

**ONTARIO ENERGY BOARD**

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B;

**AND IN THE MATTER OF** an Application by Ontario Power Generation Inc. pursuant to section 78.1 of the *Ontario Energy Board Act, 1998* for an Order or Orders determining payment amounts for the output of certain of its generating facilities (the "OPG 2008-2009 Payment Amounts Application").

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**POLLUTION PROBE  
EXAMINATION-IN-CHIEF REFERENCE BOOK**

**June 16, 2008**

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## **INDEX**

<b><u>Tab</u></b>	<b><u>Contents and Sub-Tabs [pages]</u></b>
1	Brief Curriculum Vitae for Dr. Lawrence Kryzanowski [1-3] <ul style="list-style-type: none"><li>• Exhibit M, Tab 12, Pages 154-156</li></ul>
2	Brief Curriculum Vitae for Dr. Gordon Roberts [4-5] <ul style="list-style-type: none"><li>• Exhibit M, Tab 12, Pages 157-158</li></ul>
3	Update of Recommended Rates on 30-Year Canada's and ROE for the Evidence of Drs. Kryzanowski and Roberts [6-7] <ul style="list-style-type: none"><li>• Dated June 15, 2008</li></ul>
4	Revised Summary Recommendation Tables [8-9]
5	Excerpts from the Transcripts of Ms. McShane's Testimony [10-41] <ul style="list-style-type: none"><li>• June 12, 2008 (Volume 10)</li></ul>
6	"Credit Ratings Storm: DBRS faces critics over role in ABCP Fiasco", Financial Post dated June 14, 2008 [42-49]

## APPENDICES

### APPENDIX 1.A

#### BRIEF CURRICULUM VITAE FOR LAWRENCE KRYZANOWSKI

Dr. Lawrence Kryzanowski is currently a Full Professor of Finance and Concordia University Research Chair in Finance (previously Ned Goodman Chair in Investment Finance) at Concordia University. He was until June 2002 the Co-Director of the Concordia-McGill-Xiamen (CMX) Project of the Canada-China University-Industry Partnership Program in Financial Services. He is currently a member of CIRPÉE, a Principal Researcher at CREF, a scientific committee member of Institut de Finance Mathématique de Montréal (IFM2), and the representative of retail investors on the Regulation Advisory Committee (RAC) of Market Regulation Services Inc. He is a member of the Board of Governors and its Executive Committee, and the Pension Committee at Concordia University. He has been a visiting scholar at the University of British Columbia, a research associate at the University of Rochester, and a resident consultant at the Federal Department of Finance.

Dr. Kryzanowski has extensive experience teaching undergraduates, MBA, MSC and Ph.D. students, and executives for the Institute of Canadian Bankers, Shanghai Banking Institute, CMX, Concordia University, Dalhousie University, McGill University and York University. He has taught "asset allocation and performance measurement" in Concordia's Goodman Institute Program (a private program at the MBA level). This third year course deals with a major component of the level III curriculum of the CFA program. Dr. Kryzanowski has extensive experience in developing or managing the development of instructional textbooks for the Institute of Canadian Bankers (ICB) and the Canadian Securities Institute (CSI), which includes the *Business Solvency Analysis* and *Investment and Portfolio Management* texts for the ICB, and the *Canadian Securities Course* text for the CSI.

Dr. Kryzanowski is an active educator, mentor, consultant and expert witness in financial economics, including investment management, risk pricing and management,

and regulation and operations of global financial markets, institutions and participants. He is author or co-author of over 100 refereed journal articles, seven books or monographs, and over 180 papers presented at academic conferences. Dr. Kryzanowski is the first recipient of Prix ACFAS/Caisse de dépôt et placement du Québec, which recognizes an exceptional contribution to research in finance. Dr. Kryzanowski was the inaugural recipient, with co-authors, of the BGI Canada Award and OSFI Award (latter with Dr. Roberts) for excellence in research on capital markets and on regulation of financial institutions, respectively. His 13 other paper awards for co-authored work are from the *Multinational Finance Journal* and various North American academic conferences. Dr. Kryzanowski is a former Editor of the *Multinational Finance Journal*, co-editor of finance with Dr. Roberts at the *Canadian Journal of Administrative Studies*, and founding chairperson of the Northern Finance Association. Dr. Kryzanowski is currently an Advisory Editor of the *European Journal of Finance*, an Associate Editor of the *International Review of Financial Analysis* and of *Frontier of Finance and Economics*, and is on the editorial boards of the *Canadian Investment Review* and *Finance India*.

Dr. Kryzanowski has experience in preparing evidence as an expert witness in utility rate of return applications, stock market insider trading court proceedings, and confidential final offer arbitration hearings for the setting of fair rates for the movement of various products by rail. Together with Dr. Roberts, he prepared a report and briefed counsel on rate of return considerations in the pipeline application in 1997 of Maritimes and Northeast, and prepared evidence on the fair return on equity and the recommended capital structure for the 2001/2002 Distribution Tariff Application (DTA) of Atco Electric and the 2001/2002 DTA and the 2002 DTA (No. 1250392) of Utilicorp Networks Canada (Alberta) Ltd. before the Alberta Energy and Utilities Board. Together with Dr. Roberts, and on behalf of the Province of Nova Scotia, he provided evidence and testified before the Nova Scotia Utility and Review Board in the matter of Nova Scotia Power Inc. in 2002. Together with Dr. Roberts, and on behalf of the Fédération canadienne de l'entreprise indépendante ("FCEI") / Union des municipalités du Québec ("UMQ") & Option consommateurs ("OC"), he prepared testimony and testified on

capital structure and fair return on equity in the matter of Hydro Québec Distribution before the Régie de l'Energie du Québec in 2003. Together with Dr. Roberts, and on behalf of Consumers Group, he prepared testimony and testified in Generic Hearing No. 1271597 before the Alberta Energy and Utilities Board in 2003-2004. Together with Dr. Roberts, and on behalf of the Hydro Communities (Hay River, Yellowknife and Fort Smith), he prepared testimony and testified in NTPC GRA 2006/07 and 2007/08 before the Public Utilities Board of the Northwest Territories in 2007.

Dr. Kryzanowski is often sought for his technical ability and advice on various matters in financial economics. He has consulted for the Superintendent of Financial Institutions, Federal Department of Finance, CMHC, CDIC, External Affairs Canada, Canada Investment and Savings, Hydro Quebec, the National Bank, Bombardier, and others.

Dr. Kryzanowski received a B.A. in Economics and Mathematics from the University of Calgary and earned his Ph.D. in Finance at the University of British Columbia.

## BRIEF CURRICULUM VITAE FOR GORDON S. ROBERTS

Dr. Gordon S. Roberts is currently CIBC Professor of Financial Services at York University's Schulich School of Business. Prior to joining York University, he was Bank of Montreal Professor of Finance at the School of Business, Dalhousie University. Dr. Roberts has held positions as Visiting Professor and Visiting Scholar at the National Institute for Development Analysis (Bangkok, Thailand), the University of Chile, Tilburg University (the Netherlands), Deakin University (Melbourne, Australia), University of Toronto, University of Arizona, Xiamen University (China) and the University of Zimbabwe.

In addition to teaching undergraduates, MBA and Ph.D. students at these universities, Dr. Roberts has extensive experience in executive teaching for the Kellogg-Schulich Executive MBA Program, the Institute of Canadian Bankers and in the Pension Investment Management School sponsored by the Schulich School jointly with pension consulting firms William Mercer Inc. and Frank Russell.

An active researcher in the areas of corporate finance, bond investments and financial institutions, Dr. Roberts is author or co-author of over forty journal articles and three corporate finance textbooks. In 2000, he shared with Dr. Kryzanowski the OSFI award for excellence in research on the regulation of financial institutions. Dr. Roberts is a former co-editor of finance with Dr. Kryzanowski of the *Canadian Journal of Administrative Studies*. He is a former Associate Editor of the *Journal of Banking and Finance*, and currently serves on the editorial boards of *FINECO* and the *Banking and Finance Law Review*.

Dr. Roberts is experienced in preparing evidence for utility rate of return hearings. From 1995-1997 he submitted prefiled testimony as a Board witness in rate hearings for Consumers' Gas. In 1996, he served as an expert advisor to the Ontario Energy Board in its Diversification Workshop. In 1997, he co-prepared

(with Dr. Kryzanowski) a report for the Calgary law firm, MacLeod Dixon, on rate of return considerations in the pipeline application by Maritimes and Northeast. With Dr. Kryzanowski, he filed evidence on three electricity regulatory matters in Alberta in 2001, evidence on regulatory matters before the Alberta Energy and Utilities Board and the Nova Scotia Utility and Review Board in 2002, evidence on regulatory matters dealing with Hydro Quebec Distribution in 2003, evidence in Generic Hearing No. 1271597 before the Alberta Energy and Utilities Board in 2003-2004, and evidence in NTPC GRA 2006/07 and 2007/08 before the Public Utilities Board of the Northwest Territories in 2007.

Often sought for his advice on financial policy, Dr. Roberts has consulted for the Superintendent of Financial Institutions, the federal Department of Finance, Canada Investment and Savings, Canada Mortgage and Housing Corporation, and Canada Deposit Insurance Corporation, among others.

Dr. Roberts received a B.A. in Economics from Oberlin College and earned his Ph.D. at Boston College. He has been listed in the Canadian Who's Who since 1990.

## **UPDATE OF RECOMMENDED RATES ON 30-YEAR CANADA'S AND ROE FOR THE EVIDENCE OF DRS. KRYZANOWSKI AND ROBERTS**

Drs. Kryzanowski and Roberts have updated their rate forecasts for 30-year Canada's. In turn, this changes (i.e. increases) their ROE recommendations. Both of these updates are detailed below

### **Updated rate forecasts for 30-year Canada's**

To obtain an updated risk-free rate forecast for 2008, Drs. Kryzanowski and Roberts used a six-step procedure. First, we calculated the average daily realized yields of 30-year Canada's for the 5-month period of January through May 2008 using data from the website of the Bank of Canada. The average daily realized yield of 30-year Canada's over this period was approximately 4.10%. Second, we obtained the 3-month-forward forecast of the rate on 10-year Canada's from Consensus Economics. The May 12, 2008 issue of *Consensus Forecasts* reported a three-month forward forecast (i.e., for the end of August 2008) of 3.6%. Third, we calculated the average realized spread of 30- over 10-year Canada's for the month of May 2008, which was 0.47%. Fourth, we added the averaged realized spread of 0.47% from the third step to the forecasted rate of 3.6% from the second step to obtain our forecast of 4.07% for the end of August 2008 for 30-year Canada's. Fifth, we assumed that the forecast of 4.07% was the average expected rate for the last 7 months of 2008. Finally, we formed a weighted average of the average realized rate of 4.10% over the first 5 months of 2008 from step one and the forecasted average rate of 4.07% for the last 7 months of 2008 from steps four and five. This produced a recommended rate of 4.08%, which was rounded up to 4.10% for 2008.

To obtain an updated risk-free rate forecast for 2009, Drs. Kryzanowski and Roberts used a five-step procedure. (Unlike for 2008 above, the initial adjustment for the portion of the year already past was not required resulting in one fewer step.) First, we obtained the 12-month-forward forecast of the rate on 10-year Canada's from Consensus Economics. The May 12, 2008 issue of *Consensus Forecasts* reported a 12-month forward forecast (i.e., for the end of May 2009) of 3.9%. Second, we calculated the average realized spread of 30- over 10-year Canada's for the month of May 2008, which was about 0.47%. Third, we added the averaged realized spread of 0.47% from the second step to the forecasted rate of 3.9% from the first step to obtain our forecast of 4.37% for the end of May 2009 for 30-year Canada's. Fourth, we assumed that this forecast of 4.37% was the average expected rate for 2009. Fifth, we obtained our recommended rate of 4.40% by rounding the 4.37% forecast upward.

If the Board decides to adopt an automatic adjustment formula for determining the allowed ROE, Drs. Kryzanowski and Roberts would recommend that the Board consider our 2009 recommendation as a placeholder value that would be updated using more current expectations near the end of 2008.

### **Updated ROE recommendations**

These updated rates, when all else remains unchanged, increase the ROE recommendations of Drs. Kryzanowski and Roberts by 25 basis points for 2008 and 15 basis points for 2009. As a result, a table that replaces the table included at page 11 of their filed Evidence (Exhibit M, Tab 12) follows:



The following table provides a summary of our recommendations for return on equity for OPG.

Panel A: Determination of Market Equity Risk Premium (MERP) for S&P/TSX Composite Index						
MERP Estimation Method		Estimate			Weight	
Equity Risk Premium Method		5.00%			Primary	
Survey of Estimates Reported in the Literature		Risk Premium of 5.00% for S&P/TSX Composite is Conservatively High			Directional for bench-marking purposes	
Discounted Cash Flow Estimation Method		Risk Premium of 5.00% for S&P/TSX Composite is Conservatively High			Directional for bench-marking purposes	
Survey Expectations of Investment Professionals*		Risk Premium of 5.00% for S&P/TSX Composite is Conservatively High			Directional for bench-marking purposes	
Panel B: Determination of Risk of an Average-risk Canadian Utility Relative to the Market (S&P/TSX Composite Index)						
Relative Risk Estimation Method		Estimate			Weight	
Beta		0.50			Primary	
Standard Deviation of Utilities relative to Large Sample of Industries		Relative Risk of 0.50 for Average-risk Utility is Conservatively High			Directional for bench-marking purposes	
Panel C: Determination of Recommended Return on Equity (ROE) for an Average-risk Utility and OPG when risk differences are accounted for by Adjusting the Equity Ratio for OPG						
Test Year	Recommended Market Equity Risk Premium	Recommended Relative Risk Adjustment to the MERP	Recommended Equity Risk Premium for OPG	Recommended Risk-free rate	Flotation, Financial Flexibility & Additional Financial Integrity Allowance	Recommended ROE for OPG
2008	5.00%	0.50	5.00% x 0.50 = 2.50%	4.10%	0.10% + 0.40% + 0.25% = 0.75%	7.35%
2009	5.00%	0.50	5.00% x 0.50 = 2.50%	4.40%	0.10% + 0.40% + 0.00% = 0.50%	7.40%
*Includes surveys conducted by W.M. Mercer Limited and Watson Wyatt.						

EB-2007-0905

## OPG Cost of Capital

Lawrence Kryzanowski and Gordon Roberts Recommendations - **REVISED**

Scenario #1: Assuming 25% Fixed Charge for Nuclear Assets

	Equity as % of Rate Base	Return on Equity 2008	Return on Equity 2009
OPG – Hydro	40%	7.35%	7.40%
OPG – Nuclear	50%	7.35%	7.40%
OPG – Total	47%	7.35%	7.40%

Scenario #2: Assuming No Fixed Charge for Nuclear Assets

	Equity as % of Rate Base	Return on Equity 2008	Return on Equity 2009
OPG – Hydro	40%	7.35%	7.40%
OPG – Nuclear	53%	7.35%	7.40%
OPG – Total	49%	7.35%	7.40%

References: Ex. M, Tab 12, pages 7, 8 &amp; 51 and June 15, 2008 Evidence Update.

Kathleen McShane - **REVISED**

Scenario #1: Assuming 25% Fixed Charge for Nuclear Assets

	Equity as % of Rate Base	Return on Equity 2008	Return on Equity 2009
OPG - Hydro	45% - 50%	10.5%	10.5%
OPG - Nuclear	60%	11-11.5%	11-11.5%
OPG - Total	55 to 60% (midpoint 57.5%)	10.5%	10.5%

**Scenario #2: Assuming No Fixed Charge for Nuclear Assets**

	Equity as % of Rate Base	Return on Equity 2008	Return on Equity 2009
OPG - Hydro	45% - 50%	10.5%	10.5%
OPG - Nuclear	60%	11.5% - 12.0%	11.5%-12.0%
OPG - Total	60%	10.5%	10.5%

References: Ex. L, Tab 12, Schedules 1, 2, 3 & 4 and Transcript for June 12, 2008 (Volume 10) at pages 80-84 and 90-92 and specifically at page 81, lines 5-7 and 14-18; page 83, lines 13-18; and page 92, lines 6-11.

EB-2007-0905

## THE ONTARIO ENERGY BOARD

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*, S.O.1998, c.15, (Schedule B);

**AND IN THE MATTER OF** an application by Ontario Power Generation Inc. pursuant to section 78.1 of the *Ontario Energy Board Act, 1998* for an Order or Orders determining payment amounts for the output of certain of its generating facilities.

Hearing held at 2300 Yonge Street,  
25<sup>th</sup> Floor, Toronto, Ontario,  
on Thursday, June 12, 2008,  
commencing at 9:35 a.m.

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VOLUME 10  
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## BEFORE:

GORDON KAISER	Presiding Member and Vice Chair
BILL RUPERT	Member
CYNTHIA CHAPLIN	Member

1 1/2 percent in the prefiled evidence; and inclusive of a 50  
2 basis point adjustment for financing flexibility, the  
3 updated DCF cost is 10 to 10-1/2 percent. The comparable  
4 earnings test remains unchanged.

5 There were not results for 2007 available when I  
6 updated, so the value for that test remains at 12.25, and  
7 the test in the aggregate result in no change to the return  
8 on equity. It is still at 10-1/2 percent.

9 MR. PENNY: Thank you. Then since filing your  
10 evidence, intervenors have also filed some evidence on  
11 capital structure and cost of capital.

12 I don't want to go through a detailed line-by-line  
13 rebuttal, but perhaps we can deal with this at a high -- or  
14 at a general level, and then with a couple of specifics.

15 So why don't we start with this? The intervenor  
16 witnesses on capital structure and ROE have made  
17 recommendations with regard to capital structure that  
18 suggests that OPG faces minimally higher risks than other  
19 regulated companies.

20 Do you agree with their assessment, and, if not, why  
21 not?

22 MS. McSHANE: No. My view, there has been an  
23 underestimate in -- a significant underestimate in the  
24 level of risk that OPG faces relative to other utilities.

25 First of all, OPG has no low-risk monopoly, wires or  
26 pipes, assets. Monopoly, wires and pipes assets are assets  
27 for which the probability of duplication is virtually nil.

28 The existing nuclear plants are subject to

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1 significantly higher operating and production risks than  
2 other types of generation.

3 The long-term risks associated with nuclear  
4 liabilities are higher, obviously, for utilities who have  
5 no nuclear exposure. They're higher than for utilities who  
6 have lesser nuclear exposure, and they're higher than  
7 utilities -- nuclear utilities for whom a part of the  
8 liability is actually borne by the government, in the US,  
9 by the utilities paying a fee.

10 The regulatory risks, I believe, are higher for OPG  
11 than other Canadian utilities, primarily because OPG's  
12 prescribed assets are being regulated within the context of  
13 a hybrid market and the model essentially remains untested.

14 In my opinion, those risks have not been fully  
15 reflected in the recommendations of Doctors Kryzanowski and  
16 Roberts or Dr. Booth, and I don't believe have been fully  
17 appreciated by London Economics.

18 MR. PENNY: Thank you. Then dealing with maybe a  
19 couple of specifics, Dr. Kryzanowski and Roberts take issue  
20 with your conclusion that an A rating is an appropriate  
21 objective for OPG and conclude, in their view, that a  
22 number of Canadian utilities are able to function with  
23 ratings in the BBB category. How do you respond to that?

24 MS. McSHANE: Well, first of all, I think you have to  
25 take a look at the actual ratings of the universe of  
26 utilities in Canada, and you will find that an A rating is  
27 the rule, and a BBB rating is the exception.

28 Second of all, I think you have to realize how small

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1 the BBB market is in Canada. I took a look, for example,  
2 at all of the issues of corporate debt that were done  
3 between 2006 and, I think it was May 2008. \$165 billion,  
4 400 and some issues.

5 Of that amount of money that was raised, only 6  
6 percent was raised by companies with all ratings in the BBB  
7 category or lower.

8 If you include issues that were made by companies with  
9 split ratings -- that is one rating in the A category, one  
10 rating in the BBBB category -- the number is still only 12  
11 percent. So the market remains very small.

12 The other issue that perhaps is not appreciated is, if  
13 you look at the types of debt that is being raised by  
14 companies with BBB ratings, you will see that very little  
15 of it, a third, I think, of the issues that were done by  
16 BBB rated companies in 2007 and 2008 were in excess of 10  
17 years. So there's a lack of access to the long-term market  
18 by the lower-rated companies.

19 MR. PENNY: And then a number of the other costs of  
20 capital experts, Doctors Kryzanowski and Roberts, Dr.  
21 Booth, are critical of your approach to estimating fair  
22 return, relying on three fundamentally different tests, the  
23 equity risk premium, the discounted cash flow and the  
24 comparable earnings.

25 They, as I understand it, rely almost entirely on the  
26 capital asset pricing model, or the equity risk premium  
27 approach. Can you respond to that criticism?

28 MS. MCSHANE: Yes. I think it is very important not

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1 to rely too heavily on any single test.

2 It might be a somewhat of an overstatement, but each  
3 individual test can be viewed as somewhat of a blunt  
4 instrument for estimating the return requirement. Each of  
5 the tests is relatively simple to apply, particularly the  
6 CAPM.

7 It appears, on the surface, to be a simple exercise in  
8 arithmetic, but every test is, in a sense, an  
9 oversimplification of reality. And in the particular case  
10 of the CAPM you have three pieces. You've got the risk-  
11 free rate, the beta and the market risk premium.

12 Only the risk-free rate is a number that is  
13 observable. The other pieces have to be inferred.

14 A specific comment that I have with respect to the  
15 CAPM is that it doesn't really lend itself very well to  
16 tracking changes in the cost of equity. The reason is  
17 because typically when people apply the capital asset  
18 pricing model, the market risk premium is based on long-  
19 term averages. The beta is based on historic values and  
20 the only piece that changes to any extent is the risk-free  
21 rate.

22 If we look at what has happened in the capital markets  
23 over the past year, perhaps we can get an appreciation of  
24 why that is problematic.

25 When I prepared my evidence originally, the long-term  
26 Canada bond yield was about 4-1/2 percent, and the yield on  
27 utility, long-term utility bonds rated in the A category by  
28 DBRS was 5.75 percent.



1       At the end of May 2008, the yield on long-term Canada  
2 bond yields had gone down, by 40 basis points, 4.1 percent.  
3 But the yield on long-term utility bonds had actually gone  
4 up to close to 6 percent.

5       So if we looked only at the CAPM, we would conclude  
6 that the cost of equity had gone down. But if we looked at  
7 the change in corporate bond yields as an indicator of  
8 where equity costs might have gone, we would have come to a  
9 totally different conclusion and determined that the cost  
10 of equity might have gone up. Indeed, it probably has  
11 because the whole reason that government bond yields were  
12 going down -- I shouldn't say the whole reason, but a large  
13 part of it -- was because investors were fleeing to risk-  
14 free securities, default-free securities, because of  
15 concerns with the risk level in the equity market, which  
16 would suggest that the equity risk premium was rising.

17       So to me it is important to look at a number of tests,  
18 and particularly important to look at tests that directly  
19 estimate trends in the cost of equity, particularly for the  
20 utilities themselves, and that would be primarily a  
21 discounted cash flow type of test.

22       MR. PENNY: Then in their application of the equity  
23 risk premium, Doctors Kryzanowski and Roberts claim that  
24 the historic data indicate that the market risk premiums  
25 have been shrinking. I think you just touched on this, and  
26 that -- they claim that you haven't taken that decline into  
27 account.

28       Can you respond to that? Or are those conclusions

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1 valid?

2 MS. MCSHANE: The observed market risk premiums have  
3 been declining, that is undeniable. Why have they  
4 declined? They've declined because what we've observed is  
5 relatively high achieved bond returns.

6 The reason that we observed relatively high achieved  
7 bond returns -- actually there are two reasons. The first  
8 is that historically, bond yields have been much higher  
9 than they are today. 1982, they were as high as 18  
10 percent. Today we're expecting them to be 4-1/2 percent.

11 So the returns on bonds have been higher in the past  
12 than they are likely to be in the future, because of the  
13 high bond yields during part of the historical period.

14 Also, when bond yields started to come down, starting  
15 in 1982, the decrease in yields produced significant  
16 capital gains on bonds. So together with the high yields,  
17 the bond part of the measured risk premium is considerably  
18 higher than we would expect it to be in the future.

19 If you look at the equity market return side of the  
20 equation, there hasn't been a downward or upward trend in  
21 those numbers.

22 So if we take the actual achieved equity returns and  
23 look at them in light of what the expected bond yields are,  
24 the risk premium looking forward is considerably higher  
25 than the measured risk premiums, and the market return is -  
26 - equity market return has been around 11-1/2. A bond  
27 yield, say, 5 percent over the long term, is about a 6-1/2  
28 percent market risk premium.

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1 MR. PENNY: All right. Particularly Drs. Kryzanowski  
2 and Roberts criticize your use of adjusted betas in the  
3 application of the equity risk premium. First of all, what  
4 is their criticism and how do you respond to it?

5 MS. MCSHANE: Well, they say basically there are two  
6 possible reasons that you would adjust the beta toward one.  
7 One is because betas tend to trend toward one, and the  
8 other is to reflect interest sensitivity that utilities  
9 face, which may not be captured in what I will call the raw  
10 beta. And they say that there really isn't much of that to  
11 be concerned about going forward.

12 My view on that is that's not why I adjust the beta.  
13 I adjust the beta because what I'm trying to do is to --  
14 not necessarily to forecast the future beta, but to provide  
15 a reasonable estimate of the expected return.

16 The empirical evidence shows that there is a material  
17 difference, or a systematic difference, I guess, between  
18 what the CAPM, the theoretical CAPM, would produce and what  
19 the actual results have shown to be. Higher beta stocks  
20 have earned lower returns than the CAPM would expect, and  
21 lower beta stocks have earned higher returns than the CAPM  
22 would predict.

23 So use of the adjusted beta actually is intended to  
24 adjust for that.

25 MR. PENNY: Okay. Then there are a number of  
26 criticisms of your use of the DCF test. Drs. Kryzanowski  
27 and Roberts are an example, and I think other have  
28 commented on it, as well.

1       And the core of that criticism, as I understand it, is  
2       that DCF reflects some so-called optimism of analysts and  
3       that you don't adjust for that. What's your response to  
4       that criticism?

5       MS. McSHANE: Well, just so everybody understands,  
6       there are two pieces to the DCF model. One is the dividend  
7       yield and the other is the expected growth rate.

8       The criticism is that the growth component of that  
9       cost is overstated, because it is known that investment  
10      analysts tend to be optimistic when making their forecasts.

11      First of all, any studies on this that have been done  
12      have been done with respect to the market as a whole, and I  
13      am not aware of any studies that have focussed specifically  
14      on utilities.

15      But I would say this with respect to the utility  
16      sample that I have used. It's important to realize that  
17      utilities are basically the quintessential mature industry.  
18      As a result, it would be reasonable that investors would  
19      expect the long-term growth of utilities to approximately  
20      parallel that of the economy as a whole.

21      So you can use long-term growth in the economy as a  
22      benchmark against which to judge whether investors would  
23      view analysts' forecasts as being systematically  
24      optimistic.

25      In my DCF-based risk premium test, for example, I  
26      looked at the forecast growth rate by analysts over the  
27      period that I did the analysis, which goes back to 1993. I  
28      compared those forecasts to the consensus forecast for

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1 economic growth.

2 On average, the analysts' forecasts were about 60  
3 basis points lower than the expected growth in the economy.  
4 From that, I drew the conclusion that there is no reason to  
5 believe that investors would view the analysts' estimates  
6 as systematically optimistic.

7 MR. PENNY: All right. And then let's turn to the  
8 issue of comparable earnings. There's also criticism of  
9 the use of the comparable earnings test.

10 You used the comparable earnings test as part of your  
11 analysis. Can you explain why you do that and respond to  
12 the criticism that that is a discredited-and-shouldn't-be-  
13 used test?

14 MS. McSHANE: At the outset, the key, to me, is that  
15 -- the test is one which would only apply in a regulated  
16 environment, and only apply in a regulated environment  
17 where the regulatory construct is original cost.

18 Regulation in North America relies on the original  
19 cost construct, and, therefore, it is relevant to use a  
20 test which uses the same basis of measurement as the base  
21 to which the return is applied. And that's what the  
22 comparable earnings does. It measures returns in a way  
23 that is compatible with the original cost construct.

24 It is true that in a truly competitive environment,  
25 prices would be set on the basis of market values, not book  
26 values, but as long as the rate base and the equity are  
27 measured on the basis of original cost book values, a  
28 comparable earnings test provides a meaningful guideline

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1 for a fair return.

2 In applying the comparable earnings test to non-  
3 regulated companies, essentially what one accomplishes is  
4 that you look at returns that address the comparable return  
5 standard while avoiding the circularity that you would face  
6 if you looked only at returns for other regulated  
7 companies.

8 I don't make the claim that comparable earnings is  
9 perfect. Indeed, none of the tests that we tend to use to  
10 estimate the return are perfect. Each of them has  
11 significant hurdles that have to be overcome. Drs.  
12 Kryzanowski and Roberts list some of these hurdles.

13 A number of these hurdles are similar to the hurdles  
14 that are faced by other tests, and I don't believe that the  
15 hurdles with respect to comparable earnings are  
16 insurmountable.

17 Ultimately, I believe that each test, including  
18 comparable earnings tests, should be given some weight to  
19 ensure that the allowed return rests on a solid foundation  
20 and, indeed, is consistent with the fair return standard.

21 MR. PENNY: All right. Let's just turn to the  
22 evidence of Energy Probe filed by Dr. Schwartz.

23 What is the core of his method, and do you have any  
24 concerns with his approach?

25 MS. McSHANE: I have a couple of concerns.

26 With respect to -- he uses the capital asset pricing  
27 model. There are two issues that I have with his approach.  
28 The first is that he relies on Treasury bill yields as a

1           those in the US."

2           Now, just some general questions on what we can expect  
3 from bond rating companies.

4           As I understand it, bond rating companies are paid by  
5 issuers, right?

6           MS. McSHANE: They're paid by issuers and --

7           MR. KLIPPENSTEIN: In other words, when a company has  
8 a new issue, it has to pay to have it rated, right?

9           MS. McSHANE: Yes. But I don't think that is where  
10 they get the majority of their funds from. I am trying to  
11 remember. There is another source of income for them.

12           Oh, well I know what it is, of course. I pay for it.  
13 It's all of the informational services they provide --

14           MR. KLIPPENSTEIN: Okay.

15           MS. McSHANE: -- to subscribers. I think, I believe  
16 that that is where they get most of their money. They sure  
17 get a lot from me.

18           MR. KLIPPENSTEIN: So just to follow up on that, so as  
19 far as you know, they do derive some revenue from issuers,  
20 because in order to be rated, a company has to pay. Right?

21           MS. McSHANE: I believe that that's right. Well, it's  
22 not entirely true. I mean S&P, for example, does do issues  
23 -- they do ratings for companies that they don't have, I'll  
24 call it a relationship with.

25           MR. KLIPPENSTEIN: Okay. That might be. But do  
26 you -- just going back to simplify things. As far as you  
27 know, despite what you've said, that in many cases a  
28 company with a new issue has to pay to have it rated,

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1 right?

2 MS. McSHANE: Yes.

3 MR. KLIPPENSTEIN: Do you have any sense of how large  
4 a proportion of their, the rating company's revenue comes  
5 from fees for rating an issue?

6 MS. McSHANE: As opposed to fees from subscriptions?  
7 No, I don't.

8 MR. KLIPPENSTEIN: Anything else. You don't know  
9 whether it is 5 percent or 9 percent?

10 MS. McSHANE: I have never -- that's an issue I have  
11 never looked at.

12 MR. KLIPPENSTEIN: Okay. Taking for the moment that  
13 there is some proportion of their revenues that comes from  
14 the companies they rate, do you see a potential conflict of  
15 interest between the interests of the class of users who  
16 are the bond issuers, who are paying the company to rate  
17 their issues, and the investors who want the information?

18 MS. McSHANE: I suppose there could be a potential  
19 conflict of interest, but I know, for a fact, that when  
20 utilities in Canada, for example, go to visit S&P or DBRS  
21 and they make presentations and they go through their  
22 information, and the debt rating agencies do drafts of  
23 their rating reports and they send out the drafts for the  
24 company to correct errors in fact, they do not make any  
25 changes because the company doesn't like what they had to  
26 say.

27 MR. KLIPPENSTEIN: That specific example you used may  
28 be the case, but it may not cover the whole picture.

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1        If the rating agencies derive 60 or 70 percent of  
2        their revenue from the companies they rate, would you agree  
3        with me that there is potential, significant potential for  
4        that to influence their views?

5        MS. McSHANE: I would say that the potential is  
6        offset, any potential is offset by the fact that ultimately  
7        the decision about how risky a bond is, is going to be  
8        determined by the investors and what the investors are  
9        willing to pay for it.

10       So if you've got, you know, pension fund managers who  
11       are relatively sophisticated investors, I can't see them  
12       standing by and just allowing ratings reports to come out  
13       that are systematically misstating or understating the  
14       risks that are inherent in the issues.

15       MR. KLIPPENSTEIN: But isn't that just what happened  
16       on a huge scale in the last few years with respect to a lot  
17       of the turmoil in the world markets and the securitization  
18       of debt? The bond rating companies got it all wrong.

19       MS. McSHANE: But that's a different issue. I mean  
20       they may have gotten it wrong for these particular types of  
21       securities, but I mean my understanding was it is because  
22       they basically didn't understand them, not that there was  
23       anything untoward about what they were doing.

24       They were very -- my understanding was they were  
25       relatively complex types of securities that the rating  
26       agencies got wrong.

27       I mean, but they've been, you know, the rating  
28       agencies have been looking at utilities for years and years

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1 and years, and I don't see any evidence that the debt  
2 rating agencies have a fundamental misunderstanding of how  
3 utilities operate, what their risks are, what their  
4 financial metrics ought to look like. I think that is a  
5 totally different situation.

6 MR. KLIPPENSTEIN: You do place a fair bit of emphasis  
7 on the views of rating agencies, and to go back to a  
8 question I asked before, when I asked whether you saw a  
9 significant of potential for conflict of interest if the  
10 bond -- if the rating companies got, let's, say 60 or 70,  
11 or thereabouts, percent of their revenue from the companies  
12 they rate, you said you didn't see a possibility of them  
13 systematically misstating the...

14 MS. McSHANE: I guess what I was trying to say is I  
15 thought there were enough controls in place to -- even if  
16 that were true -- and I am not convinced that they get that  
17 much of their revenue from issuers.

18 MR. KLIPPENSTEIN: I take it you have never actually  
19 checked or looked at how much revenue they get from...

20 MS. McSHANE: I remember sitting through a cross-  
21 examination once where that question was asked, and there's  
22 a vague memory in my mind that it wasn't anywhere close to  
23 that, but I don't know for a fact.

24 MR. KLIPPENSTEIN: Isn't that -- given the reliance  
25 you place on these, isn't that something you would want to  
26 know a bit about?

27 MS. McSHANE: The rating agencies are relied on by  
28 companies over the world. I didn't particularly think

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1 there was a reason I needed to know how much money they got  
2 from one service versus the other.

3 MR. KLIPPENSTEIN: Okay.

4 With respect to the effects in North America and  
5 worldwide in the recent sub-prime mortgage issues, would  
6 you agree with me that the rating agencies underestimated  
7 the risk of many mortgage-backed securities, and did so on  
8 a large scale?

9 MS. McSHANE: That's what I said in response to  
10 Exhibit L12, schedule 55.

11 MR. KLIPPENSTEIN: Would you agree that essentially  
12 the outsourcing of credit assessment to the rating agencies  
13 played a major role in the recent global financial turmoil  
14 related to mortgages?

15 MS. McSHANE: It did, yes, in that particular  
16 instance.

17 MR. KLIPPENSTEIN: And are you suggesting that there  
18 is no connection between that and possible concerns about  
19 rating companies' judgments with respect to utilities?

20 MS. McSHANE: I guess I don't see the connection.  
21 This is a business that utility analysts have been dealing  
22 with for many, many years. I don't see any evidence that  
23 over the long period of time, if they have been looking at  
24 these utilities, that there has been a systematic over- or  
25 underestimate of risk.

26 It's a fairly transparent business model. There is  
27 nothing terribly complex about understanding it, so I don't  
28 see why it would be a concern, and clearly all the utility

1 companies in North America still depend very much on the  
2 debt rating agencies.

3 MR. KLIPPENSTEIN: Well, in the sub-prime sort of  
4 issues, bond rating companies got it badly wrong for years,  
5 but it eventually caught up with them.

6 Now, if I look at the rating companies and the -- in  
7 the utilities context, and let's say they get it a little  
8 bit wrong. Let's say they tend to argue for higher deemed  
9 equity ratios and allowed returns for the utilities, and  
10 let's say that happens for years the way it did in sub-  
11 prime mortgages issues.

12 What's going to catch up with them? What's the  
13 correction when the figures are used in regulatory hearings  
14 such as this?

15 How is it going to catch up with them? Maybe never.

16 MS. McSHANE: Well, it would be one thing if the debt  
17 rating agencies were alone in this assessment, but they're  
18 not.

19 MR. KLIPPENSTEIN: What do you mean?

20 MS. McSHANE: It's not like the debt rating agencies  
21 are the only people out there saying that the returns are  
22 too low and the deemed common equities are too low. So  
23 this is not some assessment that sets them apart from other  
24 market participants.

25 MR. KLIPPENSTEIN: So are you suggesting that it is  
26 the -- that it's the other market participants who give the  
27 answer, really, not the bond rating companies? Not the  
28 ones --

1 MS. McSHANE: No, I'm not saying that. I'm just  
2 saying it is an assessment that is shared by various market  
3 participants.

4 MR. KLIPPENSTEIN: And in this case here today, what  
5 would be an example of what you have just mentioned?

6 MS. McSHANE: Excuse me?

7 MR. KLIPPENSTEIN: And in the issue before us today,  
8 what would be an example of another market participant that  
9 shares the values of the rating agency?

10 MS. McSHANE: Pension funds, equity analysts.

11 MR. KLIPPENSTEIN: Okay. If you could turn to tab 8  
12 of Pollution Probe's document book, tab 8 on page 16 of the  
13 document book, which has Pollution Probe Interrogatory No.  
14 56.

15 The interrogatory asked you to provide evidence about  
16 S&P's business risk ranking scale, that being an accurate  
17 measure, and you mentioned that you were not aware of any  
18 studies. You mentioned that it has been used widely by  
19 analysts.

20 If you turn to tab 17 of the reference book, which is  
21 excerpts from Drs. Kryzanowski's and Roberts' report, they  
22 develop their own business risk ranking methodology at one  
23 point, and that is referred to on page 29 of their  
24 evidence, page 48 of the reference book. They benchmarked  
25 it against the conclusion of the Alberta Security  
26 Commission in its 2003 hearing.

27 Are you at all familiar with that?

28 MS. McSHANE: Am I familiar with their evidence, or am

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1 I familiar with the Alberta generic...

2 MR. KLIPPENSTEIN: Their evidence.

3 MS. McSHANE: Yes. I have read their evidence.

4 MR. KLIPPENSTEIN: Did you have a look at their  
5 business risk ranking methodology?

6 MS. McSHANE: I did.

7 MR. KLIPPENSTEIN: Would you agree that by the metric  
8 of studies testing the accuracy of ranking methodologies,  
9 the approach used by Drs. Kryzanowski and Roberts has equal  
10 standing with that of Standard & Poor's?

11 MS. McSHANE: No.

12 MR. KLIPPENSTEIN: Why do you say that?

13 MS. McSHANE: Because Standard & Poor's, in the first  
14 instance, analyzes a whole range of companies globally and  
15 has a perspective that includes companies from the bottom  
16 end of the range to the top end of the range.

17 And in the particular -- and they have they have  
18 experience at doing this for years and years and years.  
19 This is the first time Doctors Kryzanowski and Roberts have  
20 ever used this methodology, they point out. We asked them  
21 some questions about the methodology in order to determine  
22 how sensitive it was to assumptions, whether or not it made  
23 sense if you included other companies, what constituted a  
24 company that was above-average risk.

25 There's simply no way, based on what we were provided,  
26 to judge that.

27 The other thing that I would say about it is that,  
28 there are nine different categories of risk that were -- I

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1 believe there were nine -- that were provided. For all  
2 intents and purposes, each and every one of them was given  
3 exactly the same weight. There was no consideration given  
4 to whether the particular risk was a large risk and with a  
5 high probability, or a low risk with a small probability.  
6 They were all given equal weight.

7 So I would say that the risk methodology is somewhat  
8 lacking.

9 MR. KLIPPENSTEIN: Thank you. If you could turn to  
10 tab 16, which is excerpts from your evidence, and to page  
11 89 of your evidence, page 37 of the document book, please?

12 MS. McSHANE: Sorry, which tab?

13 MR. KLIPPENSTEIN: Tab 16.

14 MS. McSHANE: I have that.

15 MR. KLIPPENSTEIN: I have highlighted the end of the  
16 large paragraph on that page.

17 MS. McSHANE: What page are we on?

18 MR. KLIPPENSTEIN: This is page 89 of your evidence,  
19 page 37 of the document book, and I have highlighted the  
20 last two sentences in the large first paragraph.

21 Do you see that?

22 MS. McSHANE: The sentences about TransAlta?

23 MR. KLIPPENSTEIN: Right.

24 MS. McSHANE: Yes, I have that.

25 MR. KLIPPENSTEIN: The sentences are about two  
26 companies, TransAlta Utilities and TransAlta Corporation.  
27 Is that right?

28 MS. McSHANE: Yes.

1 1992.

2 So why didn't you start your estimation period in '91  
3 and '92?

4 MS. McSHANE: Because what I was trying to do was to  
5 capture a period that, while it might not be an official  
6 business cycle, includes both years of relatively strong  
7 growth, relatively weak growth, but has the characteristics  
8 of what we would expect going forward for economic  
9 conditions, and the period, the last cycle trough, doesn't  
10 meet that -- those criteria.

11 MR. KLIPPENSTEIN: Could you turn to tab 13, please,  
12 which is Pollution Probe Interrogatory No. 28 at page 22 of  
13 the document book?

14 You were asked how the discussion in your appendix B  
15 relates to the residual income model of stock valuation,  
16 and you note that, in your answer, the second sentence:

17 "The comparable test results include total  
18 earnings, including economic profits in excess of  
19 the cost of capital, that low risk comparable  
20 unregulated companies are able to earn, but not  
21 on a discounted basis."

22 Can you tell me how you removed that category referred  
23 to as "economic profits in excess of the cost of capital?"

24 MS. McSHANE: I didn't.

25 MR. KLIPPENSTEIN: You didn't, okay. Why didn't you?

26 MS. McSHANE: Because what I was trying to capture is  
27 the actual returns of these companies, which is what the  
28 comparable return standard does.

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1 MR. KLIPPENSTEIN: Well, would you agree with me that  
2 the residual income valuation model stipulates that the  
3 price of a stock, minus its book value, is equal to the  
4 discounted value of the stream of returns in excess of the  
5 cost of capital?

6 MS. MCSHANE: I will accept that.

7 MR. KLIPPENSTEIN: Okay. If you could turn to tab 14,  
8 please, the question asked:

9 "A number of studies argue that the growth of  
10 publicly traded firms is less than the growth in  
11 GDP. Assuming that this is the case, please  
12 explain why the growth rates of higher dividend  
13 paying firms such as the utilities are expected  
14 to be higher than those of lower dividend paying  
15 firms."

16 In your answer, you said:

17 "They are not. The average expected long-term  
18 growth rate in earnings for the S&P 500  
19 companies, which have an average dividend yield  
20 of approximately 2 percent, for example, as per  
21 the most recent IBES forecasts is 12.5 percent."

22 Can you tell me how it is reasonable to assume that  
23 the earnings of S&P 500 companies can grow long-term at a  
24 much faster rate than the GDP of the overall economy?

25 MS. MCSHANE: They probably can't over the long-term.  
26 But there are different rates of growth that investors  
27 expect at different points in time.

28 The S&P 500 companies tend to be higher-growth than

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1 the mature company like a utility, so the expected growth  
2 in the near- to medium-term is going to be significantly  
3 higher than the growth in the economy.

4 MR. KLIPPENSTEIN: Can you give me some sense of what  
5 you mean by "near- and medium-term"? Do you mean four or  
6 five years?

7 MS. McSHANE: Ten years.

8 MR. KLIPPENSTEIN: Ten years. But in terms of the use  
9 of long-term earnings forecasts in DCF models, isn't the  
10 long-term defined to mean forever?

11 MS. McSHANE: Long-term means forever, but it doesn't  
12 mean tomorrow. So, I mean if you have a stock market that  
13 has a dividend yield of 2 percent, which is about what the  
14 dividend yield is at the moment, and the growth in the  
15 long-term for the companies that make up that index might  
16 be 5 percent, it doesn't mean that when investors are  
17 pricing those stocks today that they expect 5 percent  
18 starting tomorrow.

19 I mean they might expect 12 percent for five or 10  
20 years and 7 percent, and going down to, ultimately, 4-1/2  
21 to 5 percent and maybe, after that, as companies enter the  
22 last stage of their life, below the growth in the economy.

23 MR. KLIPPENSTEIN: If you could turn, please, to tab  
24 17, which is the evidence of Doctors Kryzanowski and  
25 Roberts, and in the -- beginning in the middle of the first  
26 paragraph ---

27 MS. McSHANE: Sorry, what page?

28 MR. KLIPPENSTEIN: This is page 114 of their evidence,

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1 which is page 53 of the document book.

2 MS. McSHANE: Thank you.

3 MR. KLIPPENSTEIN: The first paragraph under the  
4 heading "MERP estimation problems", at the end of the  
5 paragraph, they say:

6 "The MERP that Ms. McShane estimates for Canada  
7 for the 1947 to 2006 period is materially  
8 impacted by the first four years of this period.  
9 To illustrate, the annual average over the first  
10 four years, 1947 to 1950, are 7.69 percent for  
11 the Consumer Price Index, 1.38 percent for long  
12 Canada bonds, 0.46 percent for 91-day Canadian  
13 Treasury bills and 20.88 percent for the equity  
14 market index. The result is an annual average  
15 MERP over this four-year period of 19.50  
16 percent."

17 And can you tell me why your estimated MERP does not  
18 suffer from severe selection bias, by your choice of 1947  
19 as the starting year for your sample?

20 MS. McSHANE: Well, I explained in the testimony why I  
21 picked the period that I did, and I explained it in an  
22 interrogatory response, that there was the post-World War  
23 II era, basically right after the war, I mean there was a  
24 basic change in the economy, moving from an agrarian  
25 economy to industrialized economy, the discovery of oil in  
26 western Canada. So the market, the economy was transformed  
27 in a relatively short period of time. So that's why I  
28 don't use the pre-World War II period.

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1       When you asked me why, then, I don't cut off the next  
2 five years, I would say to you, for the same reason that I  
3 don't cut out various periods in between. For example,  
4 1974 to 1980, we had very high rates of inflation. Then we  
5 had two very, very deep recessions -- in the 1981-82  
6 recession. We had the 1991-92 deep recession, which  
7 extended for a number of years while the economy adapted to  
8 NAFTA.

9       We had a secular decline in the rate of inflation,  
10 starting in the early '90s. We had a huge market bubble in  
11 the -- when was it? I haven't recovered from it yet, but  
12 in 2000, when the market burst.

13       So you can then start taking that period apart and  
14 saying: Well, let's pull out all of these other years.

15       Interestingly, I was reading the Ibbotson book the  
16 other day on equity risk premium, and they made note of how  
17 significant, at least in the US data -- and I think it is  
18 true in the Canadian data as well -- how significant two  
19 years within that period of time are on the measured risk  
20 premium, 1973 and '74 when the oil embargo occurred.

21       And just removing those two years from the US market  
22 return data make a huge difference in the data covering  
23 from 1926 to 2007, but nobody is suggesting we should take  
24 those out.

25       So that's my answer.

26       MR. KLIPPENSTEIN: Okay, thank you. If you could turn  
27 to page 126 of Doctors Kryzanowski and Roberts' evidence,  
28 which is page 56 of the document book, you have argued in

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1 your evidence that the capital asset pricing model is not  
2 supported empirically. Is that fair?

3 MS. McSHANE: Sorry, did you ask me a question?

4 MR. KLIPPENSTEIN: Yes. You argued in your evidence  
5 that the capital asset pricing model is not supported  
6 empirically; is that fair?

7 MS. McSHANE: Well, there are a number of studies that  
8 suggest that the relationship between return and beta is  
9 not what the CAPM posits.

10 MR. KLIPPENSTEIN: On page 126, the authors refer to  
11 an article by Drs. Ang, Hodrick, Xing and Zhang from the  
12 Journal of Finance in 2006.

13 Are you familiar with that article?

14 MS. McSHANE: No.

15 MR. KLIPPENSTEIN: In tab 16, which is your evidence,  
16 page 48 of your evidence, which is page 50 in the document  
17 book.

18 MS. McSHANE: Page 48 of the document?

19 MR. KLIPPENSTEIN: I think it is page 48 of your  
20 evidence.

21 MS. McSHANE: Oh, sorry. Yes.

22 MR. KLIPPENSTEIN: Let me just check if that is right.  
23 I'm just double-checking the page, apologies.

24 This, I believe, refers to your sampling of 20  
25 Canadian industrials to use the comparable earnings test;  
26 is that right?

27 MS. McSHANE: Yes.

28 MR. KLIPPENSTEIN: Can you tell me what tests, if any,

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1 you used to ensure that your sample of 20 industrials did  
2 not earn abnormal returns or free lunches over the  
3 estimation period?

4 MS. MCSHANE: I looked at the sample as a whole, and  
5 at the average market-to-book ratio of the sample compared  
6 to the market-to-book ratio of the market.

7 MR. KLIPPENSTEIN: Are you familiar with the commonly  
8 used Jensen and Sharpe measures of portfolio performance?

9 MS. MCSHANE: Yes.

10 MR. KLIPPENSTEIN: Did you use those?

11 MS. MCSHANE: No, because those are market return  
12 measures. These are book returns.

13 MR. KLIPPENSTEIN: I'm sorry?

14 MS. MCSHANE: No, I didn't. The Jensen and Sharpe  
15 measures are for market returns.

16 MR. KLIPPENSTEIN: Would you agree that Drs.  
17 Kryzanowski and Roberts found a significant abnormal return  
18 associated with your samples when they applied these tests?

19 MS. MCSHANE: I don't recall.

20 MR. KLIPPENSTEIN: So if they did find significant  
21 abnormal returns on your samples, you don't have any  
22 comment on that?

23 MS. MCSHANE: I can't say that I really studied that  
24 in their testimony, so I don't know whether their analysis  
25 is correct, or not.

26 MR. KLIPPENSTEIN: If could turn in tab 17, which is  
27 Drs. Kryzanowski and Roberts' evidence, to page 124 and the  
28 top of page 125, which is page 54 and 55 of the document

1 book?

2 Near the bottom, they say:

3 "Based on a survey of a large sample of large US  
4 corporations, Graham and Harvey, 2001 and 2002,  
5 find that the capital asset pricing model was by  
6 far the most popular method of estimating the  
7 cost of equity capital. 73.5 percent of  
8 respondents always or almost always used it. The  
9 second and third most popular methods were  
10 average stock returns and a multi-factor CAPM,  
11 respectively. Few firms used a dividend discount  
12 model to back out the cost of equity."

13 Do you have any reason to disagree with the summary of  
14 the results of this survey?

15 MS. McSHANE: No. I would have some comments on the  
16 flexibility that these firms that use it have to sort of  
17 play with the sensitivity of the results.

18 I mean, if you -- let's say that you think that the  
19 CAPM produces a cost of equity between 8 percent and 12  
20 percent. I mean, that's -- you know, that's a fairly wide  
21 range, could be as wide as the range of returns that come  
22 out of various experts' estimates of the capital asset  
23 pricing model results. But these firms are using this to  
24 evaluate projects.

25 So it is not like this is the return they're going to  
26 earn, so they can take the cash flows, discount them at 8  
27 percent. Well, that number might be right. It might be  
28 12. Let's discount it at 12 percent and see if that still

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1 gives me a positive NPV.

2 So, yes, they may use them, but they have a lot more  
3 flexibility to play with the results than a utility who is  
4 going to be allowed whatever return a regulator says is  
5 appropriate.

6 MR. KLIPPENSTEIN: In this survey, none of the firms  
7 reported using the comparable earnings method to obtain the  
8 cost of equity?

9 MS. McSHANE: No, and they wouldn't. I explained why  
10 the comparable earnings test is only relevant to regulated  
11 companies. It's only relevant in a specific comparable  
12 return context. It's not a market-based cost of equity  
13 model like the equity risk premium test or the discounted  
14 cash flow test.

15 MR. KLIPPENSTEIN: Do you know if OPG uses the  
16 comparable earnings method in estimating its cost of equity  
17 for the evaluation of capital investments for either its  
18 regulated or non-regulated activities?

19 MS. McSHANE: I would say no.

20 MR. KLIPPENSTEIN: Can you identify a Canadian utility  
21 that uses the comparable earnings method in estimating its  
22 cost of equity for the evaluation of capital investments  
23 for either its regulated or non-regulated activities?

24 MS. McSHANE: No, for the same reason.

25 MR. KLIPPENSTEIN: If you could turn to tab 15,  
26 please.

27 CCC and VECC's Interrogatory No. 15, sub F of the  
28 interrogatory asks for your estimate of the realized excess

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1 return of Canadian equities over bonds for the period 1947  
2 to 1956.

3 And your response on the next page in F states:

4 "The differential between stock and bond returns  
5 was 17.5 percent arithmetic average for the  
6 entire period 1924 to 2006 for which data are  
7 available for stock and bond returns. The  
8 average return on stocks was 11.9 percent, the  
9 average return on bonds was 6.5 percent, for an  
10 achieved risk premium in Canada of 5.4 percent.  
11 The average experienced return on bonds at  
12 approximately 6.5 percent is considerably higher  
13 than the current and expected yield, and thus  
14 overstates a reasonable estimate of the expected  
15 risk-free rate."

16 Would you confirm that the average annual risk premium  
17 achieved in Canada of 5.4 percent over the 1924 to 2006  
18 period is based on the arithmetic means for stocks and  
19 bonds?

20 MS. McSHANE: Yes.

21 MR. KLIPPENSTEIN: And if the current and expected  
22 yield on 30-year Canadas represents a geometric or  
23 arithmetic average annual return over the life of the  
24 Canadas, can you tell me which of those two it is,  
25 geometric or arithmetic?

26 MS. McSHANE: The yield?

27 MR. KLIPPENSTEIN: Yes.

28 MS. McSHANE: I guess it is fundamentally a geometric

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1 return.

2 MR. KLIPPENSTEIN: Are you not, then, comparing an  
3 annual arithmetic average to an annual geometric average?

4 MS. MCSHANE: Yes, I guess in principle you are. What  
5 I am trying to do is to isolate the risk-free part of the  
6 rate, rather than include capital gains and losses that, on  
7 bonds, that, for purposes of the future, can't really be  
8 anticipated.

9 The arithmetic average on the returns for the market  
10 does capture the actual risk, the variability of the  
11 returns and that is the appropriate measure.

12 I don't know what other measure of risk-free rate you  
13 could use in conjunction with the arithmetic average of  
14 equity market returns, other than the anticipated yield.

15 MR. KLIPPENSTEIN: Thank you. I think those are all  
16 of my questions. Thank you, Ms. McShane.

17 Thank you, Mr. Chair.

18 MR. KAISER: Thank you. Who is next?

19 MR. WARREN: I am, sir.

20 MR. KAISER: Do you want to start now or in the  
21 morning?

22 MR. WARREN: Do you want an honest answer or political  
23 answer, sir?

24 [Laughter]

25 MR. KAISER: I want an honest answer.

26 MR. WARREN: The honest answer is, no, I don't want to  
27 start now.

28 MR. KAISER: All right. Good answer.

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1 [Laughter]

2 MR. PENNY: Honest and political are the same thing,  
3 in that sense.

4 MR. KAISER: 9:30 tomorrow.

5 ---Whereupon the hearing adjourned at 4:45 p.m.

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Saturday, June 14, 2008

Presented by



## CREDIT RATINGS STORM

DBRS faces critics over role in ABCP Fiasco

**Theresa Tedesco And John Greenwood, Financial Post** Published: Saturday, June 14, 2008

Almost a year into the blame game playing out in the wake of the global credit crunch and the commercial-paper meltdown in Canada, Walter Schroeder sits at a boardroom table with his son, David, jotting down notes as he ponders the plight of his embattled company.

Trim and tanned with a neatly coiffed mane of white hair, the 66-year-old Mr. Schroeder betrays no sign of impatience as he listens to accusations levelled against DBRS Ltd., the firm he founded 32 years ago, and the rating industry in which it operates.

Mr. Schroeder, David Schroeder, 36, and the senior staff at DBRS have spent months meeting with stakeholders -- issuers, regulators, subscribers and more than 100 investors -- trying to figure out how to fix the firm's operations in the hope of appeasing critics demanding a fundamental overhaul of the industry.

"We've made some changes in light of what's gone on," explains David Schroeder, chief operating officer. "As a result, we have made wholesale revisions to the way we approach transparency and disclosure."

They're not alone.

Faced with the harsh glare of regulatory scrutiny and rising anger from investors, debt raters, who ultimately function on trust, have been fending off calls for tougher rules and greater oversight.

Major securities regulators around the world have placed a bull's eye on debt-rating agencies since last summer's market debacle. Once revered prognosticators, agencies' integrity, credibility, quality and independence are at the centre of a series of examinations and investigations into the credit-market collapse which has galvanized international regulators.

The U. S. Securities and Exchange Commission, the only regulator that oversees its industry (worth US\$5-billion a year), proposed new rules this week to reshape the way rating agencies operate.

In this country, the Canadian Securities Administrators, the umbrella group representing the 13 provincial and territorial regulators, is still "examining" the agencies' role in the securities market.

On Monday, Julie Dickson, the federal superintendent of financial institutions, will testify in Ottawa before the House of Commons finance committee that DBRS was partly to blame for the commercial-paper collapse. According to briefing notes circulated by her office, Ms. Dickson, who oversees banks in Canada, will argue that the rating agency, among other groups, encouraged the use of the flawed liquidity agreements that sparked the turmoil in the commercial-paper market last August.

Meanwhile, the International Organization of Securities Commissions, which represents more than 100 securities regulators worldwide, also released a list of recommended modifications to its 2003 code of conduct for rating agencies, originally issued after the collapse of Enron Corp.

But amid the growing clamour, there is no outward sign of concern inside DBRS's seventh-floor head-office boardroom in a gleaming downtown Toronto office tower.

"The main thing they want is transparency; more information made available to the marketplace. Provide a minimum level of disclosure," Walter Schroeder says sanguinely during an interview.

"This happens every bottom of the cycle. If you look back to the '80s and '90s, you'll find rating agencies were criticized. In the end, you're only as good as your assumptions."

Yet, that established way rating agencies conduct their business is at the very centre of the controversy --and one of the main reasons the fallout from the credit crunch has chipped away at some of the vaunted status they have long enjoyed.

DBRS, Moody's and Standard & Poors and other agencies have built their reputations on investors' confidence in the quality and objectivity of their opinions. As crucial financial gatekeepers, their judgments on the creditworthiness of public companies and securities are often key factors that determine how and at what price companies can raise or borrow money.

But in the wake of the subprime-mortgage crisis, that trust has been seriously eroded.

Central to the debate is the now-famous asset-backed commercial paper, a short-term debt product that mostly received the coveted Triple-A rating even though some of it was exposed to dodgy U. S. home loans.

In Canada, the troubles were particularly serious. Last August, a \$35-billion chunk of the ABCP market froze completely after a group of foreign banks that had agreed to provide emergency liquidity to buy up paper in the event of a market failure declined to honour their agreements. As a result, investors holding what they thought were notes backed by a bank guarantee were left on the hook for massive losses.

Perhaps most surprising to investors was that the frozen paper came with the highest rating from DBRS. Indeed, it wasn't until several days after the freeze-up that the company put the stalled ABCP under review.

Ten months later, the market is still tied up in a complex restructuring with holders unable to trade their notes.

"This is amazing that something as simple as residential mortgages could cause all of these problems," says Laurence Booth, a professor at the University of Toronto's Joseph L. Rotman School of Management.

How did the rating agency get it so wrong?

Some point to a lack of objectivity, given that rating agencies earn a healthy portion of their revenue helping companies obtain a certain rating before they take their products to market. Agencies generally disclose when they are paid by the companies they rate, but because DBRS is a private company, Mr. Schroeder would only confirm the firm earns the "bulk" of its revenue from issuers, not subscribers.

Critics, including Anthony Fell, former chairman of RBC Dominion Securities, argue that model is flawed.

"They became part-time investment bankers, working hand in glove with the major banks and dealers as to how the products should be structured," he said in a recent speech. "They were, in effect, rating their own product, which is a clear conflict."

In the case of ABCP, the rating agency worked with trusts that issued the commercial paper. Of the more than 20 trusts that seized up last August, all were sponsored by a handful of boutique financial firms such as Coventree Inc. and Newshore Financial Services, and all were stamped with top ratings by DBRS.

To participate in the market, issuers required a triple-A score. But Moody's and S&P refused to even offer opinions saying -- rightly, as it turned out -- that they didn't trust the Canadian liquidity agreements.

DBRS was the only player willing to rate the paper, which gave rise to an alarming situation: The more ABCP that was issued, the higher the profits for DBRS from fees collected from the firms issuing the paper.

Moreover, not only did DBRS offer opinions on the paper, the company helped craft the investments. First introduced in Canada about two decades ago, ABCP evolved into a highly complex product that went well beyond the understanding of most investors.

Indeed, even the banks and financial firms that sponsored the paper relied on input from the rating agency on how to structure it.

"The root cause of this was that clever investment bankers were able to manipulate the rating agencies," says Mr. Booth.

Observers say the industry is open to criticism because firms are paid by the issuers they rate. It's a fundamental conflict --and the established business model. Sophisticated institutional investors recognize this relationship, which explains why so many employ their own credit analysts.

Worse, some say investors have become too reliant and far too trusting of ratings, especially unsophisticated investors who accept the scores as stamps of approval rather than opinions.

"I've never had a high regard for rating agencies because we understand there are these conflicts," says Mr. Racioppo, adding the money manager does not subscribe to rating agencies. "Too many investors absolutely rely on ratings and it's important to protect the less sophisticated ones that don't understand there are these conflicts."

Walter Schroeder says that criticism is unfair.

"We don't get paid for guaranteeing the debt, nobody pays us for that. We're just giving opinion on the credit quality."

Adds Peter Bethlenfalvy, DBRS's managing director of global corporate finance: "We put out opinions and investors should always use us as a tool. Ultimately, all of us have our reputations and our integrity on the line every time we put out a rating."

Given its level of involvement, it is not surprising DBRS is facing allegations it was in conflict of interest, helping to manufacture the very product it rated.

"They were biased," says Diane Urquart, an independent analyst and shareholder activist. "They became the marketing arm of the ABCP sponsors and the investment dealers."

David Schroeder sees it differently.



"With an issuer-pay model, there are conflicts that everybody knows. With the investor-pay model, there are just as many conflicts. What we have to do is manage it," he argues.

This is not the first time the industry has come under fire for questionable opinions. Over the past few decades, there has been a string of high-profile corporate collapses in which the ratings agencies were accused of failing to provide any warning despite numerous red flags. Glaring examples include the Enron fraud, the collapse of Confederation Life and the spectacular demise of real-estate giant Olympia & York in the early 1990s.

"There hasn't been a problem recently because of the good economy, but what happens is you go into a slowdown and, when people start to lose money, they begin pointing the finger at the credit-rating agencies," says Mr. Booth.

Even so, he says, "the debt-rating agencies will admit they made mistakes."

For one, "they didn't take into account future losses would not be equivalent to historic losses." In other words, Mr. Booth says, they did a lot of "fancy modelling" based on what happened in the past without taking into account how the world was changing.

Mr. Racioppo argues rating agencies aren't trained to be forecasters. "They provide after-the-fact rating," he says. "What purpose does that serve?"

Still, many governments and pension funds are required by securities rules to buy only stocks and bonds that carry a top rating from a major ratings agency. That means money managers such as Jarislowsky, Fraser, which did not purchase ABCP, are forced to rely on ratings when buying and selling certain investments, even when their own credit analysis doesn't agree with the opinions.

"I wish there was a way I didn't have to rely on these rating agencies because it's like putting a straightjacket on us," Mr. Racioppo says.

"It's clear with hindsight that sometimes assumptions that get used across the market need to be revised to reflect what's happening," says Huston Loke, DBRS group managing director, structured finance. "We've learned a lesson on assumptions. We try to make our assumptions now

as forward looking as possible." At the same time, DBRS has revised its disclosure rules by publishing monthly

summaries of the asset types and related risks associated with ABCP. It is also setting new internal conflict-of-interest guidelines and, more important, is now focusing on forward-looking assumptions and incorporating a broader range of potential outcomes rather than relying predominantly on historical performance.

"If we had sat back and did not make any changes to the business, then perhaps the criticisms would be more accurate," Mr. Loke says.

The credit collapse cast a spotlight on another shortcoming in the industry in Canada: There is no watchdog overseeing the ratings agencies.

Meanwhile, the SEC proposed new rules to make the industry more transparent and open it up to more competition. More important, among the proposals in its 167-page report is a ban on rating agencies from advising investment banks on how to package securities.

The SEC's initiative emerged a week after the New York Attorney General reached a deal with the world's three largest players -- Moody's, S&P and Fitch Ratings -- that will require the firms to provide more information on the products they rate and to avoid conflicts of interest with investment banks.

"At the core of it, they are opinions, they are not recommendations to buy or sell or hold a security," says Mr. Loke. "We can't know the circumstance of all the investors who follow us. I don't think regulators want to second-guess methodology and assumptions, which ultimately are opinions. I don't think that's where regulators want to go."

At DBRS, the initial reaction is relief.

"There's nothing that is game-changing or hugely significant," says David Schroeder of the SEC initiatives.

And although he still has to pore over the voluminous report, his sense is that U. S. regulators "look like they are just adding bureaucratic costs and burdens without really improving the quality of ratings."

DBRS, which has one of the coveted designations to operate in the United States, has 30 days to respond to the proposals. It's clear the challenge to thriving--maybe even surviving-- rests with changing attitudes, and not just the rules.

"There are perhaps unreasonable expectations placed on rating agencies to be perfect in their opinions," observes David Schroeder, as his father nods in agreement. "We'll never be 100%, but the important thing is that we put them out and stand by them. It's not a case of being right all the time."