coyne's proxy groups since they are comprised of primarily holding companies that own several distinct operating utilities, which operate in numerous jurisdictions. However, I would note that a recent Oliver Wyman report on North American utilities suggested that the "average utility does not earn its allowed return on equity."[14]

An alternative and effective approach to comparing the riskiness of NP to that of Mr. Coyne's proxy groups is to compare the volatility in earned ROEs. This is a measure of total risk (i.e., business and financial risk), since financial leverage influences net income, whereas EBIT is not influenced directly by financial leverage. Table 13 provides the summary statistics for earned ROEs for NP and for Mr. Coyne's proxy groups over the 1995-2017 period. It shows that the average reported ROEs of 8.23% for the U.S. utilities is lower than the Canadian utility average of 10.98% and NP's average of 9.79%. This occurs despite the fact that allowed ROEs are generally higher in the U.S. than in Canada[15], which lends support for Oliver Wyman's observation that the average U.S. utility does not earn its allowed ROE. While this is interesting, the focus of my current analysis is on ROE volatility as a measure of total risk. In this regard, Table 13 shows clearly that NP displays much lower ROE variability than either Mr. Coyne's U.S. group or his Canadian group. In particular, over the 1995-2017 period, NP had a standard deviation of ROE of 0.97% and a corresponding CV(ROE) of 0.099. These figures are much lower than for any of the 10 U.S. utilities or the 3 Canadian utilities included in Table 13. The U.S. group had an average standard deviation of 4.63% and an average CV of 0.563, while the corresponding Canadian group averages were 3.73% and 0.340 respectively. Clearly, NP is well below average total risk as reflected in ROE volatility, and ability to earn

[14] Source: Page 10 of "North America Utilities: Still a Smart Bet for the New Grid," Oliver Wyman, 2015.
[15] For example, Figure 21 (page 41) of Mr. Coyne's evidence reports an average allowed ROE for U.S. electric distributors of 9.67%, which is almost a full 1% above the average allowed ROE of 8.72% for Canadian electric distributors noted in Table 9 of my evidence.

its ROE. This is as one would expect, given its low business risk, and its low financial risk (which is reflected in above average allowed equity ratios, and above average credit metrics).

TABLE 13

ROE SUMMARY STATISTICS (1995-2017)

U.S. Firms		AVERAGE(%)	STD. DEV.(%)	CV(ROE)
	Allette inc.	9.83	2.56	0.260
	Aliant Energy Corp.	8.73	3.72	0.426
	American Elec. Power	7.63	4.04	0.529
	Duke Energy Inc.	8.76	4.55	0.519
	Edison International Inc.	7.03	5.99	0.851
	Eversource Energy	5.07	4.99	0.982
	OGE Energy	8.89	5.53	0.622
	Pinnacle West.	9.59	2.88	0.300
	PNM Resources Inc.	5.31	5.01	0.944
	Southern Company	11.49	2.28	0.199
	U.S. Group Average	**8.23**	**4.63**	**0.563**
Canadian Firms				
	Canadian Utilities	13.55	3.93	0.290
	Emerea Inc.	11.61	2.72	0.234
	Enbridge Inc.	7.79	3.88	0.497
	Canadian Group Average	**10.98**	**3.73**	**0.340**
Newfoundland Power	**NP**	**9.79**	**0.97**	**0.099**

Data Sources: U.S. and Canadian proxy group data was obtained from the Compustat database.

3.5 Capital Structure Recommendation

3.5.1 The Costs to Consumers of Maintaining an Above Average Equity Ratio

One way to illustrate the relationship between ROE and equity ratios is to use the DuPont system for decomposing ROE into basic components. The standard 3-point decomposition formula breaks ROE into three financial ratios which are considered important by analysts examining company performance. These

ratios are: the net income margin (net income dividend by sales, or "NI/S"); the asset turnover ratio (total sales divided by total assets, or "S/TA"); and, the leverage ratio (total assets divided by total equity, or "A/E"). Since ROE is defined as net income divided by total equity (or "NI/E"), we can see the multiplying the three ratios above by one another leaves us with NI/E or ROE. This equation is presented below:

$$ROE = NI/S \times S/A \times A/E$$

Since the product of the first two terms reduces to NI/A, or the return on assets ("ROA"), it is also common to observe that ROE = ROA × A/E, which is convenient for my discussion.

I begin by noting that a higher leverage ratio (A/E) implies a lower equity ratio, and vice-versa. "Non-regulated" firms will typically try to choose a leverage ratio that generates higher ROEs, while recognizing that higher leverage ratios generate additional financial risk, as reflected in greater volatility in ROEs, all else being equal. However, regulated utilities earn higher NI if they have a higher ER (i.e., lower A/E) since they earn the allowed ROE as applied to this higher equity dollar figure. Of course they should also earn higher ROEs if they are awarded higher allowed ROEs. So regulated utilities prefer both higher allowed ROEs and higher ERs. Not only do the utilities earn higher net income if they have higher allowed ERs, it also reduces their financial risk and the associated volatility in ROEs, all else being equal. Of course, this additional net income and reduction in earnings volatility comes at the expense of consumers, as reflected in their rates.

I would note that my analysis above demonstrates that NP has low business risk, as reflected by volatility in operating income, and that they also maintain low total risk as reflected in both their ability to earned allowed ROEs and the low volatility in those earned ROEs. The granting of higher equity ratios to utilities serves to reduce the financial risk of such utilities. Since total risk is a function of both business and financial risk, such a process is a useful mechanism for controlling total risk. However, it does come at a cost, which I illustrate in the example below.

Assume that one utility (A) is allotted an equity ratio of 45%, based on an allowed ROE of 8.5%, while another utility (B) is allotted a 40% equity ratio with the same ROE. I assume for illustrative purposes that both Sales (S) and Total Assets (TA) are $1 million for the utility.

Example – Net Income Effect:

Utility A: Allowed ER of 45%; TA =$1m; S = $1m.

So Equity (E) = 0.45 × $1m = $450,000

Since ROE = Net Income (NI) / E,

Then NI = E × ROE = ($450,000) × (.085) = $38,250

Utility B: Allowed ER of 40%; TA =$1m; S = $1m.

So E = 0.40 × $1m = $400,000

NI = E × ROE = ($400,000) × (.085) = $34,000

So Utility B earns an additional $4,250 in net income on sales of $1million (i.e., an extra 0.425%). This is the cost of providing a higher equity ratio to Utility A, which is borne by consumers. This additional cost may be necessary if Utility A has greater business risk than Utility B, since it would reduce A's financial risk, which reduces its total risk. However, if both A and B have similar business risk, this additional cost to consumers is unwarranted.

We can apply this logic to NP to obtain an estimate of the cost to Newfoundland consumers of maintaining an equity ratio (ER) of 45%, which is well above the Canadian average of 38% (median 37.2%) as reported in Table 9. I will consider the costs of a 45% equity ratio versus the 40% ratio I recommend in my discussion below.

I begin by taking the 2017 "Average Rate Base" figure of $1,092,254,000 from page 7 of Exhibit 3 of Newfoundland Power's GRA 2019/2020. We can then multiply this figure by 45% and 40% to obtain the resulting Common Equity (CE) dollar figures of $491,514,300 and $436,901,600 respectively. Using both the 8.5% allowed ROE and the 8.93% ROE earned by NP in 2017, these common equity figures translate into the following net income available to common shareholder figures (NIACS):

	Using ROE = 8.5%	Using ROE = 8.93%
For an ER =45%:	NIACS=$491,514,300×.085=$41,778,716	=$491,514,300×.0893=$43,892,227
For an ER =40%:	NIACS=$436,901,600×.085=$37,136,636	=$436,901,600×.0893=$39,015,313
	NIACS Differences: $4,642,080	$4,876,914

We must offset these costs to consumers of maintaining a 45% ER against the additional financing costs associated with maintaining a 40% ER (which would also be borne by consumers). With a 40% ER, the CE figure is $54,612,700 lower. Assuming the ER is reduced to 40% from 45% by issuing long-term debt

at 4%, we obtain the following additional after-tax cost to be passed through to NIACS due to the issue of $54,612,700 in new debt.[16]

Additional Debt Costs (After-tax[17]) = $54,612,700 × 0.04 × (1 – 0.2368) = $1,667,217

Since this after-tax cost would be passed on to consumers through rates, we subtract this amount from the benefits that consumers would receive if the NIACS was reduced (as above) due to reducing the ER from 45% to 40%. Thus, we can obtain the following "net benefit" in terms of NIACS to NP's CE owners of maintaining a 45% ER versus a 40% ER:

= ($4,642,080 – $1,667,217) to ($4,876,914 - $1,667,217) = $2,974,863 to $3,209,697.

Dividing these figures by NP's 2017 NAICS margin of 6.09%[18], we get the following estimate of "Additional Revenue" required to generate this net benefit in terms of NIACS:

Additional Revenue associated with maintaining 45% ER (versus 40%):

= ($2,974,863/0.0609) to ($3,209,697/0.0609) = to $48,848,325 to $52,704,384.

Of course, this additional revenue is collected from NP's customers. During 2017 NP generated 5,922.2 GWh of Energy Sales, so we can estimate the additional revenue impact per GWh as:

Additional Revenue per GWh = ($48,848,325/5,922.2) to ($52,704,384/5,922.2) = $8,248.3 to $8,899.5 per GWh, or $0.0082483 to $0.0088995 per KWh. NP's 231,639 Domestic customers accounted for 3,644.8 GWh (or 61.54%) of NP's total GWh of energy sales in 2017.[19] Therefore the average domestic customer uses 3,644,800,000/231,639 = 15,734.83 KWh per year. So we can estimate the average additional annual cost to the typical NP domestic customer of maintaining a 45% ER as follows:

Additional Cost = 15,734.83 KWh × $0.0082483 to $0.0088995

= $129.79 to $139.96 annually, or $10.81 to $ 11.66 per month.

[16] Using 4% is conservative, given that NP issued $75 million in 40-year bonds at a rate 3.815% during 2017.
[17] The tax rate of 23.68% is estimated using the 2017 "Income tax expense" figure of 12,882 divided by the 2017 "Earnings Before Income Tax" figure of 54,408. Both of these figures can be found on page 3 of NP's 2017 Annual Financial Statements.
[18] Calculated by dividing the 2017 "Net Earnings Applicable to Common Shares" figure of 40,971 by the 2017 "Revenue" figure of 672,435 as reported on NP's 2017 Income Statement.
[19] Sources: Tables 5-2 and 5-3 on pages 5-3 and 5-4 of NP's GRA 2019-2020.

This represents close to 10% of the average monthly bill for NP's residential customers, which is a real cost.[20]

3.5.2 Conclusions Regarding Capital Structure

Both the qualitative discussion and quantitative analysis in Section 3.2 clearly demonstrates that NP has low business risk. Section 3.3 shows that NP currently has less financial risk than other Canadian utilities based on an examination of allowable ROEs and equity ratios, and of existing credit metrics. Not surprisingly, Section 3.4 demonstrates that NP has low total risk as reflected in its ability to earn its allowed ROE, and in terms of the variability of its earned ROE. My analysis shows that a low risk utility like NP does not require an equity ratio that is close to 20% higher than the average Canadian electric distributor, while being allowed to earn an ROE that is around average. I recommend that the Board reduce NP's equity ratio to 40%, which would bring it in line with Canadian averages. The additional "above average" of 7-8% equity thickness is not warranted based on NP's business risk, nor is it required to maintain solid credit metrics that will permit NP to maintain its ability to raise credit on reasonable terms.

[20] Source: Figure 27 of Mr. Coyne's evidence reports a monthly average bill of $122.08 for NP's domestic customers.

APPENDIX A – Cleary CV

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Areas of Interest

Research: Empirical studies in corporate finance and investments.
Teaching: Investments, Business Finance and Corporate Finance. I have also taught numerous courses and delivered seminars in many preparatory programs designed to prepare students to write exams for all three levels of the CFA program and the CSC for over 10 years.

Education

University of Toronto	Ph.D., Finance, 1993 - January, 1998
Saint Mary's University	M.B.A., Finance, 1987-1989
Saint Francis Xavier University	B.Ed., Secondary, 1983-84
Acadia University	B.A., Economics, 1979-1983

Career Experience

Queen's University	BMO Professor of Finance Director of Master of Finance (2016-present; 2008 - 2014)
Saint Mary's University	Associate Dean and Pengrowth Nova Scotia Professor in Petroleum Financial Management: (July 2007 – June 2008) Professor: (September 2006 – June 2007) Associate Professor: Finance (September 2000 - June 2001, July 2002 – August 2006) Assistant Professor: Finance (July 1998 - August 2000) Lecturer: Finance and Statistics, (1990-1993, Full Time)
York University	Assistant Professor: Finance (July 2001 – June 2002)
The University of Lethbridge	Assistant Professor: Finance (1997- 1998, Full Time)
The University of Toronto	Lecturer: Business Finance (Undergraduate and MBA) (1994-1997, Part Time)
Ryerson University	Lecturer: Investment Finance (1994-1997, Full Time)
WSC Investment Services	Instructor for CSC and CFA Seminars and Prepare Course Materials and Deliver Seminars for various professional organizations; (1996-present, Part Time)
Royal Bank of Canada	Commercial Lender; (1989-1990, Full Time)

Expert Witness Experience:

2017-18, 2016-17 and 2015-2016 – Utilities Consumer Advocate (UCA) of Alberta
Prepared and testified regarding an appropriate ROE and capital structure for regulated Alberta utilities.

2015-2016 – Newfoundland Consumer Advocate
Prepared and testified regarding an appropriate capital structure for Newfoundland Power.

2017-18, 2017 and 2014 – Utilities Consumer Advocate (UCA) of Alberta
Prepared and testified regarding appropriate risk margins for commodity risk for regulated Alberta utilities.

2016 – Manitoba Public Insurance
Prepared a report and testified regarding interest rate forecasts.

Publications:

Academic Journals:

"Institutional Investors, Monitoring and Corporate Finance Policies," 2017. International Journal of Managerial Finance, Vol. 13, Issue No. 2, 186-212. Co-authored with Jun Wang, The University of Western Ontario.

"The Cash Effect and Market Reaction over Three Decades," 2016. Journal of Accounting and Finance, December 2016, 93-115. Co-authored with Fatma Sonmez, Queen's University.

"An Efficient and Functional Model for Predicting Bank Distress: In and Out of Sample Evidence," 2016. Co-authored with Greg Hebb, Dalhousie University. Journal of Banking and Finance, Vol. 64, March 2016, 101–111.

"Managerial Practices and Corporate Social Responsibility," 2015. Co-authored with Najah Attig, Saint Mary's University. Journal of Business Ethics, Vol. 131 (No. 1), 121-136.

"Organization Capital and Investment Cash Flow Sensitivity: The Effect of Management Quality Practices," 2014. Co-authored with Najah Attig, Saint Mary's University. Lead Article - Financial Management, Vol. 43 (No. 3), 473-504.

"Corporate Legitimacy and Investment-Cash Flow Sensitivity," 2014. Co-authored with Najah Attig, Saint Mary's University, Sadok El Ghoul, University of Alberta, and Omrane Guedhami, South Carolina University. Journal of Business Ethics, Vol. 121 (No. 2), 297-314.

"Debt Rating Initiations: Natural Evolution or Opportunistic Behavior?" 2013. Co-authored with Laurence Booth, University of Toronto, and Lynnette Purda, Queen's University. Journal of Modern Accounting and Auditing, Vol. 9 (No. 12), 1574-1595.

"Institutional Investment Horizons and the Cost of Equity Capital," 2013, Co-authored with Najah Attig, Saint Mary's University, Sadok El Ghoul, University of Alberta, and Omrane Guedhami, South Carolina University. Financial Management, Vol. 42 (No.2), 2013, 441-477.

"Institutional Investment Horizon and Investment-Cash Flow Sensitivity." Co-authored with Najah Attig, Saint Mary's University, Sadok El Ghoul, University of Alberta, and Omrane Guedhami, South Carolina University. Journal of Banking & Finance, Vol. 36, (No. 4), 2012, 1164-1180.

"Capital Market Developments in the Post-October 1987 Period: A Canadian Perspective." Co-authored with Laurence Booth from the University of Toronto. Review of Accounting and Finance, Vol. 8 (No.2), 2009, 155-175.

"Cash Flow Volatility, Financial Slack and Investment Decisions," 2008, China Finance Review, Number 1, Vol 2, 63-86. Co-authored with Laurence Booth from the University of Toronto.

"The Investment Nature of Income Trusts and Their Role in Diversified Portfolios," Canadian Journal of Administrative Sciences. Co-authored with Greg MacKinnon from Saint Mary's University, (Vol 24(4)), 2007, 314-325.

"The U-Shaped Investment Curve: Theory and Evidence." Co-authored with Paul Povel, University of Minnesota, and Michael Raith, University of Southern California, Lead article, Journal of Financial and Quantitative Analysis, Vol. 42 (No. 1), March 2007, 1-39.

"Financial Constraints and Investment: An Alternative Empirical Framework." Co-authored with Bert D'Espallier, Hasselt University, Anales de Estudios Economicos y Empresariales, Vol. 17, 2007, 9-41.

"Dividend Smoothing and Debt Ratings." Co-authored with Laurence Booth and Varouj Aivazian, both from the University of Toronto. Lead article, Journal of Financial and Quantitative Analysis, Vol. 41(No. 2), June 2006, 439-452.

"International Corporate Investment and the Relationships between Financial Constraint Measures," Journal of Banking and Finance, Volume 30 (5), 2006, 1559-1580.

"Are U.S. Variables Good Predictors of Foreign Equity Risk Premiums?" 2006. Co-authored with John Schmitz, President, Sci-Vest Capital Management Inc., The Cyprus Journal of Sciences.

"Income Trusts: Past Performance and Future Prospects." Co-authored with Greg MacKinnon of Saint Mary's University. Canadian Investment Review, Winter 2005, 53-54.

"Dividend Policy and the Role of Contracting Environments" FSR Forum, December 2005, 13-20. Co-authored with Laurence Booth and Varouj Aivazian, both from the University of Toronto.

"Corporate Investment and Financial Slack: International Evidence," The International Journal of Managerial Finance, 2005, 140-163.

"Industry Affects Do Not Explain Momentum in Canadian Stock Returns," Investment Management and Financial Innovations, 2005(2), 49-60. Co-authored with John Schmitz, President, Sci-Vest Capital Management Inc., and David Doucette, Saint Mary's University.

"Do Emerging Market Firms Follow Different Dividend Policies from U.S. Firms?" The Journal of Financial Research, Fall 2003, 371-387. Co-authored with Laurence Booth and Varouj Aivazian, both from the University of Toronto.

"Dividend Policy and the Organization of Capital Markets." Journal of Multinational Financial Management, Spring 2003, 101-121. Co-authored with Laurence Booth and Varouj Aivazian, both from the University of Toronto.

"The Risk-Adjusted Performance of Closed-End Funds and the Impact of Discounts." Journal of Today, December 2002, 119-133. Co-authored with Greg Hebb of Dalhousie University and Greg MacKinnon from Saint Mary's University.

"Transactions Costs for TSE-Listed Stocks," Canadian Investment Review, Spring 2002, 20-26. Co-authored with John Schmitz, President, Sci-Vest Capital Management Inc., and Kevin Kerr, TD Securities, Toronto.

"What Has Worked on Bay Street," Canadian Investment Review, Winter 2001, 25-34. Co-authored with John Schmitz, President, Sci-Vest Capital Management Inc.

"The Sensitivity of Canadian Corporate Investment to Liquidity," Canadian Journal of Administrative Sciences, September 2000, 217-232.

"Diversification with Canadian Stocks: How Much is Enough?" Canadian Investment Review, Fall 1999, 21-25. Co-authored with David Copp, Mount Allison University.

"The Relationship Between Firm Investment and Financial Status," Journal of Finance, April 1999, 673-692. Received at least one vote from the editorial board for the top Corporate Finance Paper Award during the year of publication.

"Momentum in Canadian Stock Returns," Canadian Journal of Administrative Sciences, September 1998, 279-291. Co-authored with Michael Inglis, University of Toronto.
One of five nominations for "best 1998 CJAS paper."

Books and Book Chapters:

Corporate Finance, First US Edition. Co-authored with Laurence Booth from the University of Toronto and Pamela (Petersen) Drake) from Virginia Commonwealth University. John Wiley & Sons. In progress – publication date 2013.

Introduction to Corporate Finance, first four editions, John Wiley & Sons Canada Limited. The first three editions were co-authored with Laurence Booth from the University of Toronto (2007, 2010, 2013), and the fourth edition (2016) co-authored with Laurence Booth and Ian Rakita from Concordia University. This is an Introductory Canadian Finance text that was written from "scratch."

Investments: Analysis and Management, First, Second and Third Canadian Editions, co-authored with Charles P. Jones of North Carolina State University, John Wiley & Sons Canada Limited (1999, 2004, 2008). I was solely responsible for the development of all three Canadian editions, the first being based on an adaptation of the sixth U.S. edition, authored by Professor Jones.

The Canadian Securities Exam Fast Track Study Guide, First, Second, Third and Fourth Editions (2001, 2006, 2009, 2013) – sole author. Published by John Wiley & Sons Canada Limited.

Finance in a Canadian Setting, Sixth Edition, co-authored with Peter Lusztig and Bernard Schwab, both of the University of British Columbia, John Wiley & Sons Canada Limited, March, 2001. I

was solely responsible for the development of this edition of the text, based on an adaptation of the fifth edition, authored by Professors Lusztig, Schwab and Randall Morck of University of Alberta.
Market Efficiency, a chapter in the CFA Institute Investment Series book entitled Investments: Principles of Portfolio and Equity Analysis (Wiley, 2011), which is currently used as CFA Level 1 material within the Candidate Body of Knowledge.
"Introduction to Financial Markets," (on-line course). Developed all seven modules for the Bourse de Montreal, 2002.

"Derivatives for the Retail Investor," (on-line course). Developed two modules (Forwards and Future, and Options) for the Bourse de Montreal, 2002.

"Derivatives for the Institutional Investor," (on-line course). Developed two modules (Options and Derivatives for Equity and Index Products) for the Bourse de Montreal, 2002.

"Investment Strategies and Asset Allocation," Chapter 5, Investment Management Techniques, The Canadian Securities Institute, 1999.

"Equity Securities," Chapter 12, Investment Management Techniques, The Canadian Securities Institute, 1999.

Cases:

"Time Value of Money: The Buy versus Rent Decision," with Stephen Foerster. Ivey Publishing, August 2014.

Conference Proceedings:

I have published numerous articles in conference proceedings, as summarized below:
European Financial Management Association annual conference, 2008, 2006, 2005, 2002.
Hawaii International Conference on Business, 2002.
Multinational Finance Society annual conference, 2001.
Atlantic Schools of Business annual conferences, 2000, 1998.
ASAC annual conferences, 2006, 2001, 2000.

Conference Best Paper Awards:

"The Information Content of Institutional Investment Horizon: Evidence from Firms' Implied Cost of Equity," 2012, Working Paper, Co-authored with Najah Attig, Saint Mary's University, Sadok El Ghoul, University of Alberta, and Omrane Guedhami, South Carolina University. Chosen Best Paper in Banking and Finance – 2012 European Business Research Conference.

"Income Trusts: Why All the Fuss and What About the Future?" 2006. Co-authored with Greg MacKinnon from Saint Mary's University. Chosen as the best paper in the Finance division for the 2006 ASAC Conference in Banff, Alberta.

"The U-Shaped Investment Curve: Theory and Evidence" 2004. Co-authored with Paul Povel, University of Minnesota, and Michael Raith, Rochester University. Presented at the 2004 NFA Conference and received award as the "Best Paper in Managerial Finance."

"The Sensitivity of Canadian Corporate Investment to Liquidity." Published in conference proceedings for the 1999 ASAC Conference in Saint John, New Brunswick.
Chosen as the best paper in the Finance division for this conference.

Conference Presentations:

Keynote Speaker (Finance Area) – ASAC 2012 Annual Conference.
I have presented papers at numerous conferences, as summarized below:
World Finance Conference, 2015, 2014, 2013, 2011, 2010.
Paris Financial Management Conference, 2014.
Northern Finance Association annual conferences, 2013, 2011, 2010, 2008, 2005, 2004, 2002, 2000, 1996.
Multinational Finance Society annual conferences, 2010, 2001, 1999.
European Financial Management Association annual conference, 2008, 2006, 2005, 2002.
Hawaii International Conference on Business, 2002.
Eastern Finance Association annual conferences, 2003, 2000.
Atlantic Schools of Business annual conferences, 2000, 1998, 1996.
ASAC annual conferences, 2006, 2000, 1999.
Financial Management Association annual conferences, 2013, 2011, 2010, 2008, 2005, 2004, 2001, 1999, 1996.
Southern Finance Association annual conference, 2016, 2008.

Finance Workshops (invited presentations):

Atlantic Canada CFA Society, 2006.
Melbourne Centre for Financial Studies, 2006.
Melbourne CFA Society, 2006.
Monash University (Caulfield), 2006.
University of Melbourne, 2006.
University of New South Wales, 2006.
University of Sydney, 2006.
University of Manitoba CGA Finance Conference 2005
Wilfred Laurier University, 2002.
University of Western Ontario, 2001.
York University, 2001, 2010.
Dalhousie University, 2001, 2013.
Queen's University, 2000.
Saint Mary's University, 2002, 2001, 2000, 1999.
Schulich School of Business, 2010.
Concordia University, 2013.
The University of Waterloo, 2015.

Research Grants

Co-investigator for an Insight Development Grant in the amount of $55,626 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 2016 to 2018 period (Principal investigator – Jun Wang of the University of Western Ontario).

Co-investigator for a Standard Research Grant in the amount of $129,980 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 2013 to 2017 period (Principal investigator - Najah Attig of Saint Mary's University).

Awarded three Research Grants of $90,000 each over three years from the Queen's School of Business at Queen's University (2008-11; 2011-14; 2014-17).

Principal investigator for a Standard Research Grant in the amount of $60,500 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 2008 to 2011 period.

Co-investigator for a Standard Research Grant in the amount of $111,000 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 2006 to 2009 period (Principal investigator - Najah Attig of Saint Mary's University).

Principal investigator for a Standard Research Grant in the amount of $70,118 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 2003 to 2006 period.

Awarded a Research Grant of $25,000 per year for three years from the Schulich School of Business at York University (July 2001).

Principal investigator for a Standard Research Grant in the amount of $61,530 from the Social Sciences and Humanities Research Council of Canada (SSHRC) for the 1999 to 2002 period.

Awarded Research Grant for $1,500 from Saint Mary's University (2003-2004).

Awarded Research Grant for 2,500 from Saint Mary's University (2002-2003).

Awarded Research Grant for $2,500 from Saint Mary's University (2000-2001).

Awarded Research Grant for $3,030 from Saint Mary's University (1999-2000).

Awarded Research Grant for $2,000 from Saint Mary's University (1998-99).

Research Grant in the amount of $20,000 from the Intellectual Infrastructure Partnership Program (IIPP) at the University of Lethbridge (1997-98).

Research Grant from the University of Lethbridge Research Fund for $4,500 (1997-98).

Work-in Progress

"Post-Crisis M&As: A Story of Value, Long-Term Focus and Financial Constraints" 2018, Working Paper. Co-authored with Ashrafee Hossain, Memorial University.

"The Leverage-Profitability Puzzle Revisited," 2018, Working Paper. Co-authored with Alan Douglas, and Tu Nguyen, both from the University of Waterloo.

"Does Dual Holdings by Institutional Investors Make a Big Difference?" 2018, Working Paper. Co-authored with Jun Wang, the University of Western Ontario, and Keke Song, University of Melbourne.

"Leverage, Financial Flexibility, and Dividend Smoothing: An Empirical Investigation," 2018, Working Paper. Co-authored with Alan Douglas, the University of Waterloo.

Professional Activities

Member - CFA Society Toronto Senior Advisory Council (January 2018-present)
Editorial Board – Managerial Finance (July 2017-present)
Associate Editor (Finance area) for the *Canadian Journal of Administrative Sciences* (2017-present); Editor (Finance area) (2014-2016).
Associate Editor for the *European Journal of Finance* (2008-present).
Editorial Advisory Board – Investor Lit (2013-present)
Senior Advisor – Toronto CFA Continuing Education Committee (2014-present); Chair (2013-14); Vice-Chair (2012-13)
Chair – Awards Committee – CFA Toronto Board of Directors (2008-2011)
President - Board of Directors for the Atlantic Canada CFA Society (2007-2008). Served on the board from 2001 to 2008.
Editorial Board – *Canadian Investment Review* (2008-2011).
Served as a reviewer for the *Review of Financial Studies*, the *Journal of Financial and Quantitative Analysis*, *Journal of Business, Financial Management, Journal of Money, Credit and Banking,* the *Journal of Banking and Finance,* the *European Journal of Finance*, the *Journal of Corporate Finance*, the *Journal of Applied Economics*, the *Multinational Finance Journal, Financial Review, Journal of International Financial Management,* the *International Review of Economics and Finance,* the *Canadian Journal of Administrative Sciences,* the *Review of Financial Economics, the Journal of Risk Finance,* and for the *Journal of Management and Governance*.
Reviewer for several SSHRC grant applications.
External reviewer/examiner for several tenure and renewal applications received for professors at other universities, as well as for Ph.D. dissertations.
Conference chair for 2001 Northern Finance Association Annual Meeting, held in Halifax.
Conference organizing committee and Reviewer for several conferences.
Completed the Chartered Financial Analyst (CFA) program, and awarded the CFA designation.
Completed the Professional Financial Planning Course offered by the Canadian Securities Institute, as well as the Canadian Securities Course (CSC).
Completed the Investment Funds Institute of Canada's Mutual Fund Course.
Prepared course materials for several "on-line" finance courses.
Instructor for Canadian Securities Course Seminars.
Prepared Course Materials for the Canadian Securities Institute.
Delivered Seminars for the Canadian Securities Institute on the Canadian Securities Course (CSC), Fixed Income Securities and Portfolio Management Techniques.

Student Supervision

External Examiner for several PhD students.
Supervisor, Queen's MSc Finance Student, Wayne Charles
Served as co-director for the Investment Management of Portfolios in Atlantic Canada Training Program (IMPACT) at Saint Mary's University. This innovative program has students manage a portfolio of over $150,000 of "real" money (2005-2008).
Served as faculty advisor to several MBA students preparing their Management Research Project (MRP) in finance (FIN 669) to satisfy their MBA requirements:
Robert March, "Using Canadian and US Macroeconomic Variables to Predict Canadian Equity Risk Premiums" (1999).
Simon Sagar, "Do Canadian Investors Overreact?" (2000). Simon also presented his paper at the 1999 Atlantic Schools of Business (ASB) conference in Halifax.
Kevin Kerr, "Bid-Ask Spreads and Commissions on the TSE" (2000).
Scott LeBlanc, "An Investigation of Derivative Use: A Case Study of Cambior Inc." (2000).
David Doucette, "Industry Momentum in Canadian Stock Returns" (2001).

Balakrishna Murty, "The Effect of Board Composition on Firm Value: Some Canadian Evidence" (2003).
Bashir Jallow, "US Economic Factors and International Equity Risk Premia Predictability" (2005).
Kathy Isnor, "The Effect of Corporate Governance Policies on the Corporate Bond Rating" (2005).

References

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