

RH-4-92 - Volume 1

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NATIONAL ENERGY BOARD



OFFICE NATIONAL DE L'ÉNERGIE

Order No. RH-4-92

Ordonnance N^o RH-4-92

Trans Quebec & Maritimes Pipeline Inc.

**an Application by Trans Quebec & Maritimes Pipeline Inc. for certain orders respecting tolls
specified in a tariff pursuant to Part IV of the National Energy Board Act;**

**Hearing held at
Audience tenue à**

Montreal, Quebec

**1 December 1992
1 décembre 1992**

Volume 1

Canada

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as represented by the National Energy Board

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représentée par l'Office national de l'énergie

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I

ORDER NO. RH-4-92
ORDONNANCE No RH-4-92

IN THE MATTER OF the National Energy Board Act and the Regulations made thereunder; and

IN THE MATTER OF an Application by Trans Quebec & Maritimes Pipeline Inc. for certain orders respecting tolls specified in a tariff pursuant to Part IV of the National Energy Board Act;

RELATIVEMENT a la Loi de l'Office national de l'énergie et ses reglements d'application; et

RELATIVEMENT a une demande de Gazoduc Trans Quebec & Maritimes Inc. concernant les droits en vigeur au 1er janvier 1993 et au 1er janvier 1994.

- - -

Hearing held at Montreal, Quebec on Tuesday, 1 December 1992

Audience tenue a Montreal, Quebec, le mardi 1er decembre 1992

- - -

PANEL:

J.-G. Fredette	President/Chairman
R. Priddle	Membre/Member
A. Cote-Verhaaf	Membre/Member

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C O M P A R U T I O N S

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C. K. Yates	Canadian Association of Petroleum Producers
H. N. E. Hobbs	Foothills Pipe Lines Ltd.
F. Hebert	Gaz Metropolitain, inc
W. M. Moreland	Alberta Petroleum Marketing Commission
R. Robitaille) J. Brisson)	le Procureur general du Quebec
J. Morel) D. Champagne)	Board Counsel

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Montreal, Quebec

Tuesday, 1 December 1992

Le mardi 1er decembre 1992

--- Upon commencing at 1:00 p.m./A l'ouverture de
l'audience a 13 heures.

LE PRESIDENT: Bonjour, mesdames et
messieurs; good afternoon, ladies and gentlemen.

For those requiring simultaneous translation,
the usual gadgets are available, as there is a likelihood
that there will be both languages used in this hearing.

Conformement a l'Ordonnance d'audience RH-4-92 telle que modifiée par l'Ordonnance AO-1-RH-4-92, l'Office commence aujourd'hui son audience publique pour traiter des questions relatives au taux de rendement soulevées par la demande de Gazoduc Trans Quebec & Maritimes qui est datée du 28 août 1992, faite en vertu de la Partie IV de la loi sur l'Office national de l'énergie, concernant les droits pour les années 1993 et 1994.

Par son Ordonnance, l'Office avait informé les intervenants qui désiraient que les questions autres que celle du taux de rendement soient traitées au cours de la partie orale de l'audience, qu'il leur fallait soulever ces questions au moment du dépôt de leur intervention. Aucune autre question n'a été ainsi soulevée, et cette audience ne traitera donc que les questions du taux de rendement des capitaux propres, du coût de la dette et de la structure du capital.

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Les parties sont donc priées de limiter leurs interrogatoires et contre-interrogatoires aux questions relatives au taux de rendement. Toutefois, celles-ci pourront traiter de toutes les questions se rapportant à la demande de TQM lors de leurs plaidoiries respectives.

La société demanderesse aura par la suite un droit de réplique.

We will begin this afternoon with the registration of appearances, in accordance with the Order of Appearances, copies of which are available at the back of the room.

When Board Counsel calls your name, please come forward to register your appearance. At that time, would you also inform the Board if there are any preliminary matters which you wish to raise.

All preliminary matters will be heard following the completion of the registration of appearances and before we proceed to the evidentiary part of the hearing.

The Board has prepared, as usual, a Prefiled Exhibit List, which is available from the Hearing Process Officer, or at the back of the room. Parties need not tender for filing copies of exhibits that are already on the Exhibit List. You are requested to verify the Exhibit

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List before registering your appearance.

If you intend to file an item that does not appear on the list, you may do so when you register your appearance.

I would request parties, when filing an exhibit, to provide the usual ten copies to the Hearing

Officer, three copies for TQM, and sufficient copies for people in the room.

I would ask the Court Reporters to reproduce the Prefiled Exhibit List in the transcript, showing the documents as filed on the record of these proceedings.

--- Prefiled Exhibit List follows:

EXHIBIT NOS. A-1 to A-11:

As per Prefiled List of Exhibits

EXHIBIT NOS. B-1 to B-22:

As per Prefiled List of Exhibits

EXHIBIT NOS. C-1-1 to C-1-6:

As per Prefiled List of Exhibits

EXHIBIT NO. C-2-1:

As per Prefiled List of Exhibits

EXHIBIT NO. C-3-1:

As per Prefiled List of Exhibits

EXHIBIT NOS. C-4-1 to C-4-2:

As per Prefiled List of Exhibits

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As per Prefiled List of Exhibits

EXHIBIT NO. C-8-1:

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EXHIBIT NO. C-9-1:

As per Prefiled List of Exhibits

EXHIBIT NO. C-10-1:

As per Prefiled List of Exhibits

EXHIBIT NOS. C-11-1 to C-11-2:

As per Prefiled List of Exhibits

EXHIBIT NO. C-12-1:

As per Prefiled List of Exhibits

THE CHAIRMAN: (Cont.) After hearing preliminary matters, if any, we will proceed with hearing the evidence of the Applicant, with cross-examination of the Applicant's witnesses taking place in accordance with the Order of Appearances.

The Board will then proceed to the examination of the witness representing the Canadian Association of Petroleum Producers and the Alberta Petroleum Marketing Commission.

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Cross-examination of the CAPP and APMC witness will also proceed according to the Order of Appearances.

L'office siégera aujourd'hui jusqu'à 17 heures. Pour les prochains jours, les heures d'audience seront de 8 heures 30 à 13 heures. Pour ce qui est de la journée de jeudi, il sera possible de siéger toute la journée, si nécessaire.

Avant que l'audition des temoins ne soit completee, l'Office indiquera aux parties comment il entend proceder, et a quel moment, pour la presentation des plaidoiries finales.

Les seances auront lieu en anglais et en francais. Par consequent, comme je vous l'ai deja dit, la traduction simultanee est disponible.

Je vous demanderais donc maintenant, maitre Morel, de proceder a l'enregistrement des comparutions.

Maitre Morel, s'il vous plait.

Me MOREL: Merci, monsieur le President.

Trans Quebec & Maritimes Pipeline
Inc./Gazoduc Trans Quebec & Maritimes Inc.

Me LECLERC: Maitre Louis Andre Leclerc pour la requerante.

J'aurai quelques petites questions preliminaires.

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Me MOREL: Merci, maitre Leclerc.

Canadian Association of Petroleum
Producers/Association canadienne des producteurs
petroliers.

MR. YATES: Mr. Chairman, my name is Yates, initials C.K. I will be representing the Canadian Association of Petroleum Producers.

I have one filing to make, which I will make after the registration of appearances has been completed.

MR. MOREL: Thank you, Mr. Yates.

Alberta Natural Gas Company Limited...?
--- (No Response/Pas de reponse)
Foothills Pipe Lines Limited.

Mr. Chairman, Mr. Harry Hobbs, Manager of Public and Regulatory Affairs at Foothills, has asked me to register his appearance for Foothills. They will be monitoring the hearing.

Gaz Metropolitain, inc....?

Me HEBERT: Bonjour, monsieur le President, madame et monsieur les membres.

Mon nom est Francois Hebert, et je represente dans cette cause la societe Gaz Metropolitain. Permettez-moi de vous souhaiter la bienvenue a Montreal.

L'Office ne se deplace pas regulierement a Montreal; alors, on l'apprecie d'autant plus et on vous souhaite la

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bienvenue au nom de la societe.

Je comparais donc aujourd'hui au nom de Gaz Metropolitain et je souligne des a present a l'Office que Gaz Metropolitain n'a pas l'intention de presenter des temoins ni de contre-interroger les temoins qui vont traiter de la structure du capital et du taux de rendement de la compagnie Trans Quebec & Maritimes.

Toutefois, nous aurons des commentaires succincts, tres succincts, a formuler en plaidoirie finale. A ce sujet, je me dois d'informer l'Office que si les plaidoiries se deroulaient vendredi prochain, c'est-a-dire vendredi le 4 decembre, j'aurai a ce moment-la a deposer des commentaires par ecrit puisque, malheureusement, je suis retenu a l'exterieur de la ville toute la journee. Evidemment, si les plaidoiries avaient lieu jeudi, il nous fera plaisir d'en traiter viva voce, de vive-voix, jeudi.

Voila, monsieur le President. Je vous remercie.

Me MOREL: Merci, maitre Hebert.

Nova Corporation of Alberta...?

--- (No Response/Pas de reponse)

Pan-Alberta Gas Limited...?

--- (No Response/Pas de reponse)

TransCanada PipeLines Limited...?

--- (No Response/Pas de reponse)

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Union Gas Limited...?

--- (No Response/Pas de reponse)

Westcoast Energy Inc....?

--- (No Response/Pas de reponse)

Western Gas Marketing Limited...?

--- (No Response/Pas de reponse)

Alberta Petroleum Marketing Commission...?

MS. MORELAND: Good afternoon, Mr. Chairman. My name is Moreland, initials W. M., on behalf of the APMC.

MR. MOREL: Thank you, Ms. Moreland.

Le Procureur general du Quebec...?

Me ROBITAILLE: Bonjour, monsieur le President, madame et monsieur les membres. Nous vous souhaitons egalement la bienvenue ici a Montreal.

Je represente le Procureur general du Quebec en compagnie de maitre Jean Brisson, dans cette cause, et nous reservons notre droit de contre-interroger les divers temoins. Cependant, nous entendons soumettre une

plaidoirie a la fin de l'audience.

Je vous remercie.

Me MOREL: Merci, maitre Robitaille.

Comme vous l'avez indique, monsieur le President, mon nom est Jean Morel et je serai assiste a ces audiences par maitre Diane Champagne qui est procureur

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au contentieux de l'Office.

Monsieur le President, pendant que je suis debout, j'aimerais porter a l'attention des participants que l'Office a mis a leur disposition, sur la table a l'arriere de la salle, la version francaise de la piece justificative A-3, qui est la premiere demande de renseignements de l'Office a la requerante Trans Quebec & Maritimes, Gazoduc TQM.

Egalement sur la table a l'arriere de la salle sont disponibles la version francaise ainsi que la version anglaise de la piece justificative A-11, qui est la troisieme demande de renseignements contenant les questions 72 a 74 adressees par l'Office a la requerante, Gazoduc TQM.

C'est tout, monsieur le President. Je vous remercie.

Me LECLERC: Monsieur le President, madame et monsieur les membres, je ne voudrais pas qu'on interprete mon silence comme etant le fait que nous n'appracions pas egalement votre venue a Montreal.

La premiere petite question preliminaire dont j'aimerais traiter, monsieur le President, est la suivante. Puisque les demandes de renseignements nous sont arrivees jusqu'a la semaine derniere, j'aimerais deposer comme piece la preuve de signification de nos

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reponses a ces demandes de renseignements.

La deuxieme petite question preliminaire est celle-ci. Lors d'une conversation telephonique avec maitre Yates, il nous a fait remarquer que la deuxieme page de la cedula annexe a notre reponse a la question 10.3 de la CAPP, piece B-13, nous a fait remarquer, dis-je, qu'a certaines photocopies il manquait la derniere ligne, c'est-a-dire que dans la premiere serie de chiffres il manquait la ligne pour 1991. Nous avons fait parvenir cette information a maitre Yates et, pour ceux qui ne l'auraient pas, nous en avons depose plusieurs exemplaires a l'arriere de la salle.

Me MOREL: Excusez-moi, maitre Leclerc, si vous le permettez.

Monsieur le President, il y aurait peut-etre lieu de donner la cote B-23 a la preuve de signification deposee par Gazoduc TQM.

--- PIECE No B-23: Preuve de signification de la reponse

de TQM a la demar
de l'Office

Me MOREL: Quant au tableau, j' imagine qu'il remplacera tout simplement une des pages d'une piece justificative deja produite. Donc, il n'y a pas lieu de lui accorder une cote.

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Me LECLERC: Une nouvelle cote, effectivement. Apres verification, nous avons constate que l'information apparaissait sur certaines des copies alors que sur d'autres elle n'y apparaissait pas.

Ce n'etait qu'un probleme de photocopie, monsieur le President.

La troisieme question dont j'aimerais traiter c'est que, lorsque nous avons avise l'Office que monsieur Morin ne serait peut-etre pas disponible pour la premiere journee -- ce qui a entraine l'emission de l'Ordonnance de modification -- nous avons prevenu maitre Morel que possiblement il serait ici cet apres-midi ou demain matin. Nous sommes en mesure d'informer l'Office que monsieur Morin est arrive; en effet, il est arrive sur l'heure du midi. Comme il a voyage toute la journee, il est plutot fatigue. Nonobstant ce fait, nous serions dispose a commencer avec la preuve de monsieur Morin; cependant, nous demanderions a l'Office de ne commencer qu'a 3 heures, afin de lui donner une chance de se reposer un peu et de passer en revue son temoignage.

Deuxieme element: mon collegue, maitre Yates, m'a remis hier certains documents a soumettre a monsieur Morin qui n'a cependant pas eu l'occasion d'en prendre connaissance encore. Dependamment de ce qu'il lira, j'aimerais demander que son contre-interrogatoire sur

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ces aspects soit reporte a demain.

LE PRESIDENT: Cela nous parait tout a fait acceptable.

Me LECLERC: Je vous remercie.

LE PRESIDENT: Si on finit avec nos deux premiers temoins avant 3 heures, nous ajournerons et nous reprendrons a 3 heures.

Me LECLERC: Cependant, si les questions de ce panel devaient se prolonger jusque vers les 4 heures, a

ce moment-la nous prefererions ne commencer que demain matin avec monsieur Morin.

LE PRESIDENT: D'accord, ca serait raisonnable, pourvu qu'on ne perde pas trop trop de temps.

Me LECLERC: Voila. Merci, monsieur le President. C'etaient la mes questions preliminaires.

Je croyais que monsieur Yates avait indique qu'il avait...

THE CHAIRMAN: Mr. Yates, do you have a document to produce?

MR. YATES: As I indicated, Mr. Chairman, I have one document to file. It is an Update to Table 15 in the Evidence of Dr. Waters. It is entitled "Partial Year Rates of Return on Common Equity, 20 Non-Utilities, In First Septile, 1991 and 1992", and it is dated November 28, 1992.

THE CLERK: The Exhibit number will be C-1-7.

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--- EXHIBIT NO. C-1-7:

Update to Table 1
Dr. Waters, entit
Rates of Return c
Non-Utilities, Ir
and 1992"

MR. YATES: Thank you, Mr. Chairman.

Me LECLERC: Monsieur le President, j'aimerais vous presenter mon premier panel. Plus pres de vous se trouve monsieur Robert Heider, vice-president reglementation et marketing et, a la droite de ce dernier, se trouve monsieur Rejean Laforge, tresorier et controleur de la compagnie.

Je crois que ces deux temoins sont bien connus de l'Office et, avec votre permission, j'aimerais etre dispense de passer en revue leur curriculum vitae.

Peuvent-ils etre assermentes?

M.R. HEIDER	ASSERMENTE
R. LAFORGE	ASSERMENTE

INTERROGATOIRE PAR Me LECLERC:

Q. Monsieur Heider, est-ce que vous avez avec vous votre temoignage ecrit ainsi que votre temoignage additionnel, qui sont les pieces B-5 et B-6?

M. HEIDER: Oui, je les ai.

Q. Avez-vous des commentaires a y apporter?

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int. (Leclerc)

M. HEIDER: J'aimerais tout simplement ajouter que, conjointement avec monsieur Laforge, je suis responsable des reponses aux demandes de renseignements qui ont ete remises depuis le depot de la demande tarifaire le 28 aout de cette annee sauf, evidemment, en ce qui a trait aux recommandations salariales et au retour sur l'avoir propre.

Q. Avec ces commentaires, monsieur Heider, est-ce que vous adoptez ce temoignage comme etant votre preuve dans ce dossier?

M. HEIDER: Oui, certainement.

Q. Monsieur Laforge, est-ce que vous avez devant vous votre temoignage ecrit qui est egalement depose sous les cotes B-5 et B-6?

M. LAFORGE: Oui, monsieur Leclerc, je l'ai.

Q. Avez-vous des precisions ou des corrections a y apporter?

M. LAFORGE: Tout simplement d'indiquer mon accord aux commentaires de monsieur Heider en ce qui a trait aux demandes de renseignements.

Q. Est-ce que vous adoptez ce temoignage comme etant votre temoignage en cette cause?

M. LAFORGE: Oui, je l'adopte, maitre Leclerc.

Me LECLERC: Ceci complete mon interrogatoire en chef, monsieur le President.

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cr.-ex. (Yates)

LE PRESIDENT: Merci, maitre Leclerc.

Me MOREL: Canadian Association of Petroleum Producers, please.

MR. YATES: Thank you, Mr. Chairman.

CROSS-EXAMINATION BY MR. YATES:

Q. Mr. Heider, I have some questions for you that arise out of Information Requests sent by the Board in respect to the Direct Testimony of Dr. Morin, but they are questions that I think relate more to the

knowledge of TQM than the knowledge of Dr. Morin.

What I would propose to do is start down the road of asking questions of you and then you can tell me if we are getting out of your realm of knowledge -- or yours, Monsieur Laforge -- and we can defer them to Dr. Morin.

Is that alright with you?

Mr. HEIDER: Yes.

Q. Am I correct that, from its inception, TQM had a 25 per cent deemed common equity ratio?

MR. HEIDER: That is my understanding.

Q. And it is also your evidence, or the evidence of TQM, that it has been able to secure financing on terms which have been reasonable while it has had a 25 per cent deemed common equity ratio.

16 TQM Panel No.
cr.-ex. (Yates)

Yes?

MR. HEIDER: I believe we did have an Information Request on that particular point. Naturally we feel that we were able to secure financing which was reasonable and acceptable. That is not to say, however, that we could not have been able to finance under better terms if the equity ratio had been different.

Q. The Information Request that you are recalling, Mr. Heider, is the Response to Question No. 50 of the National Energy Board.

As I understand it, the Application of TQM, as it was filed in this case, involved a request for approval of the continuation of the common equity component of the capital structure at the 25 per cent level.

Correct?

MR. HEIDER: I am sorry, could you start that again.

Q. My understanding is that when TQM filed its Application in this proceeding, the request was for a continuation of the 25 per cent common equity level.

Correct?

MR. HEIDER: That is correct.

Q. And that was the case, and remained the case, at least until the circulation of what has become Exhibit B-19, which is the Responses to various

17 TQM Panel No.
cr.-ex. (Yates)

Information Requests, including the one that I referred you to a moment ago?

MR. HEIDER: Yes. It also remains today.

Q. So that what you have done here, Mr. Heider, is anticipate the next question which I was going to ask you, which is whether it is still the request of TQM that the Board approve a 25 per cent common equity ratio.

MR. HEIDER: Yes. We have not amended the Application in front of the Board. However, I would say that we are prepared, and we would agree to an increase of the equity ratio. We have, in the past, requested that from the Board. We have discussed the matter several times. And we still feel that it would be appropriate to increase the equity ratio.

Our tolls Application does not presently suggest or request that the equity ratio be increased.

Q. Perhaps you can help me with that a bit, Mr. Heider. You are saying that you are not asking for it but that if the Board decides to give it to you, that is okay with you?

MR. HEIDER: Definitely.

Q. And if the Board decides to give it to you, when you would like them to give it to you is in October of 1994.

18 TQM Panel N
cr.-ex. (Yates)

Right?

MR. HEIDER: Yes, sir -- when the Company's refinancing will be taking place. That is not to say that we couldn't implement a 30 per cent equity ratio, for example, starting in the near future.

We do think, however, that the refinancing is an opportune time to change, to modify the capital structure.

Q. Since you appear to be more than willing to accept the largesse of the Board if it is forthcoming, perhaps we should talk about this a bit more.

The October 1994 date is a date which you have chosen because it is a date when you are going to be required to do some refinancing.

Is that right?

MR. HEIDER: Yes.

Q. And you comment in your Response to Information Request No. 50 that you reiterate the views that were expressed by TQM in its Response to RH-2-88, NEB Information Request No. 1, Question 20(c).

MR. HEIDER: Yes.

Q. And that is two cases ago. Correct?

MR. HEIDER: Yes.

Q. And in that case you were actually asking for approval of a 30 per cent common equity level.

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Yes.

MR. HEIDER: That is right. We were asking to implement the 30 per cent equity ratio on a specific date, I believe.

It did not give an average of 30 per cent for the particular year in question, if I am not mistaken. I think it was the refinancing of 1990, and that raised the equity ratio above the 25 per cent, but did not average 30 per cent for the year.

So you could say that we were asking for a 30 per cent equity ratio at a point in time inside of the 1990 Test Year. That is my recollection.

Q. Do you have with you the Response to which you refer in your Response to Question 50? I am referring here to the Response to Question 20(c) in the RH-2-88 Hearing.

MR. HEIDER: Yes, I do.

Q. This is the one that you liked so much you thought the Board should look at it again. Right?

MR. HEIDER: I guess so, yes. Basically, Mr. Yates, I believe that the comments that were made then are still

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TQM Panel No. 1
cr-ex (Yates)

applicable today.

Q. The copy that I have is of all of Question 20 and Response to Question 20.

Is that what you have in front of you.

MR. HEIDER: Yes, I do.

Q. The first question asked by the Board in Question 20 was an indication as to what year the Company expects to have an income tax provision in its approved Cost of Service.

Right?

MR. HEIDER: Yes.

Q. And your expectation was for the year 1991?

MR. HEIDER: Yes.

Q. And did that in fact come to pass?

MR. HEIDER: Yes.

Q. The second question is for an estimate of the income tax provision. Correct?

MR. HEIDER: Yes.

Q. And your Response then was that, in 1991, when you expected that the income tax provision would begin, the rate of income tax would be just over 44 per cent.

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TQM Panel No. 1
cr-ex (Yates)

MR. HEIDER: That is correct.

Q. Was that in fact the rate that related to the income tax provision when it did occur in 1991?

MR. HEIDER: Mr. Laforge...?

MR. LAFORGE: Yes, that is approximately the income tax rate, Mr. Yates.

MR. HEIDER: Approximately.

Q. And is that still approximately the income tax rate?

MR. LAFORGE: Yes, it is.

Q. Mr. Heider, what you had indicated to me earlier was that the reasons which you set out in Response 20(c) you think are equally applicable today in respect of the validity, in your view, of a 30 per cent common equity ratio?

MR. HEIDER: That is correct.

Q. Are there any new arguments that you want to put forward today, apart from those that appear in 20(c)?

MR. HEIDER: At the moment, I think that our answer to Question No. 20, and this year's Answer to Question No. 50, contain all of the reasons that we can think of to justify such an increase.

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Q. The fact is that in the RH-2-88 Decision, the National Energy Board declined to increase the common equity ratio from 25 to 30 per cent.

Correct?

MR. HEIDER: Unfortunately, yes.

Q. I suppose that depends on your perspective.

MR. HEIDER: Pardon me?

Q. Whether it is "unfortunate" or not might depend on your perspective.

MR. HEIDER: Yes.

Q. One of the reasons why the Board declined to grant the requested increase in the common equity ratio was that it was not convinced by the evidence that an increase in the equity ratio was required for the Company to access capital markets at reasonable terms.

Do you remember that?

MR. HEIDER: Yes, I recall that.

Q. The Board also indicated that it was not persuaded that such an increase would be cost-effective from the perspective of the tollpayer.

Do you recall that?

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MR. HEIDER: Yes, I do.

Q. One of the positions which was

taken at the time that this was discussed in the RH-2-88 proceeding -- and this position was taken by Dr. Waters on behalf of the CPA, as it then was -- was that since TQM's rate base was expected to decline, any future debt refinancing would be smaller than the maturing issues.

Do you recall that?

MR. HEIDER: The total debt of the Company naturally is declining. That does not mean that some of the refinancements that would have to be made are not significant from time to time. Some are greater than others. The expiry date varies between issues. But in total, the debt does decline.

Q. So if we are looking at it on a total basis, the debt which will be subject to future refinancing would be smaller than the maturing debt, simply because the debt, overall, is declining. Yes?

MR. HEIDER: The total debt should be smaller, yes. You realize we do not usually refinance the total debt all at once.

Q. I understand.

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Can you help me, Mr. Heider, as to why you would refinance a maturing debt issue at a level larger than the amount of the maturing issue?

MR. HEIDER: In 1994, for example, we have two issues that are maturing simultaneously, the issue that was refinanced in 1990 and an earlier issue. So that the amount that we are looking at refinancing in 1994 is greater than what we refinanced in 1990.

That is the comment that I wish to make: you are not necessarily refinancing a smaller amount at a particular point in time than you did two years ago or five years ago.

Q. But you are going to be refinancing a smaller amount than the, can I call it, "face value" of the maturing issues in 1994?

MR. HEIDER: We will be refinancing

less than the sum of those two issues, yes.

Q. When the Board made reference to its lack of persuasion that the increase in the common equity ratio would be cost-effective from the perspective of the tollpayer, do you understand that to have been a reference to the

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fact that the cost of service would be higher under a 30 per cent equity scenario than under a 25 per cent equity scenario?

MR. HEIDER: That is my understanding of what the Board meant by that comment.

Q. In fact, what the Board cites in its Decision is that TQM's calculations in the RH-2-88 Decision showed that, under a 30 per cent equity scenario, the cost of service would in fact be higher than under the 25 per cent equity scenario.

Correct?

MR. HEIDER: Yes. In answer to Question 50 of that Hearing, we did analyze the effects on the cost of service from year 1989 to year 2008.

There is one difficulty in making an assessment ---

Q. I am sorry, Mr. Heider. Before you give the explanation, did you say that what you have analyzed is the effect on the cost of service to the year 2008?

MR. HEIDER: Yes.

Q. Could you tell me where that appears in the Response?

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MR. HEIDER: That is Schedule 50 in the 1988 case.

MR. YATES: I am sorry. I thought you were referring to your Response to Information Request 50 in this case.

MR. HEIDER: I was actually answering your question, saying that we had analyzed it. And we did.

The problem, at a particular point in time, in trying to assess what the total impact of modifying the equity ratio at a particular point in time is that all of the changes that will flow out of this modification are difficult to assess.

For example, the actual negotiation for refinancing, the actual rates that will be received by the Company, in the context of interest rate changes through time. Interest rates can go from 6 per cent today to 20 per cent in five years.

The impact naturally will be much different from what you did today, in five years, if the interest rate situation has changed completely.

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The same thing with return on equity, which is definitely, I would think, affected by a higher equity ratio.

All of these variables are very difficult, and you practically have to create a certain scenario that would show that there is no benefit; you could create a scenario that would show there is a benefit on cost of service.

We found that it was very difficult, at a particular point in time, to try to forecast, over the next 20 years, what the impact would be of the change, and also that we could demonstrate the benefits that could result from a higher equity ratio.

One thing that seemed clear to us is that as the rate base is declining, as the equity portion in absolute dollars -- therefore, the profits in absolute dollars -- diminished with time, the absolute coverage for any emergencies or disasters of some sort, in either our forecast, or whatever, will be rather limited. There, again, we may even face difficulty in actually accessing the financing market.

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Those are my comments.

Q. But what the Board asked you for in Question 50(a) is a detailed, quantitative

analysis of how TQM's cost of service would change by increasing the deemed common equity ratio from 25 to 30 per cent.

I think what you have just told us is that it is very difficult to provide a response to that over time because of the variables which may occur over time.

Do I understand you correctly?

MR. HEIDER: That is correct.

In this particular Question, we were addressing 1993 and 1994, and there it is a little easier to see what the change could be, especially in 1994. For 1993 we did not think, with a deemed rate base, it would flow very well into the cost of service to increase the equity ratio to 30 per cent.

Q. Is Schedule 50.A.1 an illustration or a calculation of what you would consider to be the impact of increasing the common equity ratio from 25 to 30 in October of 1994?

MR. HEIDER: That is correct.

Q. And can we tell from Schedule

50.A.1 what the dollar impact of doing that would be on the cost of service, or not?

MR. HEIDER: On Schedule 50.A.2 you would find the impact on the cost of service.

Q. This is an impact on the cost of service of three months of 30 per cent common equity.

Is that right?

MR. HEIDER: Yes, Mr. Yates.

Q. What I would like to try and do is understand what the annual impact would be on the cost of service.

I do not know whether this is your area, Mr. Heider, or whether Mr. Laforge is the "numbers" man.

But let me see if I can understand this from Schedule 50.A.1.

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I gather from the bottom of that page that the effect of going from a 25 per cent to a 30 per cent equity would, in your view, be a savings of 25 basis points in the cost of debt.

Is that right?

MR. LAFORGE: That is an assumption that we work with, Mr. Yates.

Q. And it is the same assumption that you worked with in the 1988 case, as I recall?

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MR. LAFORGE: That is exactly right, yes.

Q. And the total debt that would be affected, on this schedule at least, is the Series "E" and Series "F" debt, which total \$115 million.

Right?

MR. LAFORGE: Under a 30 per cent equity, yes.

Q. Am I correct in thinking, then, that in a year you would save 25 basis points on the \$115 million?

MR. LAFORGE: Based on the assumption, you could say that, yes.

Q. Which is just a little bit less than \$300,000. Correct?

MR. LAFORGE: Subject to check, yes.

Q. \$287,500. All right?

The total capitalization from line 6 on the same table is \$309,589,000. Right?

MR. LAFORGE: Yes.

Q. So we call that \$310 million, for purposes of this simplistic example.

As I understand it, what you would

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want is to have an increase in equity which would be equal to 5 per cent of that total

capitalization.

Is that correct?

MR. LAFORGE: That is exactly right, yes.

Q. Which would amount to, by my numbers, \$15 1/2 million.

Will you accept that, subject to check?

MR. LAFORGE: Subject to check, I do, yes.

Q. What you would want, then -- "you" being TQM -- is 13 1/2 per cent on that extra \$15 1/2 million of equity.

Right?

MR. HEIDER: One thing, Mr. Yates: we did not amend the return on equity as it applies to the whole year for the change that would only take place for the end of the year.

Q. I take your point. What I am trying to do is arrive at what a ballpark figure would be for the cost of this in the year following the change from 25 to 30 per cent.

I am taking it as an assumption here

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that the 13 1/2 per cent would continue.

Perhaps you can accept that assumption, for the purposes of this discussion.

MR. HEIDER: Just to make a point here, in 1988 we did suggest that there would be a reduction on the return on equity due to modification from 25 to 30 per cent of the equity ratio. But we will accept your assumption that it stays the same, if you like, for now.

Q. Would my understanding be correct, then, that if we accept this assumption of 13 1/2 per cent, that would be, roughly speaking, about 3.7 percentage points higher than the cost rate for the debt?

MR. LAFORGE: I am sorry, could you

repeat your question? We are having a hard time hearing you, Mr. Yates. We have a fan in the back of us that is very noisy.

Q. I will stop looking at you and start looking at the microphone.

What I was seeking your agreement on, Mr. Laforge, was whether the 13 1/2 per cent equity return would be, roughly speaking, about

3.7 percentage points higher than the cost rate for the debt, which is in respect to the \$15 1/2 million which would otherwise be raised.

We are ignoring the tax effect for the moment.

MR. LAFORGE: Subject to check, I can accept that, yes.

Q. How I got there was that I was looking at the debt rate being about 9.8 per cent, which would be a weighted average of the Series "E" and Series "F" down at the bottom of the table.

All right?

MR. LAFORGE: Yes.

Q. So we are 3.7 percentage points higher than that.

If that were so, the additional cost of the equity would be about \$57,000.

Do you agree with that?

MR. LAFORGE: Subject to check, yes.

Q. Would you agree that we also need to consider the fact that the additional \$15 1/2 million in common equity involves a payment of income tax?

MR. LAFORGE: Yes, it does.

Q. By contrast, there is no tax effect on the debt?

MR. LAFORGE: That is true.

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Q. Would you then agree that a 13 1/2 per cent after-tax equity return would require approximately 10 percentage points to be added for tax?

MR. LAFORGE: Yes, I would agree.

Q. And that falls out of the approximately 44 per cent tax rate that we talked about a few moments ago.

Right?

MR. LAFORGE: Yes, approximately. It is 43.79 I think. But I will accept 44 per cent, yes.

Q. Am I correct, then, that the additional cost of the new equity would total about \$1.6 million?

MR. LAFORGE: I will accept this, subject to check, yes.

Q. And against that we would be comparing the savings in the debt costs of 25 basis points on the \$115 million, or approximately the \$300,000 figure we started with.

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Do you remember that?

MR. LAFORGE: Yes.

Q. Am I correct then in thinking, in this scenario, that the tollpayers would pay approximately \$1.3 million more in that year if TQM were granted a 30 per cent common equity ratio?

MR. LAFORGE: With all of the assumptions that you make, yes, I agree.

But one thing is put in question here -- and I think that we have mentioned that also in the previous hearing -- is that the equity return, you have a control on that which is more frequent than if you go with the long-term debt.

For example, if you take the long-term debt for ten years, you are going to

have this rate for ten years. If the equity, for example, goes up substantially three years from now, then it could be favourable to go with an equity of 30 per cent. It could also decrease the cost of service.

It depends on the assumption that you are using, actually. But you have more control on the equity rate than you do on the long-term

debt. When it is fixed, it is good for 10 years, or 20 years, or whatever.

Q. When you say you have "more control on the equity rate", you mean that it comes before this Board more frequently than the long-term debt matures?

MR. LAFORGE: That is right, yes.

Q. Mr. Heider, I think you were raising this issue a few moments ago when we started to talk about this. You indicated that if the common equity ratio went from 25 to 30, then you would expect ---

I should not phrase it that way.

The evidence that you put in in the previous case was that if the common equity went from 25 to 30, then the equity return level would be reduced.

Right?

MR. HEIDER: We would expect that what is referred to as our "financial risk" would be diminished.

Q. Do you recall whether in the previous proceeding you put a number on the reduction in the required return on common equity if the common equity ratio went from 25

to 30?

MR. HEIDER: Yes, I believe we did, Mr. Yates.

Q. Do you remember what that number was?

MR. HEIDER: I recall 25 per cent.

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Q. 25 basis points, do you mean?

MR. HEIDER: 25 basis points.

Q. And is that what you would expect now, if the common equity ratio was increased from 25 to 30 per cent?

MR. HEIDER: I have really not reviewed it presently. If anything, it might be between 25 and 50 basis points.

I believe the financial environment has fluctuated greatly, and is still fluctuating greatly, and there might be an increase in the differential with respect to financial risk that might result in a greater difference, due to a higher equity ratio, than in 1988. But really we have not reviewed it carefully.

Q. We started this discussion a few moments ago with your position -- which, as I understood it, was that you are not asking for an increase in the common equity ratio from 25

to 30 but that you would be happy to accept it if the Board gave it to you.

Right?

MR. HEIDER: Yes.

Q. If the Board felt inclined to give you that increase in the common equity ratio, how much would you reduce your requested return on common equity by?

MR. HEIDER: I do not know.

Q. Is your best estimate today the 25 to 50 basis points that you mentioned a few moments ago?

MR. HEIDER: Yes.

Q. Would you agree with me, Mr. Heider, that what the Board grants to TQM, or to any utility that is subject to National Energy Board regulation, is the opportunity to earn an allowed return?

MR. HEIDER: Yes, an opportunity to earn an allowed return, and predicated, I believe, on being able to recover its costs.

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Q. What the Board does not do is guarantee a return of a certain level.

Right?

MR. HEIDER: That is correct.

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Q. And each National Energy Board Decision relating to TQM has determined a return on equity that this Board believes is just and reasonable, and TQM is given the opportunity to earn that level of return on equity.

Correct?

MR. HEIDER: That is correct.

Q. Can we look for a moment at the Response to the Board's Information Request No. 58, which is part of Exhibit B-19.

Do you have that, Mr. Heider?

MR. HEIDER: Yes, I do.

Q. This is a question which relates again to the Direct Testimony of Dr. Morin, and also to the Response to a CAPP Information Request. It specifically asks for further information on the return on equity values for sample companies.

Right?

MR. HEIDER: Yes.

Q. What it seeks, first, is a schedule showing TQM's Utility approved and actual ROE for 1983 to 1991?

MR. HEIDER: That is correct.

Q. And part of the Response is a

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graph, which is Schedule 58.B.

Correct?

MR. HEIDER: Yes, that is correct, Mr. Yates.

Q. Is this a graph that was prepared by Dr. Morin, or by TQM?

MR. HEIDER: That was prepared by TQM, and verified by Dr. Morin.

Q. What the graph shows, essentially, are three lines, one of which is the TQM actual return, one of which is the TQM approved return, and one of which is the return of companies included in the Response to CAPP Question No. 6.

MR. HEIDER: That is correct.

Q. And the companies to which CAPP Question No. 6 relates are both utilities and non-utilities. Right?

They are the companies in Dr. Morin's RAM-3 exhibit.

MR. HEIDER: You must be right, yes.

Q. Am I correct that from this graph, we can see that TQM's allowed return, which is represented by the line with the squares on it,

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is systematically higher than the returns in Dr. Morin's sample referred to in CAPP Question No. 6, and that is the line with the stars on it?

MR. HEIDER: That is correct, Mr. Yates.

Q. And the achieved return on equity of TQM is shown to be higher than the allowed return in 1983 and 1984. Yes?

MR. HEIDER: Yes.

Q. And it is shown to be lower than the allowed return in the years thereafter?

MR. HEIDER: That is correct.

Q. Am I correct that 1984 was when the National Energy Board decided to disallow certain amounts that were proposed for inclusion in the TQM cost of service?

MR. HEIDER: I do not recall the date exactly, but I believe so.

Q. I am sorry, I did not hear you.

MR. HEIDER: I believe it was 1984,
yes.

Q. Do you remember, Mr. Heider, how
much in total was decided by this Board to be
not recoverable by TQM?

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MR. LAFORGE: Off of the top of my
head, I would say that it is approximately
\$15,053,000, plus a reduction in the rate base
for the tax benefit on sponsors' development
cost.

It was fairly detailed, but that is
the figure that I remember.

Q. Am I correct, Mr. Heider, that the
TQM toll methodology has been the same since it
was established in the first rate case?

MR. HEIDER: You are correct,
Mr. Yates.

Q. And under that methodology, the
National Energy Board determines the toll that
is, in its view, just and reasonable in respect
to the transmission services rendered by TQM,
and that entire toll was then charged to
TransCanada PipeLines.

Correct?

MR. HEIDER: It is practically all
charged to TransCanada PipeLines. There is a
portion that is credited to our total cost of
service as being revenue from transportation
services between points for Gaz Metropolitain.
There is some \$200,000 to \$300,000 I believe.

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With respect to those amounts, Gaz Metropolitain
is charged directly by TQM. Everything else is
charged to TransCanada PipeLines.

Q. And TransCanada then pays it on a
monthly basis?

MR. HEIDER: Yes.

Q. The charges by TQM to TransCanada
are, again upon approval by this Board, included
in TransCanada's cost of service as a component
of what is called Transmission by Others?

MR. HEIDER: That is correct.

Q. And as a component of TransCanada's tolls, then the TQM costs are effectively paid by TransCanada's customers?

MR. HEIDER: By all shippers on the TransCanada-TQM system.

Q. Regardless of what volumes may be shipped on TQM?

MR. HEIDER: That is correct.

Q. And that is how it has been since the beginning of TQM? I think you told me that a moment ago.

MR. HEIDER: It is since the first Toll Application, yes.

You have to remember that initially

there was a cost of service procedure, rather than a monthly toll. This applied until the first toll case was completed, I believe.

MR. LAFORGE: Mr. Yates, the first Decision on the fixed toll that we have is starting July 1, 1983.

Q. And the first shipments for TQM are when?

MR. HEIDER: February of 1982.

Q. So in the interim period, you had a cost of service arrangement?

MR. HEIDER: That is correct.

Q. Bearing in mind the toll methodology, Mr. Heider, can you tell me why the TQM actual return on equity would be less than the authorized return on equity, as depicted in Schedule 58.B?

MR. HEIDER: Why it is less?

MR. YATES: Yes.

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MR. HEIDER: It is less because the rate base allowed for TQM does not include disallowed costs, for example, so that TQM's total capital structure exceeds the rate base.

As you know, TQM only has activity as a pipeline company. The total capital structure

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does not earn a return; only the deemed rate base portion. So the return on the total capital structure is less than the return approved for the rate base.

Q. What you are telling me is that the reason that TQM's actual return on equity is less than authorized relates to the fact that the Board disallowed certain expenses incurred by TQM?

MR. HEIDER: That is correct.

Q. Am I correct in thinking, then, that the only reason that the so-called "comparable" firms in Dr. Morin's sample averaged a return on equity greater than TQM is because of the fact that certain of TQM's expenditures were held by the Board to be -- to use the word that everybody hates -- "imprudent"?

MR. HEIDER: You will have to say, also, that those returns that are graphically represented here above the TQM actual return may also have "imprudent" expenses involved in them. Whether it is a utility, or an industry, or whatever, there are often investments that do not provide a return to various companies. So,

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to me, it is comparable.

Q. What we have in Schedule 58.B are three lines ---

MR. HEIDER: Mr. Yates, I would like to clarify something, also, and that is that there are other calculations that are made by the Board in adjusting our rate base, and therefore the return on rate base, which relate to the initial period of TQM, and they were referred to as "Sponsors' Development Costs".

Basically, there are various adjustments that are made which put TQM in a

position that, if it realized exactly the return approved on its rate base, it would not realize that return on the total equity in its capital structure.

I am sorry to have interrupted you.

Q. I am not quite sure that I understood the comment that you were making, Mr. Heider.

As I understand this graph, the difference between the TQM Approved line and the TQM Actual line is caused by the fact that the Board disallowed certain costs which were put forward by TQM for inclusion in its Rate Base?

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MR. HEIDER: That is the correction that I just made; that there are other items that also reduce the Rate Base.

Q. Other items that were disallowed by the Board, you mean?

MR. HEIDER: It is not a question of disallowing it; it is a question of accounting for the manner in which TQM was first financed.

Maybe Mr. Laforge could expand on it.

MR. LAFORGE: You referred to "imprudent" costs, Mr. Yates. What I would like to clarify is that we were talking before of costs that were disallowed in the amount of \$15,053,000. That is one thing. But there is also an accounting treatment that was done on sponsors' development costs that the partners have claimed income tax deductions on before TQM.

To make sure that TQM would not reflect additional return on those costs, the Board has decided to exclude these costs from the Rate Base. But it has nothing to do with the expenditure. It is just a treatment of the

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amounts.

Q. So the bottomline here then, Mr. Laforge, is that there are really two reasons for the difference between TQM Actual

and TQM Approved on this Schedule 58.B: One is disallowed costs -- and we will leave aside the word "imprudent". One is costs disallowed by the Board; and the other is the accounting treatment which you have just explained?

MR. LAFORGE: Yes.

Q. Do you have the Surveillance Report that was filed by TQM on the 14th of February, 1992?

MR. LAFORGE: Could you tell me what period this Surveillance Report was for?

MR. YATES: This is for 1991.

MR. LAFORGE: Yes, I do.

Q. What I would like you to explain to me, Mr. Laforge, is what appears on the third page of the Surveillance Report.

What I have in front of me is a document that is dated the 14th of February -- and it comes from your desk, Mr. Heider, and it is directed to the Secretary of the Board, and it includes a two-page attachment.

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Is that what you are looking at?

MR. LAFORGE: No, that is not what I am looking at.

MR. YATES: Let me show you what I am looking at.
--- (Document handed to witness/Document remis au témoin)

Q. What I have handed you, Mr. Laforge, is a copy of a letter dated February 14th and a two-page attachment, all of it en francais.

MR. LAFORGE: I recognize the Report.

Q. If you look at the second page of the attachment, we have, under heading "B", information for the previous period of 12 months. Correct?

MR. LAFORGE: We are referring to the Schedule E...?

Q. Schedule E(1).

MR. LAFORGE: Yes. This would be the result of the 12-month period ending December 31, 1991, yes.

Q. Perhaps I can just phrase it this way, Mr. Laforge: Can you explain for me the

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numbers which appear on the last line of the table in the box under the heading "B"?

MR. LAFORGE: To explain to you the last line, what we have there is the return on equity: the calculated actual amount of 14.44 per cent versus the Decision amount of 13.76 per cent.

Q. So that the actual return for 1991 was 14.44, as compared to the allowed amount in the Decision of 13.76 per cent?

MR. LAFORGE: The actual return, for the purpose of this Report, was 14.44 per cent, yes.

Q. And "for the purpose of this report" means what?

MR. LAFORGE: It means that it is calculated on the rate base and not calculated on the equity of the shareholders.

Q. So it is calculated on the amount allowed by the Board, setting aside amounts disallowed?

MR. LAFORGE: That is true.

Q. And that is why the 14.44 per cent is a number that is different from the 11.17 per cent which appears in Schedule 58.A in Exhibit

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B-19.

Do I understand that correctly now?

MR. LAFORGE: Yes. The 11.17 is the amount that you would calculate taking the profit on the average equity from the beginning and the end of the period. This is the fashion in which we usually calculate the return for the Company.

That is exactly the way the CBRS and DBRS report it also in their document that we filed in these proceedings under ---

I forget what question, but we filed that document in this proceeding. If you want to hang on with me, I will give you the Question. It was Question 45.

Q. I am sorry, Mr. Laforge, I was not following which one you were comparing to the CBRS and DBRS.

Is that the 14.44?

MR. LAFORGE: Comparing Schedule 58.A, the result that we have there as Actual being actually the profit on the average equity, which is the amount that I compare to the DBRS and CBRS reports.

Q. And that 11.17 is the amount that is graphically represented on Schedule 58.B, as we have discussed it over the last few minutes?

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MR. LAFORGE: Yes.

MR. YATES: I think I understand that now. Thank you very much. Thank you, gentlemen.

Those are my questions,
Mr. Chairman.

MR. MOREL: Next will be APMC,
Ms. Moreland, please.

CROSS-EXAMINATION BY MS. MORELAND:

Q. Gentlemen, I have one very brief follow-up question with respect to the discussion that you were having with Mr. Yates on Schedule 50.A.1 in Exhibit B-19.

You accepted, for the purpose of the analysis that Mr. Yates undertook with you, that the total capitalization that is shown at line 6 on this Schedule is \$310 million, roughly. He has rounded up \$309 million.

Correct?

MR. LAFORGE: We said "subject to

check", yes.

Q. I think that what you did, for the purposes of Schedule 50.A, was just agree that

you were prepared to have the \$309 million rounded up to \$310 million?

MR. LAFORGE: I am sorry, you are talking about rounding it up. Yes, no problem.

Q. If the 30 per cent common equity ratio were to be approved, the common equity would be \$93 million.

Is that right?

MR. LAFORGE: I said I would take it subject to check.

If your figure is the same as the one from Mr. Yates, my answer is the same.

Q. When you were having the discussion with Mr. Yates, you mentioned that in the event that the common equity ratio were increased to 30 per cent, the cost of equity might fall by, as I think your best estimate was, 25 to 50 basis points.

Is that right?

MR. HEIDER: That was my best estimate, yes.

Q. Can you agree with me, gentlemen -- subject to checking the mathematics -- that if the reduction in the return on equity is 25 basis points, the dollar amount of the after-tax

savings that one would be looking at is \$232,500?

What I have done there is taken 1/4 per cent of 1 per cent of the \$93 million.

MR. HEIDER: We can accept that.

Q. Then if we take the tax component into account, what we are looking at is a tax component of approximately \$182,000, given a tax rate of 44 per cent?

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TQM Panel No. 1
cr-ex (Moreland)

0054
TQM Panel No. 1
cr-ex (Moreland)

MR. HEIDER: That is acceptable.

Q. And finally, if the reduction in the cost rate on the return on equity were to go to 50 basis points, will you agree with me that the dollar reduction that we have just talked about would be double those that we have just computed?

MR. HEIDER: Yes.

Q. Both for the after-tax and the tax component?

MR. HEIDER: Yes, I believe so.

MS. MORELAND: Thank you, gentlemen.

Thank you, Mr. Chairman.

THE CHAIRMAN: Thank you.

Mr. Morel, please.

55

Me MOREL: Merci, monsieur le President. Je crois comprendre que le Procureur general du Quebec n'a pas de questions pour ces temoins. Donc, c'est a mon tour.

Bonjour, messieurs. Vous allez vite vous rendre compte que mes questions couvrent essentiellement les memes sujets que ceux couverts par maitre Yates. Donc, j'ai eu a modifier et/ou a eliminer certaines de mes propres questions.

Je vais commencer avec des questions relatives au refinancement de la dette a long terme de TQM qui est propose pour la fin de l'annee 1994. Si vous me le permettez, je vais poser mes questions en anglais puisqu'elles ont ete preparees a partir de la demande elle-meme, avec l'aide du personnel de l'Office qui m'a assiste, et ce, en anglais.

0056

TQM Panel No. 1
(Morel)

EXAMINATION BY MR. MOREL:

I would like to turn your attention to Exhibit B-18, and specifically your Response to the Board's Information Request No. 2, Question 52.

This Response pertains to how the estimated corporate issuance spreads were

derived for the proposed Series "E" and "F" bonds.

In your Response, you state:
"The Company obtained the estimates of corporate issuance spreads for its 1994 planned financing from ScotiaMcLeod..."

You then go on to add:

"ScotiaMcLeod is the broker who acted as underwriter for the Company's last bond issue. At that time, several brokers submitted bids to underwrite the issue and ScotiaMcLeod submitted the lowest bid."

When you refer here to the "last bond issue", are you referring to the last time TQM refinanced its long-term debt, or part of it, which was in 1990?

0057
TQM Panel No. 1
(Morel)

MR. LAFORGE: Yes, we are.

Q. Would you agree that the financial markets have changed since 1990?

MR. LAFORGE: Yes, I do.

Q. Has TQM requested from other brokers bids to underwrite the proposed issues?

MR. LAFORGE: Not the proposed issue. The Company has strictly obtained rates from ScotiaMcLeod.

The one thing that I would like to say is that, yes, the financial market has changed, but ScotiaMcLeod is still the leader in the bond issue. But we have not obtained bids at this time from other companies.

Q. When you say "at this time", do you propose to obtain other bids between now and the time of issue?

MR. LAFORGE: When we will do the issuance, in 1994, we will obtain bids from other brokers.

Mr. Morel, I should clarify something. It is not really a "bid". It is an indication that they give to us.

MR. MOREL: I appreciate that, thank you.

0058

TQM Panel No. 1
(Morel)

Q. I would ask you to turn now to Exhibit B-9 and your Response to the first Question in the Board's first Information Request, and more specifically to Schedule 1.B, which is part of your specific Response on how the forecasted rates of 10 per cent and 9.5 per cent for Series "E" and Series "F" bonds respectively were arrived at.

MR. LAFORGE: I am sorry, could you repeat your question.

MR. MOREL: I am not at the question yet.

MR. LAFORGE: You did not ask a question. That is why I did not understand!
--- (Laughter/Rires)

MR. MOREL: I am pointing you to Schedule 1.B.

MR. LAFORGE: I have Schedule 1.

MR. MOREL: Thank you.

Q. For Series "E", which is for \$90 million, it is expected to be a public issue with a term of ten years, and Series "F" is expected to be a private issue, with a term of five years.

Is that correct? That is my

0059
TQM Panel No. 1
(Morel)

understanding.

MR. LAFORGE: Just a little bit over ten years and a little bit over five years. It is actually 10.17 and 5.17. It goes from October to December.

Q. Series "E", the ten year, would be

When you say "a little over ten years", by how much?

MR. LAFORGE: Two months.

Q. And the Series "F"...?

MR. LAFORGE: Two months.

Q. Again, from Schedule 1.B it is shown that by using an independent forecast of

Canada Bonds for a 10-year expected yield and a 5-year expected yield, you used 8.54 and 8.16 per cent, respectively?

MR. LAFORGE: Yes.

Q. And then you proceeded to add the respective issuance spreads of 145 and 130 basis points, plus an adjustment for rounding?

MR. LAFORGE: Yes; and I get 10 and 9.50 per cent.

Q. And then you arrive at your forecasted rates.

0060
TQM Panel No. 1
(Morel)

If you could turn to Appendix B of the same Response and the attachment to the ScotiaMcLeod letter, which is entitled "Canadian Macroeconomic Short-Term Forecast and Analysis"...

MR. LAFORGE: Yes, I have that document.

Q. And if you could go to Table 24, which is the last page of Appendix B...

MR. LAFORGE: I have Table 24.

Q. Do you agree that the independent forecasts of Canada bonds that we have just talked about, for ten-year and five-year yields, were obtained from this Table?

MR. LAFORGE: Yes, they were.

Q. And can you also confirm that the rate that was used for Series "E", the ten-year bonds, was the ten-year-plus average rate for 1994?

MR. LAFORGE: The rate that was used for the ten-year and 17-month bonds is the line of "10-plus years".

Q. For 1994, obviously.

MR. LAFORGE: Obviously, yes.

Q. Would you agree that other term

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TQM Panel No. 1
(Morel)

bond yields are included in this "10-plus years"

forecasted rate? In the ten-plus-year forecasted rates, do you agree that included in this calculation would be bonds with longer periods?

MR. LAFORGE: We have ten years and over, yes, I would agree. There are bonds in there that are more than ten years, yes.

Q. More than ten years maturity, such as, 15, 20, 25, and perhaps up to 30 years?

MR. LAFORGE: I do not know what percentage of each is included in there, but there is a certain portion of 15 years I would think, yes.

Q. I was not getting at the percentage of the term of bonds over ten years.

MR. LAFORGE: There are some over ten years, yes.

Q. Since the term of the proposed bonds, Series "E", that you will issue, is very close to the 10-year term, do you not think it would have been preferable to use the five to ten years?

MR. LAFORGE: No, I do not think so. In the five-to-ten years, I could turn the

argument and say there are some with a term of five years in there.

MR. MOREL: Yes, I guess you could.

MR. LAFORGE: I am trying to get something that is representative. This one says ten years and over. So I picked up this one.

Q. So you preferred the rate that is the average of the longer term bonds, which could have terms up to 30 years, rather than the five to ten, which is the average of the five to ten year periods?

MR. LAFORGE: You are saying there are some of 30 years. I do not know that there are some of 30 years in there.

I can agree with you that there are some in there that are over ten years, but it does include the ten-year one.

0062
TQM Panel No. 1
(Morel)

Q. Mr. Laforge, do you think that a blended rate could be used, to be closer to a 10-year term bond -- a blended rate between the average of the two, the five-to-ten and the ten-plus?

MR. LAFORGE: The average of the two would probably -- well, it would be an average

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TQM Panel No. 1
(Morel)

of those two rates, actually.

Would it be more representative of a ten-year bond?

I do not know what percentage, in the five-to-ten years, are five years, for example.

Q. Thank you. I would like to move on to the short-term debt.

TQM has applied for cost rates associated with its forecast unfunded debt balances, of 6.5 per cent and 7.27 per cent for 1993 and 1994, respectively. These rates represent forecast average prime rates for the two Test Years, less 50 basis points for the duration of the present loan and are adjusted to prime rate thereafter.

Is that how you proceeded?

MR. LAFORGE: I missed what you said after "adjusted".

Q. Adjusted to the prime rate thereafter.

MR. LAFORGE: Yes.

Q. If you could take Exhibit B-9 again...

MR. LAFORGE: I have it.

Q. Under Appendix A you have included correspondence between TQM and Montreal Trust, dated 1st of September, 1992.

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TQM Panel No. 1
(Morel)

MR. LAFORGE: Yes.

Q. And as I understand it, your

current short-term loans are with Montreal Trust, at prime less 50 basis points.

Is that correct?

MR. LAFORGE: That is correct.

Q. In its letter, Montreal Trust goes on to inform you that it intends to increase or revise the rate up to the prime rate.

MR. LAFORGE: Well, they are not telling me that they are going to increase or revise the rate to the prime rate. What they are telling me is that when we renegotiate a loan, if we do it with them, at that time they would probably come up with a bid that would be at prime. But it is not a renewal or an addition to the present loan. The present loan will be at prime minus 1/2 until its maturity. Then when we renew, they believe that they will only be in a position to offer us the prime rate.

Q. Thank you. That was my understanding. Perhaps I did not express it as

well as I should have.

0065
TQM Panel No. 1
(Morel)

Mr. Laforge, does TQM have any indication that the Montreal Trust proposed rate of prime at renewal is a competitive rate?

MR. LAFORGE: Prime rate is certainly a competitive rate. I agree that it would be a competitive rate if we use prime.

Q. So prime less 50 basis points was a more competitive rate?

MR. LAFORGE: I agree with you. One of the things that we have to realize ---

You started by telling me that the financial market has substantially changed. That is one of the things that the person from Montreal Trust also explained to me.

The last loan that we had with Montreal Trust goes back to November 1990. At the time the conditions that Montreal Trust was operating under were different than what they are right now. At the time Montreal Trust did not have -- this is my understanding, by the way. At the time, Montreal Trust did not have to maintain a reserve but the Bank did. So

Montreal Trust had an edge on the Bank.

Also, the evaluation from

0066
TQM Panel No. 1
(Morel)

institutions like CBRS and the DBRS has been reduced for Montreal Trust, making it more expensive for them to borrow money on the market. So they had to lend it to people at a higher rate.

Another aspect is that people, I believe, in general, have a little more confidence right now in banks instead of trust companies. So instead of investing their money in their deposit account in a Trust, they will probably go to the Bank instead. So it makes it a little bit harder for the Trust to have access to this liquidity at this cheaper rate.

Those are all reasons that would substantiate why Montreal Trust cannot any more offer us a prime-minus-50-basis-point rate.

Q. Given the sums of money involved, does TQM intend to inquire from other financial institutions whether you could perhaps continue to get short-term financing at a rate lower than prime?

MR. LAFORGE: We will, definitely as I mentioned for the bonds. What we did in the last financing is we requested bids for a bond issue, and this is what we intend to do at the

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TQM Panel No. 1
(Morel)

next bond issue. We have also done the same thing for the loan. We requested bids from various Banks and Trust Companies. It is also our intention to do the same thing in 1994. But I will be honest with you, I am not expecting to have ---

Montreal Trust had the best rate that we could find last time, and I do not expect to have a better rate this time from somebody else.

Me. MOREL: Merci, messieurs.
Ceci complete mon interrogatoire.

Merci, monsieur le President.

EXAMINATION BY BOARD PANEL:

MR. PRIDDLE: Bonjour,
monsieur Laforge.

I would like to ask a question that relates to the subject-matter that maitre Morel has just been examining you on: namely, the expected interest cost of your refinancing, which must take place about two years from now.

The total amount of borrowing that you are looking at is approximately \$120 million.

Is that correct?--The \$91 million

plus \$30 million.

MR. LAFORGE: Actually, what we are refinancing is the Series A, of \$100 million, and the Series D, of \$55 million. Our plan is to refinance this with an issue of Series "E" for ten years, for \$90 million, and Series "F" for five years, for \$35 million; and the remaining \$30 million will be financed through a bank loan.

When I mention ten years and five years, I mean 10.17 years and 5.17 years.

MR. PRIDDLE: Thank you.

Mr. Laforge, if I understand correctly, you wish the Board, as a result of this present proceeding, to assume the interest rate that would be applicable to those placements, the interest rates of 10 per cent for the Series "E" and 9.5 per cent for the Series "F".

MR. LAFORGE: Yes, we do.

MR. PRIDDLE: Would you agree that there is some uncertainty about interest rate projections for two years from now?

MR. LAFORGE: Yes, I believe that.

MR. PRIDDLE: Could you indicate what you see as the margin of uncertainty?

Might the range be 100 basis points on each side of the 10 per cent and 9.5 per cent

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(Board Panel)

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TQM Panel No. 1
(Board Panel)

assumption?

MR. LAFORGE: I would like to be able to do that for you, Mr. Priddle, but...

I understand that if we are talking shorter periods, we are talking about prime rate, if you want.

In the last proceeding we thought that the prime rate would be 12 per cent for 1991 and 11 per cent for 1992. But as we all know, the prime rate fluctuated from a high of 12.75 per cent to a low of 6.25 per cent.

There is a lot of difference between those two amounts. It is 650 basis points.

I do not believe that we could recognize the same thing in the longer term financing. But I am afraid I cannot really give you an indication as to how much there would be in difference in 1994. There is definitely uncertainty in those rates, yes.

MR. PRIDDLE: Mr. Laforge, do you need the refinancing on October 23, 1994?

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TQM Panel No. 1
(Board Panel)

MR. LAFORGE: Yes, we do.

Q. For the total amount of \$155 million?

MR. LAFORGE: Yes, we do. On that day we have to repay the Series "A" and the Series "D".

MR. PRIDDLE: Let me explain what has been going through my mind.

The annual interest on the \$155 million at a rate of about 10 per cent would be, obviously, \$15.5 million; and the interest over the two months which would remain in the 1994 Toll Year would be perhaps \$2.8 million.

If the range of the possible in terms of interest rates were 100 basis points more or less than what you project here, there would be a few hundred thousand dollars which the Company would stand to lose, or to gain, as a result of our accepting a finite number now for the cost of that refinancing.

Do you agree with that?

MR. LAFORGE: Yes. There is definitely a risk on both sides, yes.

MR. PRIDDLE: But you have not approached this Application thinking that you

ought to protect yourselves or the tollpayers against that risk?

MR. LAFORGE: We have not mentioned anything in the Application saying that we would want to protect ourselves from those rates. It is not included in the Application, no.

MR. PRIDDLE: Even though it might amount to, say, \$400,000 that would be en jeu?

MR. LAFORGE: Yes. It is not included in the Application, but that does not mean that if we notice a few months before that the rates are substantially higher or substantially lower, we would not request an adjustment at the time. But right now it is not.

MR. PRIDDLE: Very well. Those are my questions. Thank you very much.

MR. LECLERC: I do not think this will be contentious, sir, but I think there is a little clarification needed.

RE-DIRECT EXAMINATION BY MR. LECLERC:

Q. In response to a question of Mr. Yates, I believe Mr. Heider, you said that the Company started to be on fixed toll rates in 1984, and then I believe that Mr. Laforge said

that the Board's Decision came down in July of 1983.

Which of those years is correct. I want to make sure there is no misunderstanding.

MR. HEIDER: My answer was that we were on fixed tolls after the first Rate Case, and the date that it was applicable from was pointed out by Mr. Laforge as being July 1983.

MR. LECLERC: Thank you. That is all, Mr. Chairman.

THE CHAIRMAN: Thank you,

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TQM Panel No. 1
(Board Panel)

0072
TQM Panel No. 1
re-dir (Leclerc)

R. Aucune correction. J'aurais cependant une mise a jour a apporter.

MR. LECLERC: For the purposes of cross-examination, I have no problem if from here on in it is conducted in English, so that everyone in the room can have the benefit of Dr. Morin's comments at the outset.

THE WITNESS: Mr. Chairman, it is a pleasure to appear before the Board one more time.

THE CHAIRMAN: We are happy to see you again, Dr. Morin. Ca nous fait plaisir de vous revoir. J'espere qu'on ne vous a pas trop brusque. On me dit que vous avez commence votre journee tot aujourd'hui.

LE TEMOIN: C'etait tres tot. J'ai commence a Las Vegas, enfin!
--- (Laughter/Rires)

LE TEMOIN: Ca donne toute une autre signification a ce qu'on va discuter aujourd'hui lorsqu'on va parler de risques!

LE PRESIDENT: Etiez-vous la pour etablir le risque des casinos?

Alors, poursuivez.

LE TEMOIN: C'est un plaisir pour moi de cooperer avec l'Office pour acclereler les debats.

0075
TQM Panel No. 2
in-ch (Leclerc)

The only opening comment that I have is that in view of the decrease in long-term interest rates that have occurred since June 1992, in view of those changes, I am formally updating my recommendation from 13 1/4 to 13 1/2 per cent down to 13 per cent to 13 1/4 per cent. In other words, I am lowering my recommendation by 25 basis points.

Had I done this in September, the decrease in my recommendation would have been even more significant; but I think that the trend in the decrease in interest rates was arrested in September 1992. Nevertheless, from June 1992 capital market conditions are such that it leaves me to modify my recommendation by 25 basis points.

This is the significant update that I wish to convey to the Board.

MR. LECLERC: Subject to that update, sir, do you accept your Evidence and your

Responses to the Information Request questions dealing with rate of return matters as your evidence in this Hearing?

A. Yes, sir, I do.

MR. LECLERC: The witness is

available for cross-examination, Mr. Chairman.

THE CHAIRMAN: Thank you.

Mr. Yates, please.

MR. YATES: Thank you,
Mr. Chairman.

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TQM Panel No. 2
in-ch (Leclerc)

CROSS-EXAMINATION BY MR. YATES:

Q. Dr. Morin, you say on page 7 that you have "few changes" from your 1990 Testimony.

Right?

A. That is correct -- few "structural" changes.

Q. You use the word "structural" to imply that there are changes in terms of the numbers and the recommendations. Is that what you mean?

A. That is correct. There are no drastic changes in methodologies; in terms of generic methodologies, anyway.

Q. And you use the same four generic tests as you used in 1990?

A. Yes, sir, I do.

Q. Those being Comparable Earnings, Discounted Cash Flow, Risk Premium, and Capital Asset Pricing Model?

0077
TQM Panel No. 2
cr-ex (Yates)

A. That is correct.

Q. And these are tests that you have used before various other tribunals in testimony on previous occasions?

A. Yes, sir. I have consistently used all of the methods available to estimate the cost of capital.

Q. You list on the third page the provincial tribunals before which you have testified.

Right?

A. Yes, sir.

Q. Do you remember how I was trying to help you edit your book the last couple of hearings?

A. Yes. I could still use some help in that regard -- although I am almost completed the opus.

Q. And you remember your undertaking to me about royalties, too. Do you not?

A. Yes, I do. You will receive a complimentary copy of the textbook.

MR. YATES: I will use it, I'm sure.

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TQM Panel No. 2
cr-ex (Yates)

THE WITNESS: Depending upon the outcome of your cross-examination.

Q. With respect to these various tribunals that you have testified before, and keeping my editorial bent in mind, on page 3 I take it the "Public Utilities Board of Alberta" and the "Alberta Public Utilities Board" are one and the same and that we should expunge one of those.

A. Yes, that is correct.

Q. And that the "New Brunswick Board of Public Utilities" is in fact the New Brunswick Board of Commissioners of Public Utilities?

A. I believe you are correct.

Q. And, similarly, the "Newfoundland Board of Public Utilities" is the Newfoundland Board of Public Utilities

Commissioners?

A. Yes, that is correct.

Q. And it is before each of those provincial and federal tribunals that you have put forward these various generic tests in the past?

A. Yes, I have presented testimony before these Boards. I prefer the expression

0079

TQM Panel No. 2

cr-ex (Yates)

"boards" and not "tribunals".

Q. Why?

A. Well, I do not view regulation as a murder trial; more as a forum to exchange views.

Q. You recall that when you appeared last for TQM before this Board, there was some extensive discussion about the methodologies that you utilized?

A. Yes, sir, I recall that.

Q. Did you review the transcript of your appearance in the last TQM case before your appearance here today?

A. Very briefly. I thought I was going to be doing that this afternoon and tonight.

Q. You do recall that it -- when I say "it", I am referring to your last appearance before this Board in respect to TQM -- was in fact your second appearance before the National Energy Board for Trans Quebec & Maritimes?

A. That is correct. I always have vivid recollections of your cross-examination, Mr. Yates.

Q. Is that because it advances the production of your new edition of your book?

0080

TQM Panel No. 2

cr-ex (Yates)

A. Yes, I believe it does.

Q. In 1990 you, as I understood it -- let me go back one step.

The first time you appeared for TQM was in 1988. Right?

A. Yes, sir.

Q. And the second time was in 1990?

A. Yes, sir.

Q. And in 1990 you added the Capital Asset Pricing Model and the Empirical Capital Asset Pricing Model to your previous tests of DCF, Comparable Earnings and Risk Premium.

Do I recollect that correctly?

A. Yes, sir.

Q. And the last time that you were here for TQM you indicated that you thought it was appropriate then to give more weight to market-based tests.

Do you recall that?

A. Yes, sir, I do.

Q. That means, at least as I recollect it, that you were giving more weight to market-based tests than to accounting-oriented tests.

Correct?

0081
TQM Panel No. 2
cr-ex (Yates)

A. That is correct. On my summary, on page 49, there are eight results that are summarized, from line 17 to line 23.

Q. Seven, you mean?

A. Seven. Six of those are market-oriented, and one of those is book or accounting-oriented, which gives you a pretty good idea of the weights that should be accorded to market versus accounting tests.

Q. And the one of the seven is the Comparable Earnings Test. Yes?

A. Yes, sir.

Q. Am I correct that the general method that you are adopting in this case is similar to the one that you used in the last two cases, which is to say that you do a number of tests; you then, to use your word, "truncate" the highest and lowest results, and then you present

both an average and a truncated average?

A. In this instance, I have presented the results in the form of ranges and mid points, as opposed to a simple mean or a simple truncated mean, because of the volatility in capital market conditions.

As I have told this Board several

0082
TQM Panel No. 2
cr-ex (Yates)

times, I do believe in the notion of a range in rate of return as an incentive device, number (1); and number (2), it accommodates the fact that some of the techniques are not scientifically precise to within two or three decimal points; also, because the capital market conditions are so volatile, a range is preferable for the Board to consider.

Q. Subject to that caveat, I take it that you agree with my description of your methodology.

A. Yes, I do.

Q. Do you recall that in the 1990 case we went through certain changes which you had made from the 1988 methodology?

A. Yes, I vaguely remember those.

Q. One of them being that you, in 1988, had used eleven results and, in 1990, you had used seven.

Do you recall that?

A. Yes, I do.

Q. What I would like to talk to you about right now is the difference between your methodology this year as compared to 1990.

Firstly, you still use Comparable

0083
TQM Panel No. 2
cr-ex (Yates)

Earnings. Right?

A. Yes, I do.

Q. And you still use the DCF?

A. Yes, sir, I do.

Q. And in 1990, as I understood it, you had three DCF Tests.

Do you recall that?

A. Yes, I do. I do this year also -- although I did reject the DCF results from the Energy Comparable Group, because it produced unreasonable results.

Q. In 1990 you had the three, which were Canadian Energy, Canadian Telco's and Canadian Low-Risk Industrials. Right?

A. Yes, sir.

Q. And this year, once you get to the Summary page at least, you only have two DCF Tests, one being Canadian Telco's and the other being the Canadian Industrials?

A. That is correct.

Q. And that is because you have, if I may say it, pre-truncated the Canadian Energy test?

A. The method produced unreasonable results.

0084
TQM Panel No. 2
cr-ex (Yates)

Q. You say that the results were unreasonably high and, therefore, in your view, unreliable?

A. Yes, sir.

Q. That is what you say at page 46. Right?

A. That is correct. On lines 7, 8 and 9, I mention the scarcity of companies in the sample and the very, very high and unreliable nature of those results.

Q. So what did you do? You thought this was going to be truncated anyway if it turned up on your Summary and so you pre-truncated it?

A. That is a good way of putting it.

Q. I think Alexander Haig would be proud of me.

I will try not to use the word

"pre-truncate" -- which I just made up a few minutes ago.

You still use the DCF Telco's.

Right?

A. Yes, I do.

Q. And you still use the DCF
Industrials?

0085
TQM Panel No. 2
cr-ex (Yates)

A. Yes, sir.

Q. And you have two risk premium studies in 1992. Right?

A. Yes, sir.

Q. Which is one more than you had in 1990?

A. That is correct. There is some added insight from the U.S. gas industry.

Q. In 1990, and again this year, you use the telephone utilities. Correct?

A. Yes, sir.

Q. Canadian telephone utilities?

A. Yes, I did.

Q. And this time around you have used the Canadian telephone utilities and you have added this "United States Gas Utilities" category.

Correct?

A. That is correct.

Q. In actual fact, this year you did three risk premium analyses, did you not, Dr. Morin?

A. Yes. The energy-based risk premium was discarded for the same reason that the DCF on the energy group was discarded -- or

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TQM Panel No. 2
cr-ex (Yates)

"pre-truncated" as you would put it.

Q. I like "discarded" better than "pre-truncated". We will use that.

You discarded it before you got to the truncation step of your process. Yes?

A. That is correct.

Q. There were two reasons, as I understand it, why you discarded that: one was that the results were too high; and the other was that the sample was too small, in your view.

Did I understand that correctly?

A. That is correct. That is discussed on page 24, in the bottom paragraph, where I note that the risk premium of 7 per cent was unreasonably high and also the sample was pretty heterogeneous and pretty small.

Q. And did that lead you to do the U.S. gas industry study?

A. Yes. And also the greater degree of integration between the Canadian and the U.S. capital markets in the last two years.

Q. The U.S. gas industry study is the totally new aspect of your testimony this time around.

Correct?

0087
TQM Panel No. 2
cr-ex (Yates)

A. Yes, it is. And it countervails some of the discomfort that a lot of people in Canada have expressed on the DCF methodology.

Q. Does it countervail your discomfort with the DCF methodology?

A. I am a little bit uncomfortable with the DCF method, as I point out in an Appendix to my Testimony, particularly in a very, very volatile capital market environment, and also when you have a very, very sharply upward-sloping yield curve, meaning that short-term rates are very, very much smaller than longer-term rates. The DCF tends to understate the results of the cost of capital in that circumstance.

Of course, it works the other way,

too. When the yield curve is downward-sloping, the DCF produces results that are too high.

Q. So generally you are not a DCF fan. Yes?

A. I am less of a fan of DCF. But if you had a gun at my head and asked me what my favourite method was, it would not be DCF.

Q. It would be the Empirical Capital Asset Pricing Model?

A. It would be some variation of the CAPM.

0088
TQM Panel No. 2
cr-ex (Yates)

Q. So you do the CAPM and the ECAPM in this testimony?

A. Yes, sir, I do.

Q. And if I had a gun at your head, would it be the ECAPM that would be the one that you would like the best?

A. No, I would weigh them equally.

Q. "Them" being the CAPM and the ECAPM?

A. Yes, that is correct. But I still believe that this Board should consider all relevant evidence before it.

Q. When you refer to "relevant evidence", are you referring to those tests that you have performed, other than the tests that you have discarded?

A. Yes.

Q. So the tests that you discarded you say are not relevant?

A. That is correct. Because it does produce results that are outside reasonable limits of probability.

Q. So the result of all of this, in 1992, is that you still have seven tests on your

0089
TQM Panel No. 2
cr-ex (Yates)

Summary on page 49, having discarded two as being

too high and having effectively replaced one DCF result with the U.S. Gas Utilities Risk Premium result?

A. Yes, sir, that is correct.

Q. Is the effect of that that the DCF Test -- notwithstanding that it is a market-oriented test -- is given less weight than the last time around?

A. That is correct. Had I included the results of the DCF applied to energy companies in the Summary on page 49 it would have, in practical terms, disappeared through the truncation process anyway.

Q. But ultimately, the DCF weight is less than the last time, because you only have two in there now, whereas you had three before.

Right?

A. In the purely arithmetic sense, yes.

Q. Is this not a purely arithmetic process that is shown on the "Summary of Results" on page 49, in the sense that you are doing an averaging and a truncated averaging?

A. I think it is anything but

0090
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cr-ex (Yates)

"purely" mechanical. I think these are the results. One has to apply judgment and qualify those results and apply them to the current environment, too.

Q. But you are not suggesting that the averaging process or the truncation process is the exercise of judgment, are you?

A. Not the pure computation of a mean or a truncated mean, no. That is purely methodological.

But the final recommendation is founded on judgment and on the results of those tests, both.

A good example of that is that, as you see, it is a range. If a utility has less risk than average, you would tend to support the lower end of the range. If a utility has higher risk than average, you would tend to support the

top end of the range.

So there is still room for judgment here.

Q. Higher than what kind of risk? Business risk? Financial risk?

A. Total risk. The investor is only concerned with total risk and not individual

pieces of risk.

0091
TQM Panel No. 2
cr-ex (Yates)

Q. The result of your changes this time around is also to ---

Perhaps I should phrase it this way: Another result of the changes in your methodology this time around is to give the Risk Premium Test or the Risk Premium method more weight than last time?

A. Yes, sir, effectively. I have essentially replaced one Risk Premium Test by another.

Q. But you actually have two Risk Premium Tests, where you used to have one. Right?

A. That is correct. Even though I show the results of the Energy Company Risk Premium Test, I do not include them in the Summary, because those results are unreliable.

Q. You discarded them because they were irrelevant?

A. No, they were too high and unreasonable.

Q. And therefore you considered them to be irrelevant.

I think that is what you told me.

A. I considered that no weight

should be placed on those results.

0092
TQM Panel No. 2
cr-ex (Yates)

Q. So in this "Summary of Results" on page 49, you have the range appearing here -- which is a change which you have already explained. It is the first time that you used the range. Yes?

A. That is correct.

Q. And then you have a midpoint, which is the last column on the "Summary of Results" table. Right?

A. Yes, sir.

Q. Having determined the midpoints, what you do, as I understand it, is to truncate the highest and lowest numbers. Right?

A. Yes, sir.

Q. And if we look at the "midpoint" column, we have seven numbers, starting with Comparable Earnings and going down to DCF Industrials; and the "average", which appears on the eighth line, is the average of those seven.

Yes?

A. Yes, sir.

Q. And the "truncated average" then is the average of five of the seven above numbers, being all of those except the highest and lowest?

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TQM Panel No. 2
cr-ex (Yates)

A. That is correct. You simply compute the mean by removing the low and the high estimates.

Q. And the "truncatees", if I can call them that, in this "midpoint" column are the DCF Telco's at the low end. Correct?

That is the first "truncatee"?

A. Yes, sir. The 12.82.

Q. And the "Risk Premium U.S. Gas" is at the high end, the 13.74?

A. That is correct.

Q. And so it gets truncated as well. Yes?

A. Yes, sir.

Q. And I think you mentioned a few moments ago that one of the reasons that you did this U.S. Gas Utilities Risk Premium Test was because there was -- as I think your phrase was --

some added insight from that?

A. Two reasons: Number (1), it gives the Board some additional insight on the risk premium technology; number (2), there is a greater degree of integration between the Canadian and the U.S. capital markets and economies in the last two years, for reasons that I discussed in my

Testimony.

0094
TQM Panel No. 2
cr-ex (Yates)

Q. But this "added insight" is truncated out, at least on the "midpoint" column?

A. As a practical matter, yes.

Q. One of the tests that you use, and which is the first test on this table, is the Comparable Earnings Test. Right?

A. Yes.

Q. As I understand your testimony, you did that for an 18-company industrial sample.

A. That is correct. A sample of low risk industrials.

Q. This is what you talk about at page 22?

A. That is correct. I describe the "risk filters", or how I arrive at a sample of low-risk industrials.

Q. Am I correct in understanding that your filters are different this year from the last time around?

A. I do not believe the spirit of the filtering process is any different, no.

Q. I did not ask you about the "spirit"; I was focusing on what I understood to be the sample in 1990, for Comparable Earnings

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TQM Panel No. 2
cr-ex (Yates)

purposes, being somewhat larger than the 18 that you used this time around.

A. The construction of the filter is the same. The companies, of course, that come out of the filter do differ.

If we were to redo the filter again today, possibly a different sample of companies would emerge. The economy is dynamic and fluid: companies drop out, others get deleted, others are restructured, other companies make the screening criteria.

So it is a very dynamic thing that changes from year to year.

Q. But the operation of the filter resulted in 18 companies this time as opposed to 27 companies last time. Right?

A. That is correct. We are steadily losing observations in the Canadian environment -- which is kind of disturbing -- clearly for reasons of restructuring and bankruptcies and acquisitions. The population is becoming smaller and smaller. It is becoming pretty tough to come up with a sizable sample of low-risk industrials in Canada -- a lot tougher than it used to be several years ago.

0096
TQM Panel No. 2
cr-ex (Yates)

Q. On page 22 of your Evidence you indicate that if you remove four of the 18 from your sample -- these being real estate and financial institutions -- then the average return on equity rises. Right?

A. That is correct. If you remove those companies that are the most dissimilar to utilities, in the sense that they are not capital-intensive -- they are financial institution types of companies -- the number becomes a little higher.

Some people do the same thing up front. They just simply disqualify from the sample any financial institution, which is quite acceptable.

Q. But what you do when you do this disqualification process is you use it to establish the range. Right?

A. Yes, sir, I do.

Q. And with all 18 in this sample, the range that you come up with on page 22 is 12.92 per cent?

I should not say the "range". The group of 18 low-risk companies are indicated to have experienced a mean return of 12.92. Right?

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TQM Panel No. 2
cr-ex (Yates)

A. That is correct. On line 12 of page 22, the pure Comparable Earnings result is 12.92.

Q. If you take out the four real estate companies and financial institutions, that is where you get the 13.36 figure on line 18. Yes?

A. Yes, sir.

Q. You think that is upwardly bias, though, the 13.36. Right?

A. Yes. Right in the next line, starting on line 18, I mention that there is a potential upward bias of these results to the extent that there is a profit decline in 1991 that is not reflected in the ten-year average.

Of course, that is no longer a speculation; that indeed did happen.

Q. Is the 12.92 upward biased too?

A. Yes, sir. Both of them. If you redo the current filter exactly the same way but you include 1991 results, the 12.92 that you see on line 12 becomes 12.78.

Do you want me to repeat that? On line 12, the pure Comparable Earnings result, if you include 1991 financial results, that average

0098
TQM Panel No. 2
cr-ex (Yates)

becomes 12.78.

Q. To get to this 12.78, Dr. Morin, do you eliminate the first year of your ten-year period?

A. That is correct. I simply move forward one year. I eliminate the starting point, which is 1981, and I move forward another year and I add 1991. So those would be the results for the period 1982 to 1991.

Q. The same companies?

A. No, sir. The same filter.

Q. What is the change in the companies? Who gets through the filter ---

Well, let me leave it at, "What is the change in the companies?"

A. A lot of the same companies survive. It is not exactly the same sample. If you were doing the same filter in exactly the same manner, the companies that emerge from that filter are slightly different than that set, in the same way that in 1990, you have a different set of companies than you have in 1992.

As you do redo the filter, the makeup, the composition of the group changes because of the dynamics of the Canadian economy.

0099

TQM Panel No. 2
cr-ex (Yates)

Q. When did you do this analysis that came up with the 12.78?

A. Approximately two weeks ago.

Q. Are you able to provide us with the documentation that supports the 12.78?

A. Yes, sir. I will gladly give you Exhibits RAM-2 and RAM-3, which are the exact clones of RAM-2 and RAM-3 in this Testimony, simply updated.

Q. Can you tell us today how many changes there are in the sample companies in your new study?

A. Yes, sir, I can. The surviving set of companies -- and we are talking industrials now. There are 17 companies ---

Let me go back one step.

Let's go to RAM-3, which is the guts of the Comparable Earnings Test.

In Exhibit RAM-3, Mr. Chairman, page 2 of 2, the first column of numbers is the ten-year average return on equity, and at the bottom you see the 12.92 that we are talking about.

If you replicate this exact process, you have 17 companies instead of 18 companies; and

0100

TQM Panel No. 2
cr-ex (Yates)

instead of 12.92, you have 12.78. And it looks to me like the vast majority of the companies survive

the screen again.

Q. How many do not?

A. Campbell Soup disappears and Canada Packers disappears, because both of these companies no longer exist.

Q. A good reason for disappearance, I guess.

A. CHUM is still there; CT is still there; Dover is still there.

Q. What happened to Canada Trust and Canadian General Investments?

A. Canada Trust remains; Canadian General Investments disappears; Dover remains; Gendis disappears; GSW disappears; Hawker Siddeley remains; Labatt and Loblaw disappear; National stays; Oshawa stays; Scott stays; UAP stays; United Corp. stays; and Weston disappears.

So there is a lot of survivorship in the sample, in other words.

Q. But eight out of the 18 did not survive?

A. Approximately. And one or two new ones appeared.

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TQM Panel No. 2
cr-ex (Yates)

But the important thing, Mr. Yates, is not to maintain the composition of the companies; it is to maintain the rigorous risk filtering screens that are applied. It is to do the same thing over and over again. That is the acid test, beyond this sample.

Q. You would need seven new ones then, I take it. If you started at 18 and lost 8, and ended up at 17, you have to add seven. Yes?

A. Yes. I have not done the exact computation, but maybe by tomorrow morning, if I give you the exhibits today, we can talk about it in more detail.

Q. All right, let's do that. Do you have the exhibits with you now?

A. Yes, I have the updated RAM-3. I will have to make some copies and give it to you after the break.

Q. Do you have an Updated RAM-2, as well?

A. Yes, it is the same thing. RAM-2 is the entire sample, including utilities; and RAM-3 is simply a segregation of that sample into a regulated group and an industrials group. So RAM-3 is the driver.

0102
TQM Panel No. 2
cr-ex (Yates)

Q. Did all of the utilities on page 1 of RAM-3 survive?

A. I believe they did. Let me verify.

The only one that disappeared is, obviously, Union Energy, since it no longer exists as the same entity that it did a year ago.

So you have the same sample minus Union Energy.

Q. So you now have 12?

A. That is correct. So the screen is pretty robust.

Q. Did anything happen to RAM-11 in this process?

A. Yes. RAM-11 is the same set of companies, for reasons of consistency, as was used in the Comparable Earnings Test. You do not want to change your sample. We are just performing another test, but on the same sample of companies. So the same would be true for RAM-11. And I have also those updated results.

Q. You have a new RAM-11?

A. An Updated RAM-11, yes, sir.

Q. Did Canadian General Investments get punted from Updated RAM-11?

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TQM Panel No. 2
cr-ex (Yates)

A. That is correct. Canadian General Investments is no longer in the sample for DCF purposes.

Q. And Gendis?

A. Gendis has also been discarded.

Q. Labatt...?

A. Discarded.

Q. Loblaw...?

A. Loblaw did not make the sample.

Q. That means discarded?

A. Excuse me?

Q. That means discarded?

A. Yes, sir.

Q. Weston...?

A. That has also disappeared.

Q. Any other companies?

A. No, I believe those were the same ones that we discussed earlier with the Comparable Earnings Test.

Q. Does RAM-11 still have 14 companies in it?

A. It now has 16 companies. If you will recall from my Testimony, for Canada Malting and Canada Packers we could not conduct a DCF test because these companies were no longer

0104
TQM Panel No. 2
cr-ex (Yates)

publicly-traded stocks.

Q. So you got rid of five and added seven in RAM-11. Is that right?

A. That is correct. The composition did change slightly.

Q. Are there other exhibits that you have done the same thing to, Dr. Morin?

A. The only other exhibits that were updated that do change with time would be the DCF analysis performed on Telco's, which is RAM-10, pages 1 and 2.

Obviously the companies remained the same here. We are simply using fresher stock price information.

Q. Do you have those for filing,
too?

A. Yes, sir. I will give them to
you.

Q. After we adjourn today?

A. Yes, sir.

Q. Let's go back to page 22 of your
Evidence as it has been filed so far. We were
talking about the 18 industrials and then the
truncation from that sample of four real estate
companies and financial institutions.

0105
TQM Panel No. 2
cr-ex (Yates)

Do you remember that?

A. Yes, sir, I do.

Q. And we were talking about the
upward bias in the numbers. That is what got us
launched on the 12.78 and the amended RAM-2 and
RAM-3. Right?

A. Yes. In June 1992, of course, I
did not know the extent of the bias, but I did
surmise or speculate on its magnitude. I thought
it would be about 40 basis points. I was a little
bit pessimistic on that bias. It turned out to be
more like 20 basis points.

Q. If we are dealing with the 40
that is actually in your Evidence, that is how you
get to the range of 12.52 to 12.96.

Right?

A. That is correct.

Q. And the lower end, the 12.52, is
all 18 companies; and the upper end, the 12.96, is
14 companies, adjusted for your 40 basis points,
being what you then thought was the upward bias.

Right?

A. Yes, sir.

Q. Then you put those results on to
page 49. Right?

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TQM Panel No. 2
cr-ex (Yates)

Perhaps I should say that you

"intended to put those results on to page 49".

A. It was a typographical error that was corrected in one of the replies to an Information Request.

On line 17, on page 49, the 13.36 should have been 12.96. The computation was nevertheless correct. It was a typographical error. So page 49, line 17, the 13.36 should have been 12.96. This was pointed out in answer to one of your interrogatories.

Q. It was actually in response to one of the Board's interrogatories, Dr. Morin.

I would ask you to get in front of you Question No. 23 from the Board, which is in Exhibit B-9.

A. Yes, I have it.

Q. You see that the request is to "provide a narrative explaining why the upper range of the Comparable Earnings results was not adjusted by the 40 basis points as was the lower end to reflect 1991 financial results".

A. Yes.

Q. And I take it from what you have said earlier that there was a typographical error

0107
TQM Panel No. 2
cr-ex (Yates)

on page 49 and that the number 12.96 should have been there?

A. That is correct.

Q. Now, the typographical error is in fact not corrected on the Response to Question 23. Is it?

A. No. I am formally correcting it now.

Q. So the "Comparable Earnings" line on the Response to Question 23 should say "12.52 to 12.96". Right?

A. That is correct.

Q. And the midpoint of that is not

in fact 12.94, is it? It is 12.74?

A. 12.74. Thank you, Mr. Yates.
Your royalty rate is steadily increasing here!

MR. YATES: Maybe I will get two
copies of the book.

Q. Let me see if I understand what
you have done here in this Response to Question
23.

With these two corrections, this
Response to Question 23 is really the corrected
version of the "Summary of Results" which was on
page 49.

0108
TQM Panel No. 2
cr-ex (Yates)

Right?

A. Yes.

Q. Am I correct that if we look at
the "midpoint" column now -- let me back up a
couple of steps here, to make sure that I have
this right.

Am I correct that what you have done
with this "Summary of Results" is that you have
calculated an average and a truncated average for
each column?

A. Yes, sir, that is correct.

Q. And if we look at the "midpoint"
column, we had an average which was of the seven
values shown in that column. Right?

A. Yes.

Q. And then you had a truncated
average, which was of five of those values shown
in that column, leaving aside the highest and the
lowest?

A. That is exact.

Q. The highest is the "Risk Premium
U.S. Gas". Right?

A. Yes.

Q. And the lowest -- until we made
this correction on the Comparable Earnings Test --

0109
TQM Panel No. 2

cr-ex (Yates)

was the DCF Telco's at 12.82?

A. That is correct.

Q. But now that we have corrected the Comparable Earnings number to 12.74, it is the one that gets truncated. Right?

A. That is correct.

Q. So that the effect of your truncation is to eliminate any weight whatsoever to the Comparable Earnings Test. Yes?

A. Which will please some pundits immensely. Yes, that is the mathematical result.

Q. Does it please you? Or does it give you heartburn?

A. It does not do anything for me. It is so close to the average that it really does not disturb me at all.

Q. In Column 1, you have done the same sort of process where you do the average of all seven values and then you do the truncated average of five values, having eliminated the highest and lowest. Right?

A. Yes.

Q. And the highest that you would truncate in the first column, which is the low end of your range, would be again the U.S. gas

0110
TQM Panel No. 2
cr-ex (Yates)

utilities?

A. That is correct. And the DCF Telco's.

Q. DCF Telco's is the lowest?

A. Yes.

Q. And in column (2) you do the same thing, except this is for the upper end of your range?

A. That is correct.

Q. By "the same thing", I mean that you follow the same process?

A. Yes. It is the same computation from column to column.

Q. But in the upper end of the range you get rid of or you truncate the Empirical Capital Asset Pricing Model as the highest. Yes?

A. Yes.

Q. And you truncate the Capital Asset Pricing Model as the lowest?

A. That is correct.

Q. Except if you did it with the right numbers for the Comparable Earnings Test, in which case the 12.96 that we put in at the top of the column would be the one that went?

A. With the amendment, that would

0111
TQM Panel No. 2
cr-ex (Yates)

be the effect. The Comparable Earnings result would disappear from the computation of the high end of the range.

Q. Do you have the correct numbers for the average and truncated average in the high end of your range column, or not?

A. No, I do not. Can you give them to me?

Q. I cannot do it that fast.

As I understand it, then, depending on which column you look at, you, through your truncation process, could eliminate four of your tests from the result.

Have I got that right?

A. Not really. You have to look at this table as a package deal.

Q. We can do that in a minute. I am trying to follow it through here.

In the first column -- the low end of your range -- you eliminate the risk premium of U.S. gas utilities and DCF Telco's; in the second column you would eliminate the Empirical Capital Asset Pricing Model and the Capital Asset Pricing Model, except with the correction that it is now the Comparable Earnings Test; and then in the

0112

TQM Panel No. 2
cr-ex (Yates)

final column, it would be the Comparable Earnings Test and the DCF Telco's.

Yes?

A. No, I believe for the midpoint, it is the "Risk Premium U.S." that is the highest.

Q. You are right, that is the highest one; and the Comparable Earnings Test is the lowest. Right?

A. That is correct. If you look column by column, that is the effect.

Q. And what happens to this with your amended exhibits that you were telling me about a few minutes ago?

A. In other words, if I were to replicate the answer to No. 23 with the new results?

Q. If you were to give the Summary on page 49 of your Evidence with the new results. It looks to me like Question No. 23 is kind of an interim step now.

A. That is correct. The bottomline -- if you want to get directly to your destination -- is that the 13.29, which is both the average and truncated average of all the results of all of my tests, is much closer to 13,

0113
TQM Panel No. 2
cr-ex (Yates)

which is the basis for my update when I was sworn in, when I decided to amend my recommendation to 13 per cent.

The grand average is much closer to 13. I think it is 13.03.

I will give you that tomorrow morning, or tonight, as well.

Q. What do you mean by the "grand average"?

A. The 13.29 that you see in the bottom right-hand corner labelled "Average" and the 13.29 that you see also under "Truncated Average", these numbers, with the new results, are 13.03 and 13.01; something of that magnitude. Let's just round it to 13.

Q. When you say "grand average", you mean average as opposed to truncated average.

Is that right?

A. Yes, sir.

Q. So what you will now provide is an updated summary of results to replace the one which appears on page 49 of your Testimony and which forms the basis of the downward adjustment in your recommendation to 13 to 13 1/4. Yes?

A. Yes. If you want me to provide

0114
TQM Panel No. 2
cr-ex (Yates)

it, I will provide it for you.

Q. I do want you to provide it, Dr. Morin.

We have talked about the changes in the Comparable Earnings sample and results, and we have talked about the changes in the DCF sample and results.

Do you have new results for your Capital Asset Pricing Model or Risk Premium or Empirical Capital Asset Pricing Model?

A. Yes, sir. That one is very straightforward.

Q. Is it as a result of the declining interest rates that you end up with different results for those?

A. Strictly because of that. If you go to page 49, and looking down at the Master Table ---

Q. This is the one entitled "Summary of Results"?

A. That is correct. If you look at Line 20 and Line 21, instead of using a long-term Canada yield of 9.0 per cent, I used a long-term Canada bond yield of 8.75 per cent -- which, incidentally, is what they are yielding today --

0115
TQM Panel No. 2
cr-ex (Yates)

and the net result is to lower the CAPM estimates by clearly 25 basis points.

The same thing occurs on Lines 18 and

19, where the Risk Premium results are lower by 25 basis points because TQM's borrowing cost, instead of being 10 1/4 per cent, is now in the order of 10.0 per cent. The net result is to lower the Risk Premium results by 25 basis points.

Q. Let me be sure that I understand what we are going to get here. We are going to get a new "Summary of Results", which you call the "Master Table" on page 49?

A. Yes. I will replicate the table on page 49 with the amended results.

Q. And we are going to get a new
RAM-2. Yes?

A. That is correct, which drives
RAM-3.

Q. So we are getting a new RAM-3.
And we are indicating a new RAM-10 and a new
RAM-11. Yes?

A. That is correct.

Q. Anything else?

A. No. Everything else remains the
same.

0116
TQM Panel No. 2
cr-ex (Yates)

Q. Am I correct in understanding then that where we really are is where you thought you might be when you wrote the answer on page 50, in that we have substantial changes that have occurred between June 1992 and you are going to provide us with a formal update which will be comprised of these various summaries and schedules which you are going to file for us.

Is that right?

A. I will gladly do that for you. I will give you the summary table and the exhibits that you and I agreed do change with the updated results.

--- UNDERTAKING (TQM Panel No. 2):

To provide update "Summary of Results" to replace that which appears at page 49 of Prepared Direct Testimony, as well as updated RAM Exhibits 2, 3, 10, and 11.

MR. YATES:

Q. Do you have your response to the Information Request of the Canadian Association of Petroleum Producers?

A. Number...?

Q. The exhibit is number B-13. I

0117
TQM Panel No. 2
cr-ex (Yates)

suppose I should not call it your Response. It is the Response of TQM. But most of it I think is your material.

Do you have that?

A. Not yet. What number, Mr. Yates?

MR. YATES: Question 10.3.

A. Yes, I have that.

Q. This is where CAPP asked you to provide the dividends per share and earnings per share data for each company on a year-by-year basis?

A. Yes. Those were the tables that were provided.

Q. Mr. Leclerc spoke about the Response to Question 10.3 earlier. That was before you arrived in the Hearing Room, Dr. Morin. He indicated that on the page which shows exhibit RAM-11 and dividends and then earnings per share, on some of the copies the 1991 numbers for dividends, 1977 to 1991, were left out, and on others they were not.

Does your copy that you have in front of you have the 1991 numbers on it?

A. Yes, it does. You mean because

0118
TQM Panel No. 2
cr-ex (Yates)

of the photocopying?

Q. I don't know. The copy which I had did not have it on there. So I guess I was one of the unlucky ones.

You have one that has a column "1991", the top number of which is \$35.28. Yes?

A. I have the response to 10.3, the second page. That is correct, the upper number is indeed 35.25. I have that.

Q. This relates to Exhibit RAM-11.
Yes?

A. Yes, it does.

Q. Since you are revising RAM-11, will you be revising this Response as well?

A. No, sir. These are the raw dividend numbers.

Q. The question related to ---

A. But Canadian General Investments does not make the new filter.

Q. That is what I was going to ask you about. We have been talking about the changes to RAM-10 and RAM-11. This question No. 10 from CAPP related to Exhibits RAM-9, 10 and 11.

I am presuming that if you change the exhibits, you are going to change the numbers

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which support the exhibits which are in your Testimony.

Is that presumption correct?

A. Not quite correct.

Q. What is correct?

A. The growth rates that are employed in my DCF Tests are drawn directly from FRI information services, which in turn depends on the Financial Post database. I did not compute the growth rates with the raw dividends or the raw earnings per share. That was already performed by FRI. I extracted the growth numbers directly. So I did not need those raw dividends numbers that you and I are talking about right now.

But clearly, if the membership of the low industrial group changes, that will correspondingly change the course of the response to that exhibit.

Q. You have a number of companies that were in the original RAM-11 ---

A. That is correct.

Q. -- that are no longer there, and you have a number of companies that were not in the original RAM-11 that are there in the new one. Yes?

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A. That is correct. And I will change that Response correspondingly.

Q. Thank you.

On this line for Canadian General Investments, do the numbers look a little strange to you?

A. Yes, they do. They look very, very strange.

Q. The strangeness starts in 1984, when the dividends of 1983 of \$2.99 go, in 1984, to \$27.35. Yes?

A. Yes. Very strange.

Q. Do you have an explanation for this, or not?

A. No. I would have to ask the Financial Post database to see if there is a discrepancy in their numbers. But I did not use those numbers. I used the raw growth rates that were published by FRI.

Q. But in any event, Canadian General Investments is one of the ones that gets punted from your new RAM-11. Yes?

A. Yes. And that would appear to be fortunate.

Q. Let's talk about the Capital

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Asset Pricing Model for a moment, Dr. Morin. You talk about this at pages 28 and following in your Testimony.

A. Yes. The best place to see it is on top of page 29, with that box there.

Q. You talk about this CAPM not only in your Evidence but in your book. Right?

A. Yes. I do talk fairly

extensively about CAPM, yes. Most textbooks in finance devote extensive discussion to this paradigm of modern finance.

It is sort of like "perfect competition" in economics.

Q. You mean you assume the assumable and then analyze it?

A. The problem with economists is that they assume 99 per cent of the problem away, as we all know.

Unfortunately, in finance, and in these proceedings, we do have to put some reality and some numbers and practicality into the implementation of those models.

Q. When you are talking about the CAPM in your book, you talk about the fact that it dwindled in popularity after 1981. Right?

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A. Yes. It seems to wane in and out of popularity, depending on the answers that it produces.

I recall in 1981 and 1982, when the risk-free rate -- in other words, the long-term bond yield -- was very, very high, it did provide unreasonably high estimates.

Q. That is what you say in your book. Right? You say that it has "dwindled in popularity partly because it yielded unreasonable estimates of equity costs"?

A. That is also correct.

Q. I am looking at page 197, if you are able to follow it.

A. I remember the book very well.

Q. You have it memorized.

Essentially, it dwindled in popularity because the results were such that some analysts would do what you did with certain of your analyses in this case, they would discard it as being unreasonable. Yes?

A. Yes. And that, in turn, stemmed from the fact that people were using the wrong risk-free rate proxy in the model. They were

using short-term treasury yields as a proxy for

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the risk-free rate.

If you will recall, in 1980, 1981 and 1982, the short-term rates were astronomical, which in turn produced very, very high estimates of equity costs.

Since 1984, practitioners and academics have had a tendency to use long-term rates -- which are more stable, which are less volatile -- as proxies for the risk-free rate, and the results of the CAPM are much more reasonable since.

Q. When you talked about the dwindling popularity, you said it was also partly in response to the "academic community's growing disenchantment with it, challenging its veracity on both conceptual and empirical grounds". Correct?

A. That is almost a direct quote from the book, where we found the model, like all models, does not explain reality perfectly. It tended to understate the cost of capital for low-risk assets, like utilities, and overstate the cost of capital for high-risk assets.

That is why, in my Testimony, and in textbooks and in practice as well, one tends to

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complement the CAPM with the empirical version of the CAPM, to countervail some of those frailties.

Q. We will get to that in a minute. I am just trying to understand the frailties of the CAPM, or "CAP M", as I think you called it.

When you say in your book that the academic community's "growing disenchantment resulted in challenging the CAPM's veracity on conceptual grounds", what did you mean?

A. Academics wondered why the model did not work absolutely perfectly in predicting returns. They went to the raw assumptions of the model, and they thought they were a little bit unrealistic, like most assumptions of most models. They challenged the idea of, for example, a market proxy that only looks at stocks and does

not look at mortgages, or short-term securities, or corporate bonds; they challenged some of the raw assumptions of the CAPM, one of them being that all investors believe in fairly consistent prospects on the part of companies.

The consensus was that some of these assumptions were a little bit unrealistic, and they began to relax these assumptions and come up

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with amended, expanded, or refined CAPMs, or versions of the CAPM.

As a practical matter, all of these refined CAPMs essentially look like the empirical CAPM that I used.

Now, as we speak, the CAPM is slowly being replaced with something called the APM -- or the Arbitrage Pricing Model -- which is becoming the fundamental paradigm of financial theory.

Unfortunately, for our purposes here in this proceeding, the APM is still in the process of being developed. I do not know of any witnesses in North America -- yes, there is one that has used it in the United States. But it is not sufficiently developed to simply throw out the CAPM and replace it with the APM.

Q. Who is the one who has used it?

A. Excuse me...?

Q. Who is the one who has used the APM?

A. There is a professor at the University of Indiana -- his name is Charles Linke, L-i-n-k-e -- who has testified numerous times in the United States, who is a proponent of a method which he calls "Spanning Portfolios".

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What he does is he develops a set of companies, like my RAM-11, whose portfolio properties mimic that of TQM, for example.

The conceptual background behind that model is the Arbitrage Pricing Model, and we use the acronym APM for that.

He is the only one, to my knowledge, that has used APM in regulatory settings.

It would not surprise me that in a year or two this Board might even see the APM before it for consideration.

Q. Are you an APM fan yourself?

A. Yes, conceptually I am. But we still have some operational bugs to work out. We still are searching for the three or four factors that affect cost of capital.

There is a lot of research -- very much the same as the research on the CAPM ten years ago -- that is going on in journals with the APM. We are almost on the verge of making it practical -- but not yet.

Q. I take it from the way that you have discussed the criticisms of the CAPM, you do not include yourself within the academic community which you refer to on page 197 of your book?

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A. I myself have published several articles in journals which basically confirm the findings of these other academics, particularly in the Canadian environment.

Q. I wonder if you consider yourself to be an "academic"?

A. Oh, yes. I am a Professor of Finance at the largest business school in the world.

Q. That is why I asked the question. You kept saying "they" in the context of academics.

A. I definitely view myself as a professor, and nothing else.

Q. When you talk about the "academic community's disenchantment with CAPM" in your book, were you expressing your own disenchantment with it?

A. I share some of the malcontent or discontent of these academics.

Q. What I was trying to get you to tell me is what the disenchantment was. To use

the phrase in your book, what was the challenge to the veracity of CAPM on the conceptual ground? What was the concept that was being challenged?

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That is what I want to know.

A. Academics are always looking for the "Holy Grail". We are all looking for that model that is going to explain rate of return and cost of capital perfectly. Of course, that search still continues. In that sense, the CAPM is a major, major leap forward in technology. It is a paradigm in financial theory. But it is still not perfect. It has given us tremendous insight into investments, corporate securities. It is a very intuitive model.

If you look at the top of page 29, that is the most intuitive statement you can make. It tries to quantify that risk premium. But it does not explain reality perfectly -- and of course no model does: DCF does not; Comparable Earnings does not; and Risk Premium certainly does not.

That is why you have to use a variety of techniques, to try to use each technique as a cross-check to the other technique.

One of the advantages of the kind of work that I do is that when you look at all the answers I get on the Summary Table, they are pretty convergent, pretty homogeneous, generally.

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I don't know if I am answering your question, but I think I am.

Q. One of the problems with the CAPM that you perceived in your book is that the "implementation problems are formidable".

Right?

A. Yes, sir. On line 6 of page 129, you need proxies for three things: the risk-free rate, beta, and the thing that is in brackets there, which we call the market return, the excess market return.

We need to find proxies in the real world to come up with those three quantities.

Like any model in finance, everything

is expectational, everything is prospective, everything is forward looking. And all we have is historical data. That is the eternal problem of finance: we are always trying to find proxies for expectations. This is no exception.

Q. And was it because of these problems that you perceived with the CAPM that led you to the empirical CAPM process?

A. That is correct.

Q. When I asked you whether the Empirical CAPM was your favorite, if somebody put

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a gun to your head, I think you said that it would be that one and the CAPM equally.

Do I recall that correctly?

A. Yes. The other techniques are pretty antiquated. Even Comparable Earnings is not something you see in a textbook. DCF is not something you see as the premier technique of estimating cost of capital in modern finance, or in practice for that matter. Corporate practice, academia, textbooks, are very much CAPM-oriented, in the same way that economics is very much "perfect competition model"-oriented. It is the same thing in finance.

Therefore, as a contemporary academic, I am more in tune with the CAPM framework. And do you know why? It is because it makes risk explicit data, and that is a very nice feature.

With the other models, risk is the invisible thing that is somehow buried in stock price somewhere. No one ever sees it, or smells it, or touches it.

The reason I like the CAPM, and the reason why it is intuitively pleasant to professors and practitioners, is because it makes

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risk explicit and not implicit.

Q. Let's talk about betas, then. Starting on page 35, when you are talking about Empirical CAPM estimate, you discuss the problems with CAPM, and that is really what gets you into the use of betas. Right?

A. No, that is not correct. Even in the CAPM itself -- you and I were just on page ---

Q. I was looking at page 37 specifically, Dr. Morin. That is where you talk about the simple version of the CAPM not providing an accurate description, et cetera.

A. I think we are confused here. You need a beta, whether you are a CAPM proponent or an empirical CAPM proponent. You need a beta.

Q. Are you one or the other, or both?

A. I am using both models.

Q. So you are a proponent of both?

A. Yes. I think the Board should look at all the evidence before it, including both of these models.

Q. Go ahead. Sorry I interrupted you.

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A. You do not use the Empirical CAPM because you have a problem with beta. You need to come up with a risk estimate of beta in either case.

Q. You use the empirical CAPM because you have a problem with CAPM?

A. That is a much better way of putting it.

Q. And then you get into a discussion in your Evidence about betas when you are talking about the Empirical CAPM.

Do I understand that correctly?

A. I get into the imperfections of the CAPM and, therefore, the need to use an expanded CAPM, that is correct.

Q. And that is when you start talking about beta as a risk measurement?

A. I think beta starts way before that. Beta is just a risk measure.

Q. In any event, beta is a

measurement of the relative volatility of a particular stock as against the market as a whole.

Do I have that right?

A. Yes, you have that right.

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Q. And the market beta, by definition, is 1.0?

A. That is correct.

Q. And the theory, as I understand it, is that beta values over time will tend towards 1?

A. That is not quite correct. If you measure beta with historical data -- going back five years -- there will be a natural sampling error. You will tend to understate low beta securities and overstate the beta of high beta securities.

If we are trying to measure the average age in this room here and we take a sample, we will tend to, unfortunately, understate the age of the younger people and overstate the age of the older people.

It is the same thing with beta. There is a statistical sampling bias by which or from which beta tends to be understated.

Number 2, there is also a natural economic trend towards maturity. Just like human beings tend to mature, companies also tend to mature, through their investment decisions, their financing decisions, their corporate dividend

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decisions, and we have to correct for that also.

This is why most practitioners, and investment services, and most professors, and most people in this field, adjust the beta for that trend, or that tendency.

Q. Am I correct in thinking that what you have indicated is that measured betas are what move towards the mean?

We are talking about the regression towards the mean -- which is a concept which I

thought I understood. But maybe I do not.

A. Historical betas -- or what is commonly called "raw betas" -- are estimated with error. We just discussed that.

And number 2, there is a tendency for corporations to mature.

These two factors, combined, result in the fact that we have to adjust for both these tendencies, by adjusting beta towards 1.0. I refer to this as "adjusted beta".

This is what investors do and rely on and discuss routinely in most textbooks.

Q. And putting it simplistically, would I be correct in saying that, in theory, if a beta is higher than 1.0, it will tend to adjust

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downward; and if it is lower than 1.0, it will tend to adjust upward?

A. I think that is a good way of putting it. Just like human beings, corporate extremes tend to get corrected.

Q. Has it been determined empirically that beta values tend to regress towards the mean?

A. Yes, sir. This is a very well-documented empirical trend, which is discussed in most investment and corporate finance textbooks.

Q. Can you explain to me how it has been determined empirically that beta values tend to regress towards the mean?

A. Yes. Again, very broadly, by going back to the future. You take a given five-year period, you estimate its beta, and then you look, five years later, at what actually happened. And you keep repeating that "going back to the future" process and you adjust for the trends that you find. This is the way Merrill Lynch went about it, and so did ValueLine.

In a nutshell, Mr. Yates, the best way of putting this is that a lot of professors

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have written articles, and they have said: What is the best predictor of future beta?

And the only way that you can do that is by "going back to the future". Ten years ago, you estimate a beta and you look, five years later, at what actually did materialize. And you replicate that process.

The end result of that literature is that the best proxy for future beta is the adjusted beta that I discuss in my Testimony.

Q. But what you have done in this process is that you have observed that the values below 1.0 in Period One tend to be closer to 1.0 in Period Two. Fair?

A. That has been noticed in some of the empirical studies.

Q. And similarly, the values above 1.0 in the first period will tend to be closer to 1.0 in Period Two?

A. That has been observed in the empirical studies. It is not something that I have done. I have simply taken adjusted betas, because that is what everybody does -- or should do, I should say.

Q. Would it be fair to say that

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some values which are quite properly well above the average ---

When I say "quite properly", I mean because of the high relative risk.

-- some values which are quite properly well above the average in the first period could be found in the same region in the second?

A. Yes. Typically, companies that are in very high risk categories will tend to stay there for a while.

Q. Is that also true on the other side? Is it true that some values which are quite properly, because of low relative risk, below the average in the first period would be found in the same region in the second?

A. I think it is a fair statement that, for example, utilities that have betas in the order of .5, .6, will tend to stay that way, unless they diversify into riskier ventures.

But researchers have observed that companies with very, very high betas -- junior emerging-growth companies -- eventually will take on more mature policies and their risk will come down towards that of the market.

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Conversely, companies that have very, very low betas -- .2, .3, for example -- you find empirically that eventually the beta gravitates towards .5, .6.

So you need to squash the extreme betas towards the middle of the pack. That is the upshot of what I am doing here in this Testimony.

Q. When you are squashing the extreme betas towards the middle of the pack, what is happening is that the absolute value of the adjustment that you make for this regression-towards-the-mean effect is largest for the extremely high risk beta values and for the extremely low risk beta values?

A. Yes, that is correct.

Q. I think you mentioned a moment ago that utility common stocks are generally considered to be of relatively low risk.

Did I hear that correctly?

A. That is a fair statement, sir. Betas are of the order of .5 to .6. I would say that for electric utilities, .5; I would say for gas utilities, something of the order of .6; and for telephone utilities, at least in the U.S., it is much higher than that; and the same thing will

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happen in Canada in a few years, following the emergence of competition in Canada as well.

But for our purposes here, in the Canadian environment, betas are of the order of .5, .6, that order of magnitude.

Q. Did you examine the consistency over two or more periods of the beta values of

your utility sample?

A. No, I did not. I depended on the empirical literature of Finance. And I depended on the Canadian edition of ValueLine, which publishes betas for Canadian utilities, which uses the same procedure that I use.

I am doing something that is fairly routine in the field and I did not feel the need to validate, one more time, the same finding.

Q. If one were to observe that the beta values for low-risk utilities did not regress towards the mean in a subsequent period, would that, in your view, be evidence that it would be inappropriate to adjust their values to reflect that phenomenon, or not?

A. No, it would not be. It would depend on whether the study was performed properly to begin with.

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Q. Let's say that the study is performed properly and the observation is that the data values for the low-risk utilities do not regress towards the mean in a subsequent period.

In that circumstance, would you consider that to be evidence that it would not be appropriate to adjust their beta values?

A. I would have to see the evidence: where it was published, the credentials, and the rigor of the study.

It would be a formidable task, because the weight of the evidence is certainly not in that direction.

Q. But if the observations satisfied you that the study was done properly, I take it that you would accept that that would be evidence of the inappropriateness of adjusting the beta values of those utilities.

Yes?

A. I would have a rough time, but I would. If this was a published study and the general finding was used by the investment community, I would. But I certainly have not seen anything like that.

Q. I understand. Thank you.

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Let's talk about another subject close to your heart, the arithmetic and geometric means.

DR. MORIN: Do we have to do this approaching five o'clock! Sure, I will talk about it.

MR. YATES: I am happy to do it tomorrow, if you would prefer that.

THE WITNESS: I was just being fanciful here.

Q. Can you give us a one-sentence definition of the "arithmetic mean"?

A. Yes. If I wanted to compute the average age in the room, I would add everybody's age and divide by the number of people in the room.

If I want the average rate of return, I simply add up all of the historical returns over the years and divide by the number of years.

Q. So it is the simple average of the elements of the series. Yes?

A. Yes, correct. Well put.

Q. It is not original.

What is your one-sentence definition of "geometric mean"?

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A. That is a little bit more complicated. It is the equivalent rate of return.

If ten years ago I put a dollar in the stock market, and in one year I get 4 per cent return, the next year I get minus 16 per cent, the following year I get plus 21 per cent, et cetera, and I end up with \$1.21 today, the geometric mean is the equivalent compound rate of that \$1, that will essentially produce the \$1.21 versus the \$1 that I invested.

Q. So the geometric mean involves the rate of return compounded annually. Yes?

A. It is the equivalent rate of return compounded annually on your \$1 investment, when you are looking at a past historical period.

Q. Would you agree, Dr. Morin, that the object of the exercise is to determine what constant return would have to be achieved in each year to have your investment growth equal some particular proportion of the return achieved by the stock market?

A. No. And that is the crux of the matter. If I were trying to do that, if I wanted some historical perspective on the returns of my

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dollars invested, I would definitely look at the geometric rate of return.

But if you are trying to estimate the cost of capital -- which is what this proceeding is about -- then one must utilize the arithmetic mean.

I agree with you that to evaluate performance of an investment -- a mutual fund or a stock market investment -- you do rely on the geometric mean. But not to estimate the cost of capital.

Q. Let's go to page 32 of your Evidence, Dr. Morin, line 10.

A. Yes.

Q. You say that "the geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market".

Is it your position that that is not the question that this Board should be asking?

A. No. This Board is concerned with the issue of the cost of capital. What is the appropriate discount rate for future cash flows that will equate it to the present value

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today. That is what a stock price is; it is the present value of a future flow.

If I am trying to figure out what rate should I discount a future flow to make it

equal to today's prices that I observe in the stock market, this is clearly the arithmetic mean.

Another way of putting it, that would help, is that in order to earn the geometric mean over a 10-, 20-, 30-year period, you must earn the arithmetic mean in every sub-period.

Q. Would you agree, Dr. Morin, that you can only earn the geometric mean if in every sub-period you earn the arithmetic mean?

A. Yes, I would agree with that. That is why you use the arithmetic mean for cost of capital.

Q. And what you are telling this Board is that they should set the return in accordance with the arithmetic mean -- I will stop there.

That is what you are telling the Board, to start with. Yes?

A. No, I am telling the Board something much less ambitious. I am saying:

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"Look, if you want a proxy for the market return in the CAPM equation, the best proxy is to look at the arithmetic mean returns historically." That is the only thing that I am telling the Board.

The CAPM is an additive model and the arithmetic mean is an additive concept; the geometric mean is a multiplicative concept.

Q. Are you saying that the Board would need to set the return in accordance with the arithmetic mean in order to get a return that conforms to what we would want in accordance with the geometric mean?

A. No. I am merely telling the Board that if it wishes to obtain a CAPM estimate of the cost of capital for TQM, it should use, as a proxy of the market return, the arithmetic realized rates of return over long, long time periods.

Q. The arithmetic means are always higher than the geometric means. Yes?

A. Typically, yes -- well, yes, all the time. By definition, it cannot be less.

Q. Do you use arithmetic means, in part, because you would expect highly varying returns over time?

A. I am using arithmetic means because that is the right thing to do for estimating the cost of capital.

Q. That is a circular argument, Dr. Morin.

A. That is the correct thing to do. I am trying to get a discount rate here; a cost of capital estimate. I have to use the arithmetic mean, or else I am not being loyal to certain basic concepts.

Q. This reminds me of something the Supreme Court of Canada once said about regulators: "It is not sufficient to say 'My reasons are because I think so'."

A. It is because it is the right thing to do -- and I think I have explained this on this page quite well. This is an issue that was debated ad nauseum in the States in front of FERC and the FCC, and I thought that issue was put to bed.

A lot of the textbooks talk about this, and they all argue -- they do not even argue about it; they say: "To estimate the cost of capital, you use the arithmetic mean."

If you want to estimate performance

over a time period, you use the geometric mean.

You have to use the right tool for the right purpose.

Q. Is one of the reasons why you think that the use of the arithmetic mean is the right thing to do because you expect highly varying returns over time?

A. That is not the reason why I use the arithmetic mean. The reason why I use the arithmetic mean is because ---

Q. -- it is the right thing to do?

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A. No. Well, that is true. But the CAPM is an additive model and the arithmetic mean is an additive concept. Again, you have to earn the arithmetic mean every period to earn the geometric mean over a long time period.

This Board is trying to set, not the rate of return for the next 50 years that an investor will realize, but the cost of capital for the next period of regulatory coverage, which is two years.

Q. I think you just said that you have to use the arithmetic mean in each period in order to achieve the geometric mean over a long period of time.

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Did I hear you correctly?

A. Yes, you did, sir.

Q. And that is because -- I should not say "that is because".

That is consistent with the concept that the geometric mean measures total wealth over time. Yes?

A. Yes. The geometric mean will tell you how well your dollars have performed over a long time period.

Q. And is one of the reasons why you would use the arithmetic mean for each time period in order to achieve the geometric mean over time because you expect highly varying returns over time?

A. That is not my reason, but it is a reason.

Q. Would you agree that if there is no uncertainty about the returns over a series of periods, the arithmetic and geometric means have the same results?

A. I certainly do. They are the same.

Q. We are dealing here with utility regulation. Yes?

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A. Yes, sir.

Q. And we are dealing with a utility that is regulated -- and when I say "utility", I mean TQM -- by a Board that is required, by its statutory mandate, to determine just and reasonable tolls. Yes?

A. Correct.

Q. And you know that TQM recovers, through its toll methodology, all of its fixed costs, irrespective of other events?

A. That is correct, irrespective of volumes.

Q. Would you agree that as long as a utility earns what it is allowed by its regulator -- I will not use "tribunal" -- that the arithmetic and geometric means would be the same?

A. No, I would not. That has nothing to do with market returns or realized returns on the stock market. We are confusing two things here.

I think your line of questioning suggests the use of authorized versus allowed versus realized book returns on equity. The whole idea of arithmetic means has to do with market rates of returns: stock prices, dividends, and

coupons. It really has nothing to do with the book rates of returns that the Board specifies.

Q. I do not think I was talking about book rates of returns. What I was trying to differentiate was the fact that arithmetic means deal with market and the fact that a regulator sets an authorized rate of return which the regulated utility has the opportunity to earn.

The question which I had specifically put to you was whether you would agree that as long as the utility earns in each period what it is authorized to earn, then the arithmetic and geometric means would be the same?

A. For these historical ROEs, that would be the case. I think I understand your question.

If I look back at the last ten years and TQM earned its authorized rate of return every year, the arithmetic mean and the geometric mean

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would converge, would coincide, as a matter of pure arithmetic.

Q. Let me try some arithmetic with you, Dr. Morin, to see if I understand this.

Let's say we have \$1 to be invested and the recovery is going to be at 10 per cent.

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In Year 1, you would make 10 cents. Right?

A. Yes.

Q. And then in Year 2 you would have \$1.10, and at 10 per cent you would get 11 cents. Correct?

A. Correct. \$1.21.

Q. And in Year 3 you would have \$1.21 at 10 per cent, and that gets you just over 12 cents, so you are at \$1.33. Yes?

A. That is correct. Et cetera.

Q. So the total recovery is \$1.33 at a 10 per cent return over the three-year period?

A. That is correct. And the interesting thing about your example is: if I take my \$1.33 three years from now, to bring it back to \$1 today, I must discount it at the arithmetic mean.

That is the crux of the cost of capital method.

Q. I will ask you about that in a minute or two. I am just trying to understand what the circumstances are.

Let's take a different case where we have \$1 that is invested -- and here we are going

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to deal with the uncertainty of recovery. Let's say in the first year, you lose 20 cents. So your dollar is now down to 80 cents, and your return is negative 20 per cent.

Right?

A. I agree.

Q. Then in Year 2 you make that up. Let's say you earn 41 cents in Year 2, which gets you to the \$1.21 at the end of Year 2. All right?

A. I follow you.

Q. In that instance, you would have a return of just over 51 per cent. All right.

A. From Year 1 to Year 2, from 80 cents to \$1.21.

Q. To get to \$1.21, you have to make 41 cents, which is a return of just over 51 per cent.

A. On the 80 cents. I agree.

Q. Then in Year 3, let's suppose you earn the same as in Case One, the 12.1 cents, which would give you a 10 per cent return in Year 3. Yes?

A. Correct.

Q. So you end up in the same place;

you end up at \$1.33?

A. That is correct.

Q. If you look at what the average of those three arithmetic returns are, you have minus 20, then 51-plus, and then 10. That averages about 13 1/4.

A. I agree.

Q. If we have this example of uncertainty, you would need an arithmetic mean of 13.75 -- I am sorry, I said 13 1/4 I think earlier.

A. 13.75.

Q. Yes. So, you would need an arithmetic mean of 13.75 in order to make a compound return of 10 per cent. Yes?

A. Yes, that is correct. So far, I am with you.

Q. In this example, what would

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happen if you gave the 13.75 to an entity that had certainty of recovery in each year?

A. If it had certainty of recovery, and there was no volatility at all in these numbers from one year to the next, you would give them 10 per cent.

Q. What I am asking you is: What

would happen if you gave the 13.75 to an entity that did have certainty of recovery? The result is you would end up with ---

A. You would over-compensate. You would over-compensate that company. The company is riskless, and you would over-compensate the company.

In your example, your numbers show very, very volatile stock: minus 20 per cent, plus 51 per cent, plus 10 per cent. And that has to be accompanied by a high rate of return.

Then if you tell me: "Well, they are assured a rate of return". Then you have eliminated all risk and the whole issue evaporates.

MR. YATES: I think I understand it now. Thank you, Dr. Morin.

Mr. Chairman, I am about to go into a different area, that will take me more than the time that is left. Perhaps we might adjourn now and Dr. Morin can produce the documents that he was talking about earlier and we can take this up again tomorrow morning.

THE CHAIRMAN: That will be fine. I think we had a better-than-anticipated afternoon.

We will adjourn until 8:30 in the morning.

Monsieur Leclerc...?

Me LECLERC: Seulement qu'une petite question de detail, monsieur le President.

Je vous ai depose au tout debut la preuve de signification des reponses aux demandes de renseignements et, par megarde, je vous ai depose, dans le meme document, la declaration assermentee de madame Maureen Elizabeth Pallett, puisqu'elle n'etait pas ici pour soutenir la preuve de TQM quant aux salaires.

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J'aimerais déposer cette déclaration sous une
cote séparée.

LA GREFFIÈRE: Ce document portera le numéro
de pièce B-24.

Me LECLERC: Merci.
--- PIÈCE No B-24: Déclaration assermentée de Maureen

Elizabeth Pallett
preuve de TQM qua

Me MOREL: Monsieur le Président, avec votre
permission, avant que vous n'ajourniez pour la journée,
j'aimerais demander à monsieur Morin s'il lui serait
possible de nous remettre aussi, au personnel de l'Office,
les pièces, les tableaux, les mises à jour qu'il a offerts
à maître Yates.

LE TÉMOIN: Avec plaisir.

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Me MOREL: Et dès ce soir, si possible.

LE TÉMOIN: Certainement.

Me MOREL: Merci.
--- (Le témoin se retire/The witness stood down)

LE PRÉSIDENT: Donc, s'il n'y a rien d'autre
pour cet après-midi, à demain matin à 8 h 30.

--- Adjournment/Ajournement

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