RÉGIE DE L'ÉNERGIE

DEMANDE CONJOINTE RELATIVE À
LA FIXATION DE TAUX DE RENDEMENT
ET DE STRUCTURES DE CAPITAL

DOSSIER : R-4156-2021 PHASE 2

RÉGISSEURS : M. JOCELIN DUMAS, président
Me LISE DUQUETTE
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E-5 (ACIG): Transmit the calculation sheets for all of the six figures seen in the column "Booth" (asked by EGI) 149

L'AN DEUX MILLE VINGT-DEUX (2022), ce vingtième (20e) jour du mois de juin :

PRÉLIMINAIRES

LA GREFFIÈRE :

Protocole d'ouverture. Audience du vingt (20) juin deux mille vingt-deux (2022) par visioconférence. Dossier R-4156-2021 Phase 2 : Demande conjointe relative à la fixation de taux de rendement et de structures de capital. Poursuite de l'audience.

LE PRÉSIDENT :

Merci, Madame St-Cyr. Alors, vendredi après-midi, on a reçu réponse à l'engagement numéro 4 qu'on estime satisfaisant. Donc, la preuve des demanderesses est close. Et s'il n'y a pas de questions préliminaires, on continuerait d'entendre docteur Booth.

Me ADINA GEORGESCU :

Bonjour, Monsieur le Président; bonjour à la formation. Adina Georgescu pour Gazifère et Intragaz. Monsieur le Président, il y aurait peut-être une petite question préliminaire avant de continuer avec le témoignage du docteur Booth. C'est simplement pour vous dire, bon, vendredi passé lors du contre-interrogatoire du docteur Hopkins, il a été mention d'une décision de l'Alberta lors du contre-interrogatoire ainsi que d'un règlement de la Ville de Montréal. Maître Hamelin, pendant la fin de semaine, nous a demandé de lui communiquer l'information. Juste vous informer que la décision qui a été rendue en Alberta a été déposée vendredi dernier sur le SDÉ. Quant au règlement de la Ville de Montréal, il va être déposé dans les prochaines minutes.

Et à ce sujet-là, relativement au règlement de la Ville de Montréal tout particulièrement, en révisant nos notes de l'audience au courant de la fin de semaine, nous avons réalisé qu'une question de contre-interrogatoire qui a été adressée au docteur Hopkins relative à ce règlement tout particulier a été formulée de manière un peu générale et aurait bénéficié peut-être davantage de précision pour éviter toute confusion. Donc, dans un souci d'efficience et avec l'autorisation de la Régie, nous suggérons de reformuler la question par lettre, qui est d'ailleurs déjà prête et qui pourra être déposée sur le SDÉ dans les prochaines minutes également. Et si cette reformulation requiert du docteur Hopkins une réponse différente de celle qui a été donnée à la question initiale, nous suggérons que cette nouvelle réponse puisse être soumise par voie de déclaration sous serment d'ici la fin de la semaine.

Et dans la mesure où la réponse initiale qui a été donnée demeure la même, à ce moment-là, il n'y aurait pas nécessité qu'une déclaration soit déposée. Et si dans le délai, d'ici la fin de la semaine, nous ne recevons rien, nous prendrons pour acquis à ce moment-là que la réponse initiale est maintenue. Donc, c'est un peu la façon de procéder que l'on suggère dans la mesure où cela satisfait la Régie et où ça convient à maître Hamelin également.

LE PRÉSIDENT :

Avez-vous un commentaire, Maître Hamelin?

Me PAULE HAMELIN :

Bien, écoutez, c'est un peu non orthodoxe, si je peux dire, comme façon de procéder. Je vais premièrement m'assurer que le docteur Hopkins est toujours disponible, parce qu'il avait été naturellement libéré. On va regarder la question. On va revenir à la Régie si on voit un problème avec la proposition de ma consoeur, et naturellement sous réserve des disponibilités du docteur Hopkins. On va faire dans notre possible de le rejoindre et on verra comment... Parce que, naturellement, il est libéré, mais on lui demande cette question-là. Alors, on va voir comment on agit dans les circonstances.

LE PRÉSIDENT :

Très bien. Alors, Maître Georgescu, vous pouvez déposer votre question, puis on verra par la suite.

Me ADINA GEORGESCU :

Parfait.

Me PATRICK OUELLET :

Moi aussi, Monsieur le Président, si vous me permettez, j'avais un point d'intendance très rapidement. Le docteur Booth, on avait annoncé une heure en chef. Là, ça fait une heure et quart, puis on est à la « slide » disons 16 sur 51, donc un petit peu moins du tiers. Si on pouvait juste avoir une estimation on en a pour combien de temps, parce que ça risque de faire un peu dérailler le calendrier d'audience si on triple le temps annoncé en chef. Parce que, moi, j'ai quand même beaucoup de questions en contre-interrogatoire. Et on avait annoncé trois heures.

Me PAULE HAMELIN :

Alors, on est conscient de ça, Monsieur le

Président. On va tenter d'y aller plus rondement avec le restant de la présentation du docteur Booth. On pourrait peut-être passer en anglais pour les fins de l'exercice. Mais je pense qu'on va être en mesure de le faire dans le temps... Bien, en fait pas dans le temps qui avait été annoncé, parce que, déjà, on est dépassé mais pour tenir compte du contre-interrogatoire de mon confrère. Alors, on va tenter d'y aller plus rondement pour la suite de la présentation.

LE PRÉSIDENT :

Très bien. Merci.

Me PAULE HAMELIN :

So, maybe...

Me PATRICK OUELLET :

J'allais simplement dire merci, Maître Hamelin. Excusez-moi, je ne voulais pas vous interrompre. Allez-y!

Me PAULE HAMELIN :

Non, peut-être que juste pour les fins de l'exercice, Dr. Booth, just to let you know there were some questions with respect to the examination of Dr. Hopkins referring to a by-law of the City of Montreal. An additional question will be ask in writing to Dr. Hopkins in order to answer to that question and referring to... we'll see the question to Dr. Hopkins pertaining to the by-law of the City of Montreal. With respect and... with respect to a decision that was referred to... to Dr. Hopkins in his cross-examination this... this decision has been filed Friday, it's the AUC 2023 Direct Cost of Capital. So, that was filed Friday.

With respect to the timing of your presentation, that question was asked as to, since we have announced a certain number of hours, and I indicated that we will be proceeding maybe in -- not expedite version – but we will be sure that there is sufficient time for the utilities to proceed to your cross-examination today.

So, having said that, I think that Dr. Booth is still under the same oath and I think he can now proceed, Mister Chairman.

LE PRÉSIDENT :

Yes. We're ready.

PANEL 3 - ACIG____________

IN THE YEAR TWO THOUSAND TWENTY TWO, on this twentieth (20th) day of June, PERSONALLY CAME AND APPEARED:

LAURENCE BOOTH, professor of finance, CIT Chair in Structured Finance, Rotman School of Management, University of Toronto, 105, St. George Street, Toronto (Ontario);

Testifying under the same solemn affirmation, doth depose and saith as follows:

EXAMINED BY Me PAULE HAMELIN:

Q. **[1]** So, Dr. Booth, I think that we closed your presentation by discussing the, I think, the next slide in your presentation... And, Madame la Greffière, maybe we can put back the presentation of Dr. Booth. I think it's C-ACIG-0087. And if you go to the page, which was I think Fair ROE, and from now I'll... it's the next page.

R. Okay. First of all, I'd like to apologize to counsels and the Régie for taking too long, but I can blame my lawyers because they asked me to counter several things in Dr. Villadsen's direct testimony, and as a result, it added time to what I originally planned to say.

So, in terms of my presentation, the first third of it really is on business risk. And this is business risk from the sense of the capital market, not on the nitty gritty, which Dr. Hopkins gets into. So, the second part here is referring to my direct testimony, so the fair ROE, and the final part, which essentially has been added at the request of counsel, is to deal with some of the things that Dr. Villadsen said.

So, in talking about the fair ROE, Dr. Villadsen and I both use the same techniques, the two basic ones are the risk premium model where the Capital Asset Pricing Model is one variation of that, where the core of it is the risk value of money and the time value of money. And then the Discounted Cash Flow simply sets the market prices and try to work out what on earth would the investors doing given a stream of cash flows that the firm is expected to earn.

So, we're trying to sort of work out what the investors are doing. So, Madame St-Cyr, can you change to next overhead, please.

So, the two critical methods they work best in aggregates, the more you get down to individual companies and individual securities, the more difficult it is to interpret any model, there’s more uncertainties. So, I start out looking at the big picture in terms of in the overall capital market, because when you look at the capital market as a whole a lot of things disappear through diversification.

So, for the Capital Asset Pricing Model, for example, we got the time value of money and the risk-free rate. And then we've got the risk premium for the individual security, and there is significant disagreement with Dr. Villadsen and I on the correct relative risk of utilities, the beta coefficient. There's less risk... sorry, less disagreement between us on the market risk premium.

In fact, her historic market risk premium of five point six eight percent (5.68%) is indistinguishable from mine, five point five to six percent (5.5-6%).

Similarly, when we look at the Discounted Cash Flow Model, we are essentially looking for the aggregate market of the dividend yield on the stock market plus long-term growth. Now, it's important here to recognize that that model comes from a very, very specific model for valuing stocks. It assumes that the growth rate in the dividends go on to perpetuity and we can use the formula for a geometric series to get a close form for the value of the stock and as a result the dividend yield plus growth model results. And that growth rate is technically the cost in growth rate in perpetuity.

The individual stock is causing enormous problem, because no company can grow, say at nine or ten percent (9-10%) in perpetuity when the stock market is only, overall market is only growing at three and a half, four percent (3.5-4%) in long-run growth.

So, there's a constraint on that for individual stocks that doesn't exist for the stock market as a whole. So, I start out looking at these two models, because they work better under different sources of economic circumstances. So, if you set the beta is equal to one, we got the estimate for the market return, and if you set the growth rate equal to the long-run growth rate in the economy, which is basically the most that the earnings can grow at, otherwise earnings and dividends will increase exponentially as a percentage of GDP, and eventually all of the GDP will be earnings to the stock market rather than wages or salary, employment or anything else.

So, when we do that... and next slide, please. And this is what I've done here. I've looked at the overall stock market, not individual securities, because it's a lot easier to use these models for the overall stock market. And I've assumed the market risk premium was three point five percent (3.5%), which is basically what I was using about twenty (20) years ago, and long-run growth rate. And the long-run growth rate was about three point five percent (3.5%) twenty (20) years or so ago. So, these are long-run values going back decades in terms of the tradeoff between equities and bonds. So, can we go to the next slide, please?

And when you do this, and in this case subtract the risk premium estimates from the DCF estimates, we get an idea of when these models perform well and when they perform badly. For example, you can see in the nineteen seventies (1970s), the DCF models were giving higher values than simple risk premium models. And I call them naive, because I'm using this constant market risk premium and constant growth rates.

In contrary, in contrast, in the nineteen eighties (1980s) and to the nineteen nineties

(1990s), risk premium models were giving high rate return to DCF models. And then, since about two thousand and six (2006), we got simple DCF models giving higher values than risk premium models.

So, this is basically to set up the fact that I look at both DCF and risk premium models. In fact, I'll look at anything that is a available to get inside into what investors require in terms of a fair rate of return.

Now, the critical thing... Next side, please. The most objective critical problem has been the long term bond yield. And now similar to the nineteen seventies (1970s), we've got negative real long term bond yields or have had until very, very recently. And this is causing problems with the... the risk premium models. And this has been recognize by several authorities including the Régie in past decisions.

And when we look at this, this is the graph of the Treasury Bill yields on the long term bond yield. Up until two thousand and eight (2008), we can see that the pink line basically touch the blue line, which means the Treasury Bill yields were almost at the same level as long Canada bond yields, and that was because at that time the Bank of Canada was actively trying to slow down the economy because we were actually having inflation above the three percent (3%) top of the Bank of Canada target range.

That changed dramatically because of problems in the United States. The United States great financial crisis, they almost destroyed the US banking system, starting with the collapse of Bear Stearns in two thousand and seven (2007), going forward to the failure of Lehman Brothers in October two thousand and eight (2008), the shotgun marriage of Merrill Lynch to Bank of America, the enormous bailout of Citibank, the US seriously damaged the core of the economic system which is investment banking and the banking system.

And as a result, we got this dramatic drop in interest rates in two thousand eight (2008) and two thousand and nine (2009). And then, Canada's started recovering very, very quickly because we were side swipe by the United States, but we never suffer the serious problems that the United States suffered. And by two thousand and nine (2009), two thousand and ten (2010), the Bank of Canada was increasing the overnight rate normalizing as it were.

And the last time I was here for a GMI, Gaz Métro hearing was in two thousand and eleven (201,). And as you see on the graph, by then we've already increased interest rates in Canada several times and the forecast for the long Canada bond yields was four and a half percent (4.5%), four point five five percent (4.55%). And then again we were side swipe by the Americans.

In fact, from that period, two thousand eleven (2011) the GMI hearing right up until the end of two thousand and nineteen (2019), I refer to it generally as to “Waiting for Godot”, where the Americans were Godot. Canada was basically trading water for the best part of five years, waiting for the Americans to solve the core problems in the US financial system and for the US to get back to normal.

This was a period when there was massive central banks buying of bonds in order to depress long term interest rates, and some of that spilled over into Canada because the capital markets are obviously closely related, the US and Canada.

We thought we were getting out of this at the end of two thousand and nineteen (2019), and then of course we heard about this virus coming out of China and by March two thousand and twenty (2020), we were deep in a mess again with lower interest rates.

So, when you look at this, in terms of the risk premium model, the basic problem is being the long Canada bond yields. The next slide, please.

When we look at long term bond yields, it has been a deliberate policy of the Bank of England, the European Central Bank, the Federal Reserve, to lower long term interest rates. And they've done this by massive buying of long term bonds, primarily government bonds.

In two thousand eight (2008), before the US financial crisis, the combined central banks had a balance of about four trillion dollars ($4T) worth of bonds, by the end of twenty twenty-one (2021), that was up to twenty-four trillion dollars ($24T), so, that's twenty trillion dollars ($20T). And I'll say that again, trillion, not billion, not million, trillion dollars worth of bonds have been taken off the capital market by the actions of the central banks.

That deliberate buying was to lower interest rates. So, what we got in the capital market is artificially low long term interest rates, and we got a distorted view of the tradeoff that investors would otherwise make between bonds and equities and other financial securities. Next slide, please.

Back in two thousand eleven (2011), two thousand and twelve (2012), I was trying to get a handle on this and I did that by looking at preferred share yields. Now, preferred shares are part of equity, they're equity securities, they're paid out of net income and they're paid after we pay taxes and after we pay interest. They are not bonds, they behave very much like equities with a twist that they've got a fixed dividend, a preferential dividend, traditionally preferred share yields have been close to the yield on A bonds. And we see that in this graph up until two thousand and eleven (2011).

Once the US in particular started this massive bond buying to depress yields on bonds, the preferred share yields didn't react to the same degree, because there are equities, they are basically a made in Canada product because of the way in which we tax dividends. They're not as affected by central banks bond buying, and we can see that starting in two thousand and eleven (2011) with this massive central banks bond buying, preferred share yields did not go down to the same degree as A bond yields, the long Canada bond yields.

At that time, I said: Look, we cannot build a fair return off distorted long Canada bond yields. Look at preferred share yields to indicate what is happening on equity rates of return. And I think it was in a Hydro-Québec or Intragaz hearing, I said: The forecast long Canada bond yield was three percent (3%), but looking at the behaviour of preferred share yields indicates that that's at least nought point eight percent (0.8%) below where it would be but for the actions of the central banks. So, I added nought point eight percent (0.8%) to the forecast long Canada bond yield at that time, and ever since I've said: essentially I'm not changing my fair rate return until we get a normalization in the bond markets and until we get long Canada bond yields above three point eight percent (3.8%). And I started saying that in two thousand eleven (2011), two thousand and twelve (2012), and I'm still saying that. Next slide, please.

So, where are we now? This was the federal government's budget in twenty twenty-one (2021), and if you look at the second row, it has the ten year government bond rate and it has it going out to twenty twenty-five (2025) of two point seven percent (2.7%). That was based on Consensus Forecasts. For the last twenty (20) years the government has relied upon Consensus to avoid any sort of complaints that it’s coming up with biassed long Canada forecast simply to ease its financial problems. So, that is based upon Consensus Forecasts. That was a year ago.

This March, the Parliamentary Budget Officer came out with a forecast, and again long term bond yields by that time was three percent (3%) adding the spread to the thirty (30) year bond I come up with three point three seven percent (3.37%) as my best estimate of the long Canada bond yield. Essentially, the end of the... of a three year test year. That's still nought point four... four three percent (0.43%) below what I regard is a minimum yield reflecting a tradeoff between bonds and equities by private individuals.

So, I add nought point four three percent (0.43%), I call it an operation twist adjustment because it was a deliberately attempt by the

Federal Reserve and other central banks to twist the relationship between short and long term interest rates, and in particular to lower long term interest rates. Next slide, please.

So, if I compare my forecast with that made by the Régie in its two thousand eleven (2011) decision on Gaz Métro, at that time the risk-free rate was three point nine (3.9) to four point five percent (4.5%). At the moment, I have it as three point three seven percent (3.37%). The Régie used a market risk premium of five point five to five point seven five percent (5.5-5.75%), I used five point five to six percent (5.5-6%) at the moment. The Régie used a beta of point five to point six (0.5-0.6), I used point five to point five five (0.5-0.55). So, on that basis, the major difference is the change in the long term interest rates since two thousand eleven (2011) as a result of this central banks bond buying.

The Régie added point two five to point three five (0.25-0.35) for Gaz Métro's added risk, I don't do that because I still believe that giving them a forty-six percent (46%) equity ratio versus the thirty-seven percent (37%) for example for a gas distributor in Alberta, is the adjustment for risk. We generally tend to adjust for business risk in common equity ratios, we still do see adjustments in the allowed ROE, but I regard the extra common equity ratio as adjusting for Gaz Métro's risk, and that's the same as I said in two thousand eleven (2011).

The Régie allowed point two five to point five percent (0.25-0.5%) for other models, that's really what I regard as my nought point four three percent (0.43%) for operation twist, which gives the overall result.

One final thing the Régie did in two thousand eleven (2011) was adjust for credit spreads and here there has been a significant difference. When we were looking at this in two thousand and eight (2008) through two thousand and twelve (2012), we were worried about the fact that A credit spreads over long Canada bond yields were relatively high, but they could be high for two reasons: one, the yield on A bonds are high, the other is the yield on the long Canada bond is low. And what we've now seen with more and more evidence, that’s the long Canada bond yield that's gone down that causes the increase in spreads, not any adjustment for risk.

In fact, A bond yields in Canada and in the United States are extremely similar, so I don't regard that as justifying any adjustment for credit spreads. So, that's a change in my testimony basically now compared to two thousand eleven (2011). Next slide, please.

So, the other elements are the market risk premium and the beta...

Q. **[2]** Excuse me, Dr. Booth to interrupt you. Can we go back to the previous slide?

R. As long as you credit it to your time and not mine.

Q. **[3]** Can we just... do you have any comments pertaining to Dr. Villadsen's statement that your beta is point seventy-four (0.74)?

R. I do. I put it here, but I'll deal with it, I think it's easier to deal with it when I talk about my betas.

Q. **[4]** Perfect.

R. My beta is not nought point seven four (0.74) for reasons I'll get to.

Q. **[5]** Thank you.

R. My beta for utilities as I say is in a range of point five to point five five (0.5-0.55). So, next slide, please.

So, my risk premium I'm using five to six percent (5-6%) for the last ten years, I bumped it up a little bit to five point five to six percent (5.5-6%) mainly because of this continuation of incredibly low interest rates and there was a survey, a small survey I'll admit, but a survey of professional institutions and they said the three major sources they relied upon for the market risk premium were Fernandez's survey, professor Damodaran of NYU and Duff and Phelps. So, I included those three because they are the ones that are the most frequently referenced.

So, when we look, for example, at Fernandez's survey... and Madame St-Cyr, can you click on that and make it bigger so we can all see? Okay. So, here we have one thousand seven hundred and fifty-six (1756) responses in the United States for an average of five point five percent (5.5%) and a median of five point five percent (5.5%). The minimum was three point one percent (3.1%) and the maximum, eight percent (8%).

I mention that because in Dr. Villadsen's evidence she has a market risk premium of eight point five zero five percent (8.505%), which is beyond the top of the range of one thousand seven hundred fifty six (1756) responses in the United

States. But Fernandez five point five percent (5.5%) well within my five to six percent (5-6%) traditional range and a little bit lower than the five point five to point six percent (5.5-6%) that I'm using at the moment.

So, if we go across to look at Professor Damodaran, he's a professor at NYU and he has written a popular text book on valuation, and he has estimated the implied risk premium going back to nineteen sixty (1960) and you can see his estimate in the sixties and seventies was three percent (3%), in fact I was using as I said three point five percent (3.5%) at one stage, and most recently it's been in the range five to six percent (5-6%), very similar to mine. His estimates, so I think, are biassed high because they're estimated over the ten year yield instead of the thirty year yield and are based upon Analysts Forecast, which I regard this being over optimistic. So, next slide, please.

And the final source is Duff and Phelps. Duff and Phelps now has rebranded themselves as Kroll. They bought the Avison’s data that was used in rate hearings for a long period of time. Their latest, and this I think was April this year, eight point five percent (8.5%) for the overall stock market, three percent (3%) normalize US risk-free rate, and I stress “normalized”, I'm not the only person that sort of doesn't accept current long term bond yields, and a five point five percent (5.5%) what he calls equity risk premium, but what is commonly refer to as the market risk premium.

And if you look at that, you can backout the expected return on the market, which is the sum of those two, eight point five percent (8.5%). And you can see as well the long term forecast for the stock market as a whole... as a whole, the base for the market return hasn't been above ten percent (10%) until we go all the way back to two thousand and eight (2008). And that sort of anchors all of the recommendations. You can't have a low risk utility having an equity cost higher than that of the overall stock market, that's just risk positioning. So, next slide, please.

So, that's the market return and the market risk premium. These are my estimates of Canadian utility betas using the Utilities subindex of the Toronto Stock Exchange estimated in a normal way, five years of data over monthly returns going back to when Standard & Poor’s rebased their indexes back in nineteen eighty-seven (1987). So, this is the longest period possible.

The purple and the dark blue lines are the betas and there was a concern in the early two thousands that the betas were unusually low and why was that. And one reason given at the time was the interest sensitivity of utilities stocks and that's measured by the green line. It's essentially saying how sensitive a utility stock is to interest rate declines.

And we can see that during this period in the... around the two thousands, interest sensitivity was relatively high and betas were relatively low. But when you look at this whole time period, betas on the Utilities subindex have been around point four, point five (0.4-0.5) with absolutely no sign of a tendency of those betas to drift towards one. That's just incompatible with the historic beta coefficient, relative risk coefficient in Canada. Next slide, please.

So, this is where, I think, Dr. Villadsen got my nought point seven four (0.74) because if you look at the last column headed Booth, you see average nought point seven four (0.74) median nought point six seven (0.67) and these are my beta coefficients estimated by myself using the underlying data, estimates from Reuters, estimates from an independent research group called CFRA, estimates from Yahoo, they use Standard & Poor’s data, and estimates from RBC. And when you look at these estimates, you see that they're all very, very similar, we're all doing basically the same thing.

So, the estimates might be over slightly different time periods, Reuters are in yellow because they estimate their betas relative to the US market index rather than the Canadian market index. And as you see, it tends to be, they're a little bit lower estimated against the US market index except for Fortis.

But these are the estimates for all of the stocks that we've got in Canada. The only other one I might include is Ontario Hydro, but it's still relatively recent data on that, but it includes TransCanada, Enbridge and Pembina which are not utilities, they're pipelines.

So, if we go to the next slide, and this is schedule 4, I state very clearly that the pipeline's risk has increased relative to utilities risk, and they're no longer compatible with standard rate of return regulated utilities.

Now, we all know the problems TransCanda had with its XL pipeline into the Unites States, it was approved, then unapproved, then approved, then unapproved, there's a lot of risk attached to TransCanada and its pipelines in the United States.

Enbridge is now in a battle with the governor of the state of Michigan who wants to decertify or not allow his line 5 under the Lake Michigan. So, and Pembina acquired Fort Chicago which use to be, well Veresen, which use to be Fort Chicago. And it had a lot of risks because it basically doubled its size, borrowed a huge amount of money to finance the acquisition. So, all three of those have got very high betas, they're not reflective of the risk of utilities.

So, I don't think it's appropriate to use a beta of a pipeline that's is demonstrably riskier than the rate of return regulated utilities in terms of an estimate. And it's certainly not my estimate of the beta of utility risk. Next slide, please.

Dr. Villadsen also claims that my Canadian utility betas have been higher than the US since two thousand and fifteen (2015). That again is not correct. If we look at the estimate for the US gas companies, the last few betas point four four (0.44), point three (0.3), point two (0.2), point two two (0.22). We look at the Canadian utilities, not the pipelines, the utilities, point three two (0.32), point two nine (0.29), point two eight (0.28), point two three (0.23), point one six (0.16).

There's no evidence that Canadian betas have been significantly higher than US betas since two thousand and fifteen (2015). In fact, the last couple of years, they've been lower, marginally lower, insignificantly lower, but there's no evidence they’ve been greater. Next slide, please.

So, when we look at these US betas, the US ones are almost exactly the same as mine : RBC, Yahoo, CFRA, absolutely identical to mine for One Gas, slight differences in some of the others, very similar to RBC on a number of these. My overall average point four four (0.44), median point four nine (0.49), RBC point four two (0.42), point four seven (0.47), Yahoo point four three (0.43), point four seven (0.47), Reuters point three six (0.36), point three four (0.34), CRFA point four three (0.43), point four six (0.46)

So, these are things, they are pretty solid evidence. First of all, these are not adjusted betas and secondly they demonstrated the obvious, that these samples of US utility holding companies are low risk utilities, there are not as risky as the overall stock market.

Now, why aren’t utility betas adjusted, and there's no evidence that they are adjusted, and this is what's called a Blume methodology. And just to sort of explain what Blume did, he looked at the betas in time period T, so that's beta subscript T against a period without overlapping data, so he went back five years because basically we estimate betas over five years of monthly data, and said what's the relationship between current betas and betas five years ago, is there any tendency for them to move? And that's what this is, this is really what we call a partial adjustment model.

Now, for all stocks he estimated alpha one at point three three (0,33), alpha two at nought point six seven (0.67), so the equilibrium beta is what beta T equals beta T minus five (BT-5). So, all it involves is taking that beta T minus five (ßT-5) to the other side and set it equal to beta T (ßT), so we get one minus alpha two (-a2) and then dividing it to alpha one (a1). So, point three three (0.33) divided by one minus point six seven (-0.67) is one.

Now, what I say here is that should be one, it's a tautology. The overall beta for all of the stocks in the market is one. So, when you do this test on the overall market, you would expect some sort of drift of the betas towards one unless you know something specific about the stock. And Blume knew nothing about the stocks, he just estimated over all of the stocks in the capital market.

Now, way back in two thousand and one (2001), my late colleague Dr. Berkowitz and I replicated Blume for Canadian utilities. In that time, we had I think about fourteen (14) pretty much pure regulated utilities, we don't have them anymore, but we did have them then, and we estimated Blume's relationship beta T is equal to nought point nine four seven (0.974) minus point eight two two (0.822) times the beta of five years previously. Doing the same thing to find the equilibrium beta is point nine four seven (0.974) divided by one minus minus point eight two two (-0.822) solving the betas equal at nought point five two (0.52). That is what I always refer to as the long run beta for a utility, based upon what Mike and I did twenty-one (21) years ago, and that still reflects the fact that there's no sign of beta's drifting towards one.

We did that twenty-one (21) years ago, we cannot replicate it because we don't have those companies. The two other studies, only studies, that I'm aware of have been done it in the United States and they similarly find that the adjustment process for betas is towards their grand mean, their mean, not the mean of the overall stock market.

And just to emphasize, there is absolutely no statistical evidence indicating the betas for utility stocks adjust towards one, absolutely no statistical evidence whatsoever. Okay. Next slide, please.

The Régie recognized this in two thousand eleven (2011), that was the Dr. Morin presenting adjusted betas and without reading everything, I'll just say:

> With respect to the use of adjusted betas, the Régie maintains the position it has taken in previous decisions.

So, the Régie has made a decision on adjusted betas several times, so they do not adjust towards one and that is the correct result because there is no statistical evidence to support that. Next slide, please.

Now we have the ECAPM and I would say here that the original statistical studies of the Capital Asset Pricing Model did find that with betas above one, the CAPM overestimated returns, and for betas below one, the CAPM underestimated returns, and that's why the Empirical Capital Asset Pricing Model has a slightly flatter line. It got a high intercept and it's got a flatter line. I don't disagree with that, that is the result of the empirical studies. Now, that hasn't been updated for decades because finances move on and we now basically, the state of the art is to estimate multi-factor models.

But that is absolutely correct, I don't disagree with that, but you have to recognize that in tested ECAPM it was estimating returns over thirty (30) days. It was estimating the betas coming up with a portfolio betas and then estimating the thirty (30) day return. So, the Treasury Bill yield, thirty (30) day Treasury Bill yield was the a risk-free rate and the betas were not adjusted, they were the actually betas. So, when we estimate that, the ECAPM, if you're going to estimate it consistent with the empirical result, you should use unadjusted betas and you should use the Treasury Bill yield. If not, what you're estimating has nothing to do with the Empirical Capital Asset Pricing Model.

So, that is not what Dr. Villadsen does and it's not what her mentor, Dr. Vilbert did back in two thousand and nine (2009). And at that point, I ask Dr. Vilbert: please estimate the ECAPM in the way that it was tested. And next slide, please.

And Dr. Vilbert answer -- in the interest of time I will only read the first line :

> The results of the requested estimates would all be economic nonsense...

So, in two thousand and nine (2009), Dr. Vilbert was asked to estimate the ECAPM in the way it was estimated that justifies his use of the ECAPM, and he said it would be nonsense if he did that. The reason is that the Treasury Bill yields were so low and he didn't even use adjusted betas. If he used adjust... Sorry, he did use adjusted betas. If he didn't use adjusted betas the results would be more nonsense. So, next slide, please.

Dr. Morin presented this in two thousand eleven (2011). He presented ECAPM estimates and the Régie said:

> The Régie has already ruled on the ECAPM. In the Régie's view, there is no new information that would warrant a reconsideration of this model.

And there was no new information in Dr. Villadsen's evidence. She is using exactly the same references that Dr. Vilbert used thirteen (13) years ago, there's nothing new that she has presented. And I would suggest that if she hasn't presented any new evidence, then if she actually implemented the ECAPM in the way that it was tested, her results would be nonsense as well.

Now, I did correct this in my testimony on page 57, for some reason I copied in the wrong quote from the Régie. So, this is the quote that's in the beginning of my report, and that's the quote that I meant to... to enter. And in the quote below I reference Dr. Morin and I should've represent... reference Dr. Vilbert. So, these are the corrections on my testimony.

So, that's the Capital Asset Pricing Model.

The ECAPM, they're not... Dr. Villadsen is not estimating it the way that it was estimated and there's no justification for adjusting betas. Okay. Next slide, please.

Now, one thing that has changed over the last five to ten years is that a lot of the investment banks have put their expected long run returns on their web pages. They use it basically as advertising, to try to get people to look at their forecast and use them for asset managers to think in terms of asset allocation.

The TD's forecast in two thousand and sixteen (2016), so that's a little bit out of date now and my... I actually got the two thousand nineteen (2019) report that I became aware of recently, and at that time in two thousand and sixteen (2016), if you look at the S&P Composite, long run expect rate of return seven percent (7%), S&P 500 seven percent (7%), MSCI Europe, Africa, Far East seven percent (7%), government of Canada bonds three point five percent (3.5%), the difference to market risk premium three point five percent (3.5%). Now, this is a low run risk premium, what we might say is compound returns, I don't recommend doing that, I recommend that they'll be adjusted to arithmetic return similar to my market risk premium estimates and they get up to the normal range of five to six percent (5-6%). But the point is the low run returns were about seven percent (7%). Next slide, please.

I provided several of these in my evidence, I didn't want to present all of them. All I've got here is Blackrock. Blackrock is the biggest fund manager in the world and basically they manage trillion of dollars of funds and they produce a long run forecast, and this is taken directly from their web page, and if you drop down into the middle of those green lines where they have equity returns, you see US Equities and a round dot is the middle of the... the range of possible values and that looks to be about seven point five percent (7.5%), consistent with the... the forecast of TD, a forecast marginally greater but not materially greater than large cap stocks.

And similarly government bonds down there in yellow, is about two, two and a half percent (2-2.5%), their forecast for long run returns. And these are long run returns, they're thirty (30) year returns because when we're looking at the market risk premium, we cannot think in terms of the next three or four or five years, we're talking about holding equities for a long period of time. So, that's just extra information that's out there. So, next slide, please.

So, these are my overall estimates and I found a second typo, I'm sure there are other typos in my report, but the top line seven, it's should be six point five five to seven point one percent (6.55-7.1%) and one and four are very close on the numeric keypad and I must've hit four by mistake, but it doesn't affect any of my estimates.

So, there's my CAPM or my risk premium estimate on the first block, and the second is all of the discounted cash flow and the other information that I look at: equity market returns eight to nine percent (8-9%), the average Canada return on equity from Statistics Canada nine point seven eight percent (9.78%), asset manager long run expected return seven to nine percent (7-9%), DCF equity cost for the S&P 500 Utilities subindex six point eight to six point nine (6.8-6.9), DCF equity cost for gas US utilities seven point two five percent (7.25%).

When I come out to my recommendation, I look at the variety of indicators, and now that we have all of this extra information, there's no justification for just looking at, say a DCF estimate, or just looking at Capital Asset Pricing Model. Next slide, please.

Now, I'm afraid this is what was really added to my presentation. The last time I was here for Gaz Métro, I didn't need to do this, because Dr. Morin did not use ATWACC. And here we've got my summary of Dr. Villadsen's estimates. The Ps indicate the pages where I extracted that information. For example, she's got a DCF constant growth model nine point nine percent (9.9%), multi-stage eight point seven (8.7), CAPM seven point six (7.6), ECAPM seven point seven (7.7).

So, as I mentioned, CAPM and ECAPM use adjusted betas and ECAPM I don't accept. So, that's why they're slightly higher than mine, but if you took that out, they'd be very similar to mine. The DCF multi-stage is better than the DCF constant growth because that doesn't assume that, I'm realistic, short run growth estimate go on to infinity as they can't.

But the critical thing is she derives what I call leverage adjustments, and she refers to them as leverage adjustments as well. The way she does this is she estimates the ATWACC, the After-Tax Weighted Average Cost of Capital, using market value weight and she then bumps them up by relevering them using book value weights. So, her ten percent (10%) or nine point nine percent (9.9%) DCF becomes twelve percent (12%), a two percent (2%) bump. Her DCF multi-stage eight point seven (8.7) gets bumped up to ten point five (10.5). Her CAPM seven point six (7.6), a smaller bump but still a bump to eight point five percent (8.5%), and a ECAPM seven point seven (7.7) to eight point seven percent (8.7%).

So, it's important to understand where these bumps come from because her direct estimates of the fair rate of return using the same sort of techniques as I use and other witnesses use are significantly lower. So, next slide, please.

The first board that was subject to this was the Alberta Energy... Energy and Utilities Board in nineteen ninety-nine (1999), twenty-three (23) years ago and I recorded this because this it the core of what she does:

> In essence, a regulated company's earnings are driven by the portion of the original cost rate base deemed to

> be financed by common equity. This fact results in a fundamental disconnect to the theory that market capitalization ratios, which have deviated significantly from book capitalization ratios, reflect the appropriate financial risk necessary to determine a fair composite return to be applied to the original cost rate base of a pure play regulated utility.

That's a very long sentence, but the AUC is saying basically: we're not going to pay that much attention to the market value weight. The appropriate weights are the book value weights. And they go on to say:

> This is because the earnings of a pure play regulated utility are governed by and driven by the regulated return allowed on book equity.

In other words, it is the book equity that reflects the appropriate financial risk necessary to determine a fair composite return for a pure play regulated utilities.

Now, as far as I'm aware, only Brattle

witnesses use this methodology in Canada. There may be others in the Unites States but I'm not aware of them. And neither Dr. Chrétien nor Dr. Morin made these leverage adjustments in two thousand and seven (2007) and two thousand eleven (2011). So, this is something unique to the Brattle group. Next slide, please.

So, how do they do this? Well, this comes directly from Dr. Villadsen's testimony. She takes the DCF equity cost, which as far as I'm concerned is the end, that's what you're estimating, that's what the AUC says you estimate a market determined equity cost that apply to book value. And then, if you notice column 4, it says DCF Common Equity to Market Value, column 6 says Preferred equity to Market value, column 8 says Debt to Market Value. So, these are all using market value capitalization rates that the AUC rejected, and she calculates the weighted average cost of capital.

Now, in two thousand and nine (2009) this was what Dr. Colby referred to as the After-Tax Weighted Average Cost of Capital, ATWACC, and it's what the Régie rejected ATWACC. And it's interesting to note that she doesn't refer to it as ATWACC, she's changed the terminology, it's now weighted average tax... Weighted After-Tax Cost of Capital, but that's exactly the same, it's the ATWACC. In fact, this exhibit is a parallel one in Dr. Vilbert testimony in two thousand and nine (2009). So, if we go to the next slide.

What is ATWACC? I taught this in my business finance course just a couple of weeks ago. It is totally standard to estimate the ATWACC, it's the minimum rate of return a firm's investment have to earn in order to increase market value, it's the very basis of what we call shareholder value maximization. So, if a firm earns less on an investment than its ATWACC, its stock market value falls.

There's a disconnect between the ATWACC and regulation. Regulation is not designed to increase shareholder value, it's designed to protect ratepayers from the exercise of market power. It is not designed to maximize shareholder value. So, the very essence of calculating an ATWACC, I regard, is incompatible with the reason why we regulated utilities, which is they have market power, and without regulation they would undoubtedly abuse that market power and generate social losses. So, if we go to the next slide, please.

And here is the crux of what ATWACC does, which is that she derives an ATWACC using market values and I have no problem with doing that. What I have problems with is using that market value ATWACC and then saying well, it's constant, and it's not constant, but she assumes it's constant and say, well what happens if instead of having forty-nine percent (49%) common equity in the market value weight we have forty percent (40%) common equity. And clearly, if five point six percent (5.6%) is constant, the cost of the debt is constant, the tax rate is constant, if you just reduce the equity you have to get a higher return on equity to satisfy five point six percent (5.6%). This is arithmetic, it's not financial theory, it's the assumption that she makes that somehow you can take a market value, ATWACC, and apply it to a utility at the same level we book value weight, and that's what the Alberta Utility Commission rejected.

But it's in this way that an eight point seven percent (8.7%) equity cost, which I would regard as marginally high for the multi-stage model, becomes a ten point five percent (10.5%) ROE, and that's what the Alberta Utility Commission rejected.

In regard of the next slide, it's what the Régie rejected and you should think about what would happen if you believed Dr. Villadsen's ATWACC and you said: well okay, we're going to increase the allowed ROE from eight point nine percent (8.9%) to ten point five percent (10.5%).

Well already the stock prices of all of the firms in Dr. Villadsen's sample exceed their book value, the market weights are greater than their regulated weights. So, the price to book exceeds one. If you get a bump in your ROE, the stock prices are not going to go down, the stock prices are going to go up, and then you get an even bigger equity capitalization and the ATWACC would go up, and the result is you then apply the technology again, the ROE goes up again. This is great for shareholders, but it is a fundamental disconnect between the way which we regulate utilities.

When we see a market to book ratio or a price to book ratio above one, automatically we think the allowed or fair rate of return should be lowered, we don't think it should be increased. And this technology, this methodology, basically does exactly the opposite of what most economists would think about in terms of regulation, that we should remove economic rents and get prices a little bit above the book value, not give a higher allowed ROE that increases the market to book ratio. Okay, next slide, please.

Now, Dr. Villadsen added what she calls her Hamada adjustment. So, you have to go back to what she originally does. This is... Sorry, I didn't mean actually to go back, so you can go to slide forty... thank you. So, here are her estimates of the direct CAPM estimates, risk-free rate two point four seven (2.47), Bloomberg betas, which I think we've established they're not Bloomberg betas, they are betas that she estimated from Bloomberg betas... from Bloomberg data. The long term market risk premium, which is not very different from mine, and then the CAPM and the ECAPM estimates.

Now, notice for TC Energy, TransCanada, the beta is one that she derives and the ECAPM and CAPM are exactly the same, as they should be. It's only for a high beta's stock AltaGas, and AltaGas is... no longer got regulated Canadian utility operations, it sold its Alberta operations to finance the acquisition of WGL in the United States. These primaries two got some... some pipelines, feeders pipelines that feed the mainline, but it’s got a beta of over one and as a result, you look at it and you see the CAPM estimate is too high and the ECAPM estimate is lower. But all of the others, for example for Hydro One, beta of point seven one (0.71), the use of the ECAPM bumps up the... the fair rate of return. So, that is what the ECAPM does, it increases the cost for low beta's stocks.

And as I said theoretically or empirically that's correct, but in practice you have to do it in a way consistent with the empirical result, which is what she does not do.

But even so, her estimates CAPM and ECAPM seven point six (7.6), seven point seven (7.7) they're very, very close to my own estimates, and in particular her market expected return is simply the risk-free rate plus the long term market risk premium, eight point one five percent (8.15%).

And if you believe that part of Dr. Villadsen's evidence, then you're basically saying the return for a low risk utility should be less than eight point one five percent (8.15%). Next slide, please.

This is what she ends up with. Now, I've noticed, no two things here first. Énergir has forty-six percent (46%) common equity, the seven point five percent (7.5%) preferred shares that are deemed, as far as the rating agencies and everyone else is concerned is common equity and only does his lower the overall allowed return on the common equity. So, forty-six percent (46%), you wouldn't expect this leveraging to do anything, and if you notice, it doesn't do anything.

So, if you look a scenario 1, and I reject scenario 2 because that eight point five zero five percent (8.505%) market risk premium is higher than any survey results from over a thousand people responding to Fernandez's survey.

So if you leave their fair rate of return as based upon forty-six percent (46 %) equity which is my recommendation, her CAPM, ECAPM are indistinguishable from my seven point five percent (7.5 %) recommendation. She has seven point six (7.6) and seven point seven (7.7). Her Hamada adjustments make really tiny differences because the leverage is basically exactly the same.

The forty percent (40%) deemed common equity. I am confused here, I thought her recommendation was forty-three percent (43%) common equity. Using a forty percent (40%) simply gets a high leverage adjustment.

So, at forty-three percent (43%), it would be clearly be in-between the forty (40) and the forty-six percent (46%). So next slide, please.

How did she get this? Well, she does exactly the same thing as in ATWACC. She uses the market value equity weights. And we can see that in column 3, Common equity to Market value, we can see it in column 4 Market value, we can see it in column 5, Market value and she has the income tax rate the same as the ATWACC. All she is doing here, is calculating what we call the asset beta or the equity cost to an unlevered firm.

But she is doing it using market value weights, exactly the same as she is calculating ATWACC, using market value weights.

And I discussed this in Appendix E to my testimony, the only thing different, is I use a more conventional way of talking about the asset beta as the unlevered equity cost rather than calling it an unlevered or asset beta. So that is really just a difference in notation.

But the critical things, is she’s using market value weights and that means that this asset beta is higher than it should be. Okay, so go to the next slide.

The second is the relevering exercise. So the Dr. Villadsen relevers the betas, using the regulated book values. This is exactly the same as using a constant ATWACC with book value.

The core of this is market value estimation and in book value revaluing the fair return.

Now, she does not get as much of a bump from this, because the betas don't go very much. But what we have got here is what I refer to as a double adjustment. First of all, she adjusts the betas upwards to about point nine (.9) and then, she does the leverage adjustment, which given the capital structures are not that much different. Only get her a bump from point nine (.9) to one point zero one (1.01) or one point zero five (1.05).

But the critical thing is Dr. Villadsen is assuming that with these adjustments, Canadian utilities, Énergir, and not just Énergir, but any Canadian utility, because there is nothing in this that says Énergir, is basically high risk than the stock market, which I simply don't accept.

Next slide, please. So with these Hamada unlevered equities, to column 2, she says unlevered equity, I think that is incorrect, that is the relevered beta from the previous slide, so that is incorrect, but she then estimates the fair rate of return, using the CAPM and the ECAPM with these double adjusted betas to get eight point four (8.4), eight point five (8.5), eight point two (8.2) and as I said, this does not do a lot for her estimates, because the capital structure weights are not that different, but this is essentially exactly the same methodology, market value weights to estimate book value weights to relever as in the ATWACC.

Next slide, please. So what did the Régie say about this in two thousand and nine (2009)? First of all, I quote the Alberta Energy and Utilities Board, they explicitly said:

> We would be derelict in exercising their statutory responsibilities to accept ATWACC based leveraged adjustments.

And I will say that again, because I have never ever seen a methodology rejected by a regulatory board saying they “would be derelict to accept” this particular process. But the Alberta AUB as it then was, said that they would be derelict to accept this process of relevering betas and using the ATWACC.

And the Régie, when faced with this in two thousand and nine (2009) again said:

> ... conceptual difficulties involved in applying the ATWACC according to market values.

So it is the market values that is driving these underlying results in the ATWACC and it is the market values that is driving the underlying results in her leverage adjustments to the CAPM and the ECAPM.

And the Régie rejected this in two thousand and nine (2009) but the Hamada adjustments, leverage adjustments, are essentially doing exactly the same thing, only it's not as powerful in changing her allowed ROEs as using the constant ATWACC.

Okay, final slide, please. So what's my conclusion? My conclusion is there is no evidence for increased business risk by the Québec Utilities, certainly at this point in time, there are increased risks out there, but the question the Régie has to address is: will all these risks that would actually be reflected and be born by the utility, or will they be born by ratepayers? And the experience of the allowed versus the actual ROE, is that invariably, these are risks that even if they materialize, get reflected and born by the ratepayers, not born by the utility.

No evidence for materially increased betas or market risk premium, significant evidence that there are real problems in the long Canada bond market. And as a result the forecast long Canada interest rate, I don’t regard as a good base for a CAPM fair rate of return.

When you are looking at this, sometimes you have to fall back on common sense and common sense is a risk hierarchy. Which is to say: if you believe that the regulated utilities in Canada are lower risks than the overall stock market, which is what their betas indicate, then their fair rate of return should be lower than the overall stock market return.

And substantial evidence, I will refer to TD and Blackrock, but my evidence has got J.P. Morgan, Northern Trust, Duff and Phelps, I have not found anybody that has a forecast overall long run return on the capital market about nine percent

(9%). Which means that there is sort of a limit on a fair rate of return for regulated utilities.

And I will say again, absent adjusted betas, absent the ECAPM and absent leverage adjustments, I should have put in there with book value weights, all of which the Régie has rejected, Dr. Villadsen's direct estimates are now higher than mine, or not materially higher than mine. They are certainly narrower than my estimates eleven (11) years ago, relative to Dr. Morin's, who didn't used ATWACC.

Q. **[6]** So thank you, Dr. Booth, I have no further questions. So he is available for cross-examination.

Me PATRICK OUELLET :

Donc, je suis à votre disposition, je peux commencer maintenant ou on peut prendre la pause, je laisse ça à votre discrétion, c'est comme vous voulez.

LE PRÉSIDENT :

On peut continuer, on peut faire...

Me PATRICK OUELLET :

Parfait.

LE PRÉSIDENT :

... une bonne demi-heure, là.

Me PATRICK OUELLET :

Oui, oui, absolument.

LE PRÉSIDENT :

Dr. Booth, I see that your picture is frozen on the screen, so maybe if you can try to put your camera off, then on, to see if it can solve the problem. Yes, that’s good, thank you.

Me PATRICK OUELLET :

Je réalise que j'étais à « mute », mais j'avais demandé à madame la greffière de retirer la présentation. Donc, c'est parfait.

CROSS-EXAMINED BY Me PATRICK OUELLET:

Q. **[7]** Dr. Booth, good morning.
A. Good morning, Mr. Ouellet.
Q. **[8]** So, I will have several questions for you, this morning and most likely this afternoon. If, at any point in time, my question is not clear, feel free to ask me to repeat or reformulate. Sometimes I have, I use French expressions in my English, so it is not always easy to understand. If that happens, let me know.
R. Well, we will see.
Q. **[9]** Great. Now, can you please turn to page 26 of your evidence? La pièce C-ACIG-0037.
R. Yes.

Q. **[10]** Donc, Madame la Greffière, est-ce que vous voulez la mettre sur... on va attendre, we will just wait for the clerk to add that on the screen. So that would be page 26 of... the actual page number at the bottom, so that it would be... okay. Here we are.

Okay. So, I first like to discuss interest rates, Dr. Booth. So you'll agree with me that the risk-free rate is a key input into the Capital Asset Pricing Model?

R. Absolutely.

Q. **[11]** Now, on the middle of page 26 of your added answer, what we see in the middle of that page, is a screenshot from the Bank of Canada's website, correct?

R. Correct.

Q. **[12]** And that was taken before the finalization of your expert evidence on April eight (8) of twenty twenty-two (2022). Correct?

R. Yes, it's the last one that I had...

Q. **[13]** Okay.

R. They update it once a month.

Q. **[14]** So it was the most recent one, at the time that your expert report was published, is that correct? Okay.

R. And it is now gone up.

Q. **[15]** Well, I think you see me coming. So we will look at how those numbers had moved, since the filing of your report. So, you do agree with me that all the figures' listed, shown here on the middle page 26, have all gone up, since your report was filed?

R. That’ correct.

Q. **[16]** Okay. Now, I would like to show you...

R. Canada is a bit lower than the U.S. and the U.K. The U.K. is now at nine percent (9%), the U.S., I think, the last one was eight point seven percent (8.7%) and we are expecting seven percent (7%) headline CPI coming up this week.

Q. **[17]** I appreciate your comments, Dr. Booth, but I haven’t asked you a question.

R. Oh, sorry.

Q. **[18]** Okay. So I want to show you what we have called exhibit B-0365. Donc, est-ce qu'il serait sur le... j'avais compris qu'il avait été ajouté sur le SDÉ?

Me PAULE HAMELIN :

Je ne le vois pas, encore.

LE PRÉSIDENT :

Effectivement, on l'a.

Me PATRICK OUELLET :
Donnez-moi juste une petite seconde, je vais consulter maître Cloutier, là. We will just let madame St-Cyr... Give her time to find the documents, so it's B... it is there, I am told it is there. B-0365. Okay.
Q. **[19]** At any point in time, Dr. Booth, if I show you a document on the screen and you want time to review it before I ask my question, you let me know.
R. I will.
Q. **[20]** Okay. So, what we see here is an extract of the Bank of Canada's website which is the latest one, dated June or, it was taken on June 7th. So you agree with me that these are the actual figures. So the policy interest rate now is one point five percent (1.5%).
R. Yes.
Q. **[21]** As opposed to zero point twenty-five percent (0,25%) as it stood when your report was filed, correct?
R. I'd have to check to say exactly what it was, when it was filed, but it is certainly, certainly one point five percent (1.5%) now and it has gone up.
Q. **[22]** Okay. Now, but what we see on page 26 of your

report, I thought it was the most recent data, at the time of the filing of your report?

R. That’s correct.

Q. **[23]** Okay, so if we go back to page 26, we will see zero point twenty-five (0.25)? No, 26 of the evidence, the one we were on before, yes.

R. That’s correct. This was the last time that I... dealing with IGUA required going backward and forward with clients, and in previous hearings, I basically filed my testimony myself, without having to sort of draft testimony and then getting feedback. So this was what I had in my report, when I prepared my report that went to IGUA and then there was some feedback in terms of spelling typos and presentation. So I did, so I did not have time to make changes by the time it was filed.

Q. **[24]** Okay, so this was not the latest data available at the time of the filing of your report. Is that correct?

R. That’s correct. It was the latest data that I had when I prepared my report and I submitted it to IGUA.

Q. **[25]** Okay. And then you did recheck the data to have the most actual one at the time of the filing of your report. So that would be February data. Is

that correct?
R. That's correct. It's a significant amount of rewriting and redoing in a short period of time. It's like chasing your tail, Mister Ouellet. So it's... And I note for example, the testimony filed by the Brattle group similarly the deadline in terms of the date on the document is not the date of the data. Unfortunately when it get a little bit bureaucratic it's more difficult to, to control your own testimony. In term of filing.
Q. **[26]** Yes, but you did hear doctor Villadsen's testimony and she corrected her data to make it most up to date at the time she testify. You did not correct the data.
R. I've not corrected it because as I told you before, I've not changed my overall fair rate of return until we hit a three point eight percent (3.8%) long Canada bond yield.
Q. **[27]** O.K. So, so...
R. We're still a long way away from there.
Q. **[28]** So, we'll do the correction. We'll look at these information. So the...
Me PAULE HAMELIN :
Maître Ouellet, j'aimerais juste que vous laissiez, please let the witness answer the question because

you interrupted him when he wants to answer.

Me PATRICK OUELLET :

Vous avez raison Maître Hamelin, je m'en excuse, j'ai été un peu prompt. Mais j'ai quand même laissé le témoin terminer. J'ai tendance à vouloir poser ma question vite, mais je vais faire un effort pour ne pas le refaire.

Me PAULE HAMELIN :

Sinon je vais revenir. Vous allez le savoir.

Me PATRICK OUELLET :

Vous serez la bienvenue de le faire, il n'y a pas de problème.

Q. **[29]** So, let's look at the information, Dr. Booth. What I want to do is I want to compare the information we had in your expert evidence to the most up-to-date information. So, the policy interest rate went up by six hundred percent (600%) since the filing of your report. So from zero point twenty-five (0.25) until one point five percent (1.5%)?

R. Yes, I prefer to say it's one point two five percent (1.25%), rather than six hundred percent (600%).

Q. **[30]** But, do you deny, do you deny this is a six hundred percent (600%) increase?

R. Well, that's one way of expressing it but if I was to go on the media, as I've done several times and say the policy interest rate increased by six hundred percent (600%), jaws will drop. That's not, that's not the way we express it. So, mathematically you're correct but that would be a misleading interpretation of the number.

Q. **[31]** So, doing the maths you're suggesting is misleading?

R. Frequently it's misleading, yes

Q. **[32]** Okay.

R. You got very low numbers then a small increase gets compounded in a very big percentage increase. For example, if the policy rate was like in the United States, where they give a range where the lower bound was zero any increase is a phenomenal increase from zero.

Q. **[33]** Okay. I will show you now a document B-0366. Madame la Greffière, B-0366. So, maybe for everyone's sake including mine, if you could make this a little bit bigger? Okay.

So, you see this document. You're familiar with this Dr. Booth? An extract of the Bank of Canada website?

R. Well, I'm familiar with Bank of Canada website and

I’m familiar with these numbers, correct.

Q. **[34]** Okay. So, we can see, and this is a... in the chart to the right, we see the policy interest rate changes. And, we have the zero point twenty-five (0.25) that you have in your report so that’s January twenty-six (26), two thousand and twenty-two (2022). So that’s the figure we have at page 26. Now you’ll agree with me that on March 2nd, the policy interest rate had doubled. Going from zero point two five (0.25) to zero point five (0.5). That’s correct?

R. That’s correct. It’s going up twenty-five (25) basis points, it’s correct.

Q. **[35]** Yes. And so, that happened over a month before you filed your expert evidence? Correct?

R. That’s correct.

Q. **[36]** Okay. And you didn’t think of changing the data on page 26 for data that had been available over a month before you finalise your evidence?

R. No. Because it wouldn’t had changed my recommendations.

Q. **[37]** It wouldn’t have changed your recommendations. Okay. Some these numbers here, they don’t change your final figure at seven point five percent (7.5%), that’s what we should to understand? Okay.

But, but since you're putting the data in your testimony, didn't you think it appropriate to give the actual accurate data?

R. I think you're actually correct, perhaps I could have gone through and redrafted that. But as I explained to you, I provided my testimony to IGUA and I wrote it in part, and as you probably counted the pages, it's about two hundred (200) pages, in terms of my testimony. And I drafted one, move on to another and then send them to IGUA and got some comments stylistically. And I think, that you're probably right that I could had gone back and change that, but then it would had gone back and they would have generated another round of changes. So, I was warned to... this testimony there will be more interaction with counsel and members of IGUA because there are other bodies looking at my report. So I'd a hundred percent (100%) agree with you that perhaps I should have done it. And I would have done it, for example, in two thousand eleven (2011), when nobody looked at my evidence. I wrote my evidence and could submit it without anybody looking at it. I don't think Guy, at that time the lawyer, ever read it before I submitted it.

Q. **[38]** Okay.

R. So, I apologies for that, but you’re right.

Q. **[39]** No... Thank you for that Dr. Booth. And the reason why I’m asking this question, is if you look at page 7 of your evidence...

R. Yes.

Q. **[40]** It’s footnote 2. I don’t know if we necessarily need, if we do need to put it on the screen, but, at footnote 2, you referenced a decision rendered on March thirty first (31st) of twenty twenty-two (2022). So I would have thought that your data was actually up-to-date since at least that date. Since you, you refer to something of March thirty first (31st), so did you adjusted some of the data but not all of it?

R. I think it’s fair to say that when something important comes out that affects my testimony, then I will put that in. That’s correct. As I thought, the Régie... it was much more important that the Régie be aware of the Alberta Utilities Commission in determining the fair rate of return and capital structure, than that the overnight increases twenty-five (25) basis points. But.. with, with... For example, if, if I refiled my testimony now, and put in March thirty first (31st) in the screen capture, wouldn’t change anything in my testimony.

But the Alberta Utilities Commission's decision, that I think the Régie should be aware of it.

Q. **[41]** If we can go back to the document I initially showed the witness B-0365. So, I want to go back to the June seventh (7th) data, Doctor Booth. That I showed you originally.

R. Yes. This is my own testimony, page 26?

Q. **[42]** Yes. With, with the actual data from June.

R. Okay.

Q. **[43]** So you have this, and if we could have in front of the witness as well the 0365. Peut-être juste pour vous donner une indication, Madame la Greffière, je vais revenir souvent à la page 26 du rapport du docteur Booth quand je vais aller d'un document à l'autre. So I'm just advising the Court, Doctor Booth, that I will come back to page 26 of your report several times. Okay.

So here you have the June seventh (7th) data. So, we look at the spike in the policy interest rate. I'd like to look at inflation. So the data you had, at page 26 of your report, CPI Inflation stood at five point one (5.1) now it has increased to six point eight (6.8). Is that correct?

R. Yes, that does indicate that that's the case. But,

as I said I think it could be seven point three (7.3%) next time it's released.
Q. **[44]** Well, that's just save me a question for you so, I think we agree on that. So it's supposed to increase again, it's what the forecast say. Correct?
R. Right.
Q. **[45]** Okay. Now the CP... you have what you refer in your report as three core measures for inflation. So those also rose. So CPI Trim went from four percent (4%) to five point one percent (5.1%). Correct?
R. Well, yes. These are the Bank of Canada's measures. They don't like to look at headline CPI because it contains a lot of volatile items. But there are transitory. So, CPI Trim just trim the high and the low values, the Median Peak the middle value and CPI-common is, I think is what's called a principle component to adjust the estimate of the underlying values. Different measures trying to get at the core rate of inflation.
Q. **[46]** We see another example of what maître Hamelin was referring to. I almost interrupted you there. I'll be careful not to do it. So, you agree with me that all three core measures of CPI, so Trim went

from four (4) to five point one (5.1). Median went from three point three (3.3) to four point four (4.4) and CPI-common went from two point three (2.3) to three point two (3.2). Correct?

R. Yes. That's the concerning event, Mister Ouellet. Because when you look at this, what the Bank is concerned about is the temporary inflation contaminating wages increases and catch up on unions and things and as a result getting embedded in core inflation. So the concerns is not the headline inflation rate. Because that really affected by food stuff, particularly in commodities' prices, particularly in oil and gas. But it's these core measures and want to stop... They just signed an agreement on December seventeenth (17th) basically maintaining inflation in a one to three percent (1-3%) range.

Q. **[47]** Again, this is very interesting but just maybe focus on my question.

R. Okay. Sorry.

Q. **[48]** We saw earlier that there was a policy rate increase on March second (2nd). Which was not referred to into your report. We saw the June seventh (7th) as well, already. You do recall that there was another policy interest rate increase on

April thirteenth (13th), of twenty twenty-two (2020). Is that correct?

R. That's correct.

Q. **[49]** Okay. So that's five, to be fair, that's five days after your report was filed. So obviously you could not have that data in your report. Now I'd like to go to document B-0367. So what I'm going to show you, Dr. Booth, is a press release from the Bank of Canada, on April thirteenth (13th). So the second to last increase of the policy interest rate. Donc 0367.

Let me know if you want me to give you time to read the document. My questions are on the last paragraph, at the second page. But if you want to read the entire thing, feel free but my questions are on just before the Information note there: With the economy. You see that? Just let me know when you've read the document.

R. Okay. That's fine. I've read this before.

Q. **[50]** Okay. So this is the press release that was released by the Bank of Canada when it increased the policy interest rate by fifty (50) basis points on April thirteenth (13th). So what I want to look at with you, is... I'll read the paragraph:

With the economy moving into excess

> demand and inflation persisting well above target, the Governing Council judges that interest rates will need to rise further.

So, that was April thirteenth (13th) so obviously you'll agree with me that it was not a surprise to you when there was another increase in June?

R. Not really and I've been on the television in the last several days talking about interest rate increases.

Q. **[51]** Yes.

R. So that didn't surprised me at all.

Q. **[52]** Now, we continue:

> The policy interest rate is the Bank's primary monetary policy instrument, and quantitative tightening will complement increases in the policy rate. The timing and pace of further increases in the policy rate will be guided by the Bank's ongoing assessment of the economy and its commitment to achieving the 2% inflation target.

So, you do agree with me that... strike that question. I wanted to show you that, I wanted to show you this press release and compare the wording with the June first (1st) press release. So I'll show you now document 0368. B-0368. So I want to compare the language in the April thirteenth (13th) with the language in the June first (1st). Again in the same paragraph, the last one. So I'll just highlight with you Dr. Booth -- Let me know if you want time to read this?

R. No. I notice that the words are very very similar.

Q. **[53]** Yes. There's... I want to question you on the little differences that there are. So I'll, I will highlight those for you. So what you have in front of you is the press release that accompanied the latest interest, policy interest rate increase. So, paragraph... I'm trying to make... just change the document so I can read it. Okay. So:

> With the economy in excess demand, and inflation persisting well above target and...

And then, there is new words there :

> ... and expected to move higher in the near term...

You see that?

R. Yes.

Q. **[54]** Okay. So you do agree with me that inflation

is well above target, first of all?
R. Obviously, yes.
Q. **[55]** Okay. And you do also agree with me that the inflation is expected to move higher, in the near term?
R. Yes, and I told my students: expect an overnight rate of four point five percent (4.5%) as the rate, the last time the Bank of Canada tried to slow down the economy in two thousand seven (2007).
Q. **[56]** So, presently it is at one (1)... you expect it at four point five percent (4.5%), in fact, to achieve that on what date, approximately?
R. Oh, I'm not going to give dates, because I mean if I gave a date, you are going to say: it occurred five days earlier or five days later.
Q. **[57]** No, no, no, no, no, no, I am not going to be cross-examining you, once that occurs, this case will be over, so there is nothing to worry about. But you tell me, you are telling me, you tell your students that the policy interest rate is probably going to hit four point five percent (4.5%). When, in your opinion, is that supposed to be achieved?
R. I think it all depends upon the political implications of housing prices in... primarily in the Greater Toronto area...

Q. **[58]** Hum, hum.

R. ... and generally in Canada, and the problem it imposes on younger people, particularly Millennials and Generation Z, who had been encouraged to buy housing. The government is giving them incentives to buy housing and a lot of them have bought houses or condominiums in the last eighteen (18) months, two years, and if those prices start dropping dramatically, you are going to see a lot of screaming by Millennials and Generation Z.

And they will...you can generate... they are already into a little bit of a generation war between Millennials and Boomers like me, and I can see that that would be a political problem for the federal government.

So we saw, for example, in Chrystia Freeland's comments, last week, that she is trying to address some of the problems of higher inflation and in fact, she generates a claimer, another nine billion dollars ($9 B) worth of spending which for economists this is worst, it just increase the amount of spending in the economy. But they are definitely concerned about the impact on Millennials, of increasing interest rates.

So I think, as I tell my students: the last time the Central Bank tried to slow down the inflation in Canada was back into two thousand and seven (2007) and the rate went to four point five percent (4.5%).

At the moment, we are nowhere close to slowing down the economy. The overall demand is way too strong and we got so much built-up savings that you are going to have to have significant increases in the overnight rate.

How quickly they do that depends entirely on the politically implications of Millennials having serious financial trouble to pay for their mortgages.

So it is a political, ultimately, it's the political decision. The Governing Council of the Bank of Canada, the Deputy Minister of Finance sits on the Governing Council. So the Bank of Canada is independent but it does not mean to say that there is not a chill and throw between the government and the Bank of Canada.

Q. **[59]** Dr. Booth, do you agree with me that when, as a general rule, obviously when we see inflation rate increasing, we also see an increase in the rate for the thirty (30) year Canadian Treasury Bond yield?

R. Possibly.

Q. **[60]** As a general rule, it's a... there is exceptions.

R. The, I have here the... you can’t see it, but I have, in front of me, the June seventh (7th), Royal Bank of Canada forecast.

Q. **[61]** Hum, hum.

R. And in my view, I was hopeful that we were normalizing, and when I say I was hopeful we were normalizing, it's the interest rates would get back to normal. As I have said in my testimony, I believe anything lower than the three point eight percent (3.8%) long Canada bond yield, as being abnormal and I was really surprised with the Royal Bank of Canada forecast, obviously it’s June the seventh (7th), I couldn’t put it in my testimony, but they have the thirty (30) year long Canada bond yield in the end of two thousand and twenty-three (2023) and two point five five percent (2.55%) which is thirty (30) basis points less than now.

So their forecast in the long Canada bond yield is not going to get to my forecast of three point three seven percent (3.37%), let alone three point eight percent (3.8%), their forecasting it’s going to go down.

Now, the way that that is going to happen, if RBC is correct, is that the Bank of Canada is going to increase the short rates and we are going to have a recession and we are going to break the inflationary spiral and if we break the inflationary spiral, we are going to breakdown inflation and as a result, long term interest rates will come down.

So when we look at inflation, you see, pawn to separate out the transitory effects of the moment and a lot of this is still transitory.

At a time of my forecast or the time of my evidence Bank of Canada was forecasting the inflation would come down within its one to three percent (1-3%) range within a year, they're now pushed that off to two years.

But the most important thing, is they have not pushed it off indefinitely. They simply can't allow inflation to stay at these sorts of levels.

Q. **[62]** But on the short term, if we look at the next one, two, three years, you do agree with me that inflation is expected to rise, to continue to rise?

R. I expect it to rise and I think it has put the Bank of Canada and the federal government in a really difficult place.

Q. **[63]** Yes.

R. Tim Macklem, my former dean is governor of the Bank of Canada. He has admitted he made a mistake. The Bank of England, the governors admitted they made a mistake. The governors of the Federal Reserve have admitted they made a mistake. So all the central banks have made a mistake essentially in not reacting quickly enough to stop buying bonds and to tighten, to let the bonds run off and increase the short term interest rate.

Because we've got all these massive build-up of savings, for the last two years -- now, I don't know what Montréal airport is like, but Toronto Pearson is packed with people flying to Europe. They can't process them and the restaurants are buzzing and they're full. We had two years where people have been saving money and now they are spending money. It is like you've released the top of a pressure cooker and we got this strong spending that is now adding to the supply side problems on the economy, which started the increase in inflation.

Q. **[64]** Okay. So with increased inflation on the short term, we can expect increasing long term yield bonds as well on the short term. Correct?

R. I think we might have peaked, it all depends how quickly the Bank of Canada pushes up interest rates, which I regard as a political decision, rather than an economic decision, at the moment. Simply because higher interest rates don't affect everybody. It does not affect me at all, but it does affect Millennials and Generation Z.

Q. **[65]** Do you agree with me that economists expect the Bank of Canada to raise interest rates again in mid-July of twenty twenty-two (2022)?

R. Absolutely, I expect, as I said, I mean, to really slow down the economy, we are going to have to have an overnight rate at least three and half percent (3.5%) and it could be as high to four and a half percent (4.5%).

The neutral rate where they are not stimulating the economy is about two and a half percent (2.5%), we are not quite sure where it is, it is guess work, but it is about two and a half percent (2.5%) and we are not even at that yet.

So we are still stimulating the economy.

Q. **[66]** Now going back to the press release that we still have on the screen, we see near the bottom, there, the pace, you see the sentence that starts with "the pace"? So:

> The pace of further increases in the policy rate will be guided by the Bank’s ongoing assessment of the economy and inflation.

Whereas on April thirteenth (13th), we did not have the words "and inflation".

Again, compare, remember, I am comparing the press release from April thirteenth (13th). So you do... do you agree with me that should higher inflation persist, the Bank of Canada should tighten its monetary policy?

R. Absolutely. Tim has already admitted that he made a mistake. He admitted that he made a mistake, and now he is sort of retracing a little bit and saying: well, we are paying a lot of attention and we could be a lot quicker in the future. So that, I view, as just a reflection of the fact that he has publicly admitted that he made a mistake.

Q. **[67]** And tightening monetary policy is usually done through policy interest rate increase. Correct?

R. Yes, traditionally what we call monetary policies is all of the short end. Its treasury bills, it’s short term investments, unconventional monetary policy is all of this quantitative easing or this massive bond buying that we’ve seen, which has not

been a really big factor in Canada until COVID- 19.
Q. **[68]** And you agree with me with that, all else equal, higher policy interest rate equals higher cost of capital?
R. Now that is slipping in a different world. What is the cost of capital? It depends if we deal with the cost of capital when we are talking about long term investments, we are dealing with long term interest rates, not short term interest rates.

The only role for short term interest rates is basically what we call working capital management, inventories. When the short rate goes up, you stop stocking inventory. You don't stop making long term investments.
Q. **[69]** So are you suggesting we should put more weight on the long term than on the short term?
R. That is a crafty question, Mr. Ouellet, (inaudible).
Q. **[70]** Well... so you do not agree, you do not agree that more weight needs to be put on the short term as opposed to the long term?
R. Are you talking about business risk or you are talking about interest rates?
Q. **[71]** I am talking about interest rates, for the time being.

R. Okay, fine. So in talking about interest rates, the... when you look at interest rates, until unconventional monetary policies started around two thousand and ten (2010), the standard argument was when you buy long term bond, a thirty (30) year bond, you are going to see a recession, a boom, a recession, a boom. You are going to see three or four recessions or booms over the life of that thirty (30) year bond.

If you buy a one year bond, you are only caring about what happens over the one year and if you're looking at the recession over that one year, that is what is going to drive the yields.

So long term bonds are not as sensitive to interest rates as short term bonds, where short term bonds clearly are affected by the central banks' policy rate, the Federal Funds rate in the United States, the overnight rate in Canada. That is why we referred to bond buying as unconventional monetary policy.

Q. **[72]** Now, going back to page 26 of your evidence, je suis... je m'apprête à changer de sujet, je ne sais pas si vous voulez continuer encore. Moi, je suis à votre disposition, là, je peux continuer une vingtaine de minutes encore, si vous voulez.

LE PRÉSIDENT :
Bien, vous pourriez terminer votre ligne de questions, puis on prendra une pause.
Me PATRICK OUELLET :
Parfait. Donc, je vais faire ce sujet-là, puis... qui n'est pas très long...
LE PRÉSIDENT :
Oui.
Me PATRICK OUELLET :
... et on prendra la pause.
Q. **[73]** Dr. Booth, I am just going to deal with this short subject and then we will take the break.
R. Okay.
Q. **[74]** So page 26, no, no, not of the PowerPoint, of the... de son rapport, en fait, de son « direct testimony ». Okay. Still that same page we were on, where you had the Bank of Canada data from January.
R. You are going to give me nightmares about this page.
Q. **[75]** I know. That is what cross-examination is all about, hey. Let us... if we look at the end of page 70, no I am sorry, not of line 17, at the line 17, you see a statement here :

> The Bank expects these other factors to stabilise in twenty twenty-two

(2022) and inflation to move to slightly above the middle of its operating band of two percent (2.0%).

I think we touched on this a little bit before today, so that was true at the time you wrote your report, but it is no longer true today. Correct?

R. That is true and as I say, it is difficult for the Bank to say anything else, given the fact that it just renewed the target of one to three percent (1-3%), with a two percent (2%) middle value. So, to say anything else is basically saying: well, what we just agreed to with the federal government straight out the window, it doesn't work.

Q. **[76]** Just to make sure we got your answer, I said that was true at the time you wrote your report, but it is no longer true today and you responded: "That is true". So... that is true?

R. Yes.

Q. **[77]** But what is true? It is true that it is no longer true?

R. It is true that it is no longer...

Q. **[78]** Okay.

R. ... the Bank no longer expecting inflation to stabilize in twenty twenty-two (2022), clearly we've got increasing inflation. It is no longer true that the Bank expects inflation to move to slightly above the middle of his operating band. That was the forecast of the Bank at the time. It subsequently pushed that off for at least a year and I suspect, to be honest, it is going to have to backtrack on that. I think in fact it’s going to be longer, higher for longer.

Q. **[79]** I agree with you and I want to review that topic with you, as well. So if we could go to document... C'est le B-0371. So what you have on this... in this document, you are familiar with... it is the Monetary Policy Report of April twenty twenty-two (2022)?

R. I’ve looked at it, yes.

Q. **[80]** Okay, so again, in fairness to you, Dr. Booth, this was released on April thirteenth (13th), so five days after your report was filed?

R. Okay.

Q. **[81]** Just so we are on the same page. Now, if we go to page 5 of the PDF which is the page that’s numbered 1. You were there, you were there. Okay. Page 1. On continue à monter un petit peu. Encore un peu. There we go. Okay. Overview. And then, again, if you want to take the time to read the entire thing, let me know. My question is on the first bullet in “Key messages”. So I’ll just read this for the transcript:

> The outlook for CPI inflation in Canada is higher than previously projected. Inflation is expected to average just below 6% through the first half of 2022 and remain well above the control range through the rest of the year. It should then steadily decline to about 2.5% in the second half of 2023 and to the 2% target in 2024. This decline reflects decreases in energy prices, a dissipation of global supply chain constraints and a rebalancing of supply and demand in the Canadian economy.

So, you’re familiar with that statement?

R. I’m familiar with the Bank’s view and I think in July it will have to retract on some of that as well.

Q. **[82]** That’s exactly my point Dr. Booth that I want to review with you. In April, so the date of, of this report, that we’re looking at, April thirteenth (13th). The Bank was saying that it was expecting:

> Inflation is expected to average just below 6% through the first half of 2022...

But what we see now, is now that we're almost half way through twenty twenty-two (2022), that inflation has it stands now it's not, it's not, is above six percent (6%). It's six point eight (6.8%) and expected to rise again on the short term. Correct?

R. Correct.

Q. **[83]** So that's why you say that they'll have to retract from that because the data when, when they increased the rate on June first (1st) again that had to changed the forecast.

R. I think all of the... I'm not blaming, as I said Tim Macklem is a formal colleague of mine and, he was the dean of the Rotman's School, but I think Tim suffer the same problem as the governor of the Bank of England, and the governors of the Fed Reserve they were all late, and the key thing is they thought the supply bottlenecks would clear up a lot quicker than they actually have. In fact, as you're probably aware China keeps locking down critical cities. It's like, that game, that affair where you bang the head of an animal that comes up and then another one pop up. China just keeps locking down periodically, rather than use mass inoculations.

So, we got those problems that continuously come about. We've got the problems involving Russia and there's certain critical things that Russia produces that are identical in problems, but the big one is that they just didn't take into account the massive amount of savings on the part of consumers. And their desire after two years of lockdown to get out and spend. And that's gonna continue for a period of time and I don't personally think that they got the will to increase interest raise enough to break that.

If fact I was on Global television, one of our networks, a couple of nights ago, and saying: I think we should seriously think about increasing the GST. Because we need some sort of blanket increase in, in taxes, basically to break the back of inflation. And increasing interest rates, as I said, it affects certain sectors of the economy. It's really unfair in some sense, that it hits some particular groups, and not other groups whereas an increase in the GST affects everybody.

Q. **[84]** Before we take the break, I just want to, I just have a few clarifications and questions on what you just referred to. When you say the Bank of Canada was late in... what you mean is, it was late in increasing interest rates?

R. Yes. Very late in increasing interest rates. They should have, it should have stopped buying bonds in the middle of last year. And it should have stopped and as soon start increasing interest rates, last fall at least, and not just our Bank, but all of the banks.

Q. **[85]** On that topic, you saw that last week the Fed in the US increased its interest rate by seventy-five (75) basis points. Do you saw that?

R. Not enough.

Q. **[86]** Okay. And that was the biggest increase since nineteen ninety-four (1994). Is that correct?

R. That’s correct. But you gotta remember it’s the biggest increase because we’ve have two percentage inflation target since nineteen ninety six (1996). So as a result inflation hasn’t been a serious problem for, for decades.

Q. **[87]** In fact it illustrates what... sorry go ahead, go on, go on.

R. My students, one of the first things I do is I ask them how old they are. Because they don't recognize what us, old people, lived through in the nineteen's, seventy's, eighty's and ninety's. So their perspective is not that, say, a two and half percent (2.5%) mortgage is a great deal. Their perspective is that's normal. And it's not normal. They've never had a significant inflation. And it's the job of the Bank of Canada and the central banks to get us back to two percent (2%) inflation.

But I remember when my mortgage was twenty-three (23%). And I remember when we had fourteen percent (14%), thirteen (13) and fourteen percent (13-14%) inflation in Canada. So, I know what it was like before we came to this agreement between the federal government and the Bank of Canada to bring inflation down to two percent (2%).

Q. **[88]** Just to illustrate what you're saying when you say that central banks were late. Do you recall that in nineteen ninety-four (1994) mister Greenspan, he had raised the interest rate by point seventy-five percent (0.75%). That was a preemptive strike though. He had not waited for inflation to arise before he did that. Is that correct?

R. I think your memory is better than mine, so I can't remember that particular incident. And I'm surprised that you remember it. I didn't think you were that old.

Q. **[89]** I'm older than maybe you think. But any how. Let's... I'm about to change topic so maybe it would be a good time for the break.

R. Okay.

Me PAULE HAMELIN :

And maybe just before the break, just a small comment. In all fairness again, Dr. Villadsen has not modified her report. I know that she has in her presentation referred to updated figures in her presentation. So, I understand the line of questioning of my colleague, but generally when we file a report, and it's like that in the rate case, usually the utilities do not amend their report once it's filed. So, I just... as a remark as a general remark. Thank you.

Me PATRICK OUELLET :

Je ne suis pas certain que je comprends si c'est un reproche, ou quoi que ce soit. Je, je ne comprends pas le commentaire, je m'excuse.

Me PAULE HAMELIN :

I'm saying that, well, it's a general comment with respect to the filing as is. And the fact that we are answering to Dr. Villadsen's report and that was not updated by her. So that’s a general comment I want to make.

Me PATRICK OUELLET :

Moi j’ai compris que la docteure Villadsen a quand même fourni des chiffres mis à jour, mais je n’ai pas l’intention de répondre plus en détails. Ça serait peut-être le moment de la pause.

LE PRÉSIDENT :

Parfait. Alors, merci on se revoit à onze heures dix (11 h 10).

Me PATRICK OUELLET :

Merci.

SUSPENSION DE L’AUDIENCE

____

REPRISE DE L’AUDIENCE

LE PRÉSIDENT :

Rebonjour. Alors Maître Ouellet on vous écoute.

Me PATRICK OUELLET :

Q. **[90]** Très bien. So, Dr. Booth can you turn to page 31 of your expert evidence, so not the presentation but your initial report. And, Madame la Greffière, si on pouvait avoir la page 31 de la pièce ACIG-0037. En fait si on regarde, ça serait le numéro de page, en bas, donc la prochaine, voilà. Voilà. Donc O.K. juste le screenshot.

So what I want to have on the screen, Madame si vous pouvez descendre un petit peu juste pour qu'on voit le titre. Voilà.

So, what we have, what we have on the screen, we've put on the screen is the middle of page 31 of your expert evidence. So, the screenshot that we see here, Dr. Booth, that was taken from the Royal Bank of Canada's website and represents RBC's interest rate forecast on February ninth (9th) of twenty twenty-two (2022). That's correct?

R. Almost correct. It's taken for their monthly publication, the Financial Markets Monthly. So, I actually get that on a regular basis. So, it's a seven-page document that I get.

Q. **[91]** Okay. So you didn't have to go on the website, you just receive it yourself and that's an extract of that seven-page document.

R. That's, that's correct. What I do is I get notification and then I go to the web page and I download the PDF. I have to, pardon me, I have to do something.

Q. **[92]** Okay. So I did the same thing you did to get these documents but my point here being this one is dated February ninth (9th) of twenty twenty-two (2020). Correct?

R. That's correct.

Q. **[93]** Okay. Now, do you agree with me, or do you know that before the filing of your expert evidence, this forecast by RBC had already been updated?

R. I would think it was updated sometime in March. The dates change every month, but sometimes in March it would had been updated.

Q. **[94]** Almost right. So, it would had been April first (1st). That is was updated. And...

R. There wasn't a March one? But...

Q. **[95]** I didn't find one. I didn't find the March when I got the April first (1st), and I can show you it's document B-0372. So what we did, Dr. Booth, while Madame is looking for the document, we, I took the seven-page document and we reproduce the exact same screenshot, that we see in your report, on page 31. So we'll show you the information for April first (1st).

R. Are you going to show me the June seventh (7th) one as well?

Q. **[96]** Yes, I will.

R. Okay. Cause, it's interesting.

Q. **[97]** It is. Don't worry. I promise I will show you the June seventh (7th). Madame, le B-0372. Okay, so

I want to apologize to every one in advance, we'll be looking at those small numbers for the next few minutes. And we'll go from this document at page 31 of the report to the June seventh (7th). So bear with me. I now the numbers are small.

Now, if we use this data which was the current data as of the date of the filing of your expert report and we look at the sentence just below the screenshot, at page 31 so, if you, I don't know if you have a paper copy of your evidence in front of you. I'm just gonna read right after the screenshot. What it says is:

> RBC is forecasting that the current overnight rate of 0.25% will increase to 1.25% by Q4 2022 and 1.75% by Q4 2023.

You have that sentence?

R. I do.

Q. **[98]** Okay. Now I just want to re-write this with you with the data that was the most recent one as of the date of the publication of your report. So. What we should read is "RBC is forecasting that the current overnight rate of..." instead of point two five (0.25) it should be point five percent (0.5%), correct?

R. Okay. Yes.

Q. **[99]** Okay. "... will increase to" instead of one point twenty-five (1.25) it should be two percent (2%)?

R. Yes. That's fine.

Q. **[100]** "... by Q4 2022 and will remain at 2% by Q4 2023". Would you agree with that?

R. Yes, I'll agree with that.

Q. **[101]** Now, since the filing of your expert evidence, what we're looking at now is the April first (1st), there's been two updates to the RBC forecast. One on May tenth (10th) twenty twenty-two (2022) and one on June seventh (7th) twenty twenty-two (2022). You were aware of that?

R. Yes I was. I am, yes.

Q. **[102]** Okay. Now, I'm going to respect my promise. I will take you to the June seventh (7th). Which will be document B-0373. So you see again, we've reproduced the exact same screenshot than what we see on page 31 but for the most up-to-date, the June seventh (7th). Let me know if you need to take the time to review it.

R. No, no, that's fine. I got it in front of me and I read it.

Q. **[103]** So, again, we'll do the exercise we did.

We'll just re-read the sentence just below the screenshot on page 31, but with the most up-to-date figure. We should read: "RBC is forecasting that the current overnight rate of 0.25% will increase to 2.75% by Q4 2022 and will remain at 2.75% by Q4 2023". That would be the correct sentence?

R. That's the new sentence with the new data, yes.

Q. **[104]** Yes. Well, correct if we take the up-to-date, which did not exist at the time of your report. I do not want to, I do not want to be unfair to you. This did not exist when you wrote this report, okay?

R. I would have made a lot of money, if it did exist.

Q. **[105]** How so?

R. Because if I had a forecast ahead of time, if you gave me RBC's forecast for next year somehow materializing now, I would have made a lot of money trading on it.

Q. **[106]** My point is we want to know what changed since the filing of your reporting and we are just, it is going well, we are reviewing this together.

Now, you also write in your report, just the following sentence, on page 31...

R. Yes.

Q. **[107]** The thirty (30) year LTC bond yield will also

increase from the current two point seventeen percent (2.17%) in Canada to two point three percent (2.3%) by Q4 twenty twenty-two (2022) and remain there until Q4 twenty twenty-three (2023). You see that?
R. Yes.
Q. **[108]** Now, my first question is on the two point seventeen percent (2.17%).
R. Yes.
Q. **[109]** Okay. So that two point seventeen percent (2.17%), that represents a long term Canada bond yield as of mid-February twenty twenty-two (2022), is that correct?
R. I think that’s correct, yes.
Q. **[110]** Okay. I do not find, I can’t find a source for this and I do not see a footnote or a source in your report, and I...
R. I think that, normally, is at the end of my testimony...
Q. **[111]** Okay.
R. ... reflecting the bond yields right away across the maturity spectrum. So, I think that’s...
Q. **[112]** What, in your schedules?
R. Yes, it is in one of the schedules. So it is probably Schedule 2 or 3.

Q. **[113]** I think it is 2, Canada bond yields?
R. That would be it.
Q. **[114]** Okay. So the two point seventeen (2.17) is at the very bottom of Schedule 2?
R. That’s correct.
Q. **[115]** Okay, good thing.
R. Over 10 Canada two point one seven (2.17).
Q. **[116]** Okay. So over 10, that means more than ten (10) years, so that would be the thirty (30) year bond?
R. No, the... we never used to have thirty (30) year bonds. So the over 10 series is an average of longer term bonds. It goes all the way back to nineteen thirty-six (1936).
Q. **[117]** Okay.
R. When they started creating these series, but we could not get a thirty (30) year Canada series, because they didn’t issue thirty (30) year Canada's.
Q. **[118]** Okay. So the two seventeen (2.17) is the forecast of the long term Canada bond yield as of mid-February. Now the two point three percent (2.3%)...
R. Two point one seven (2.17) was the long Canada bond yield.

Q. **[119]** Was exactly, and I will come to that. That has moved up, correct?

R. Yes, very much so.

Q. **[120]** Okay. Now, the two point three percent (2.3%), the two point thirty percent (2.30%), by Q4 twenty twenty-two (2022). You got that from the RBC forecast, right?

R. That's correct.

Q. **[121]** Okay. Now, can we go back to page 31 of your report, because I... unless I am mistaken, the figure, and maybe I am mistaken, but you will correct me if I am wrong, but what you have at two point three (2.3), in my understanding, should actually be two point two (2.2), if we look at what was in your report of page 31.

R. I think that's correct.

Q. **[122]** Okay.

R. The... yes, it should be two point two (2.2), not two point three (2.3).

Q. **[123]** Well, that was my...

R. Okay, fine, yes, I think what I... yes, I think the two point three (2.3) as really once we get into twenty twenty-three (2023) and it says it stays there. So my eyes must of wandered over a column.

Q. **[124]** No, but I was just, I just wanted to make sure that the typo is... it should be two point two (2.2) instead of two point three (2.3), it is not that you wanted to refer to Q2 twenty twenty-three (2023).

R. Yes, no, that’s correct.

Q. **[125]** Okay, okay. Now when you write, and I am continuing that same sentence:

> And remain there...

Meaning two point three percent (2.3%).

> ... until Q4, twenty twenty-three (2023).

So you mean remain there at two point three (2.3), so that is consistent with what you just said. It should have been two point three (2.3)? Well remain there, because I don’t understand. Is it remain at two point two (2.2)?

R. Well looking at the two point three percent (2.3%)...

Q. **[126]** Hum, hum.

R. ... in twenty twenty-three (2023) or at least I think that is what I would do.

Q. **[127]** Yes.

R. And as I said, I think my eyes just wandered over and add the two point three (2.3).

Q. **[128]** Okay.

R. Now, so the typo really should, should be Q4 twenty twenty-two (2022) rather than the two point two (2.2), but regardless, I mean, I was talking about how the interest rates are going to evolve, would evolve at that time.

And just to sort of correct on this, I could have updated RBC, but a little bit of backdrop here...

Q. **[129]** I have not asked you a question.

R. I am sorry, okay.

Me PAULE HAMELIN :

No, but the witness wants to ad something to his answer, I think he should be adding to his answer.

Me PATRICK OUELLET :

Si vous me permettez, Monsieur le Président, je vais dire ça en français, puis je ne veux pas manquer de... je ne fais pas de reproche à qui que ce soit, là, mais le but du contre-interrogatoire, c'est de répondre à mes questions.

Là, on a assisté essentiellement à une plaidoirie du docteur Booth, alors que la Régie a décidé qu'il n'y aurait pas de plaidoirie orale. Il a eu tout le temps au monde pour raconter son histoire et plaider ce qu'il voulait plaider. Maintenant, c'est le temps de répondre à mes questions, ce n'est pas juste de partir sur une anecdote et un sujet. Moi, j'ai des questions à lui poser puis c'est tout simplement ce qu'il devrait faire, ce qui est l'exercice normal de contre-interrogatoire. C'est de répondre aux questions.

Me PAULE HAMELIN :

Monsieur le Président, il répond aux questions, mais il veut préciser sa réponse.

LE PRÉSIDENT :

Écoutez, je pense que c'est le privilège du témoin de donner du contexte à la réponse à la question.

Me PATRICK OUELLET :

À la question!

LE PRÉSIDENT :

Bien oui, oui, tout à fait. Et donner du contexte aussi, pour que la réponse ait un sens.

Me PATRICK OUELLET:

Q. **[130]** Did you want to add something, Dr. Booth?

R. No, I was just going to say that I have always included the RBC forecast for as long as I could remember including forecasts and I certainly added it in two thousand eleven (2011) and two thousand nine (2009) and two thousand seven (2007). And the reason for that, was that we were looking at the near term forecast for an automatic ROE adjustment mechanism.

But the RBC forecast in twenty twenty-two (2022) is only going out eighteen (18) months basically.

So if you notice what I did add, was a longer term forecast trying to get a handle on when we're going to get back to higher interest rates and I put in the March forecast of the Parliamentary Budget Officer. Because I was trying to get a long term forecast and the two point three percent (2.3%), I didn't think was a long enough forecast to get return to normality.

So what I was saying, is I put in the RBC forecast, as I always put in the RBC forecast, but I agree, based on my estimates on the Parliamentary Budget Officer forecast, which is a longer term forecast, and that was... it literally came in when I was filing, writing my testimony, which is why I inserted that in, because that was bang-up to-date, consensus economic parliamentary budget forecast.

So that just providing a little bit of context.

Q. **[131]** Now, I am continuing to read right where we left off at Q4 twenty twenty-three (2023) :

As a result, the yield spread will

significantly decrease from one point forty-three percent (1.43%) at the end of twenty twenty-one (2021) to zero point forty-five percent (0.45%)(sic) by the end of twenty twenty-four (2024).

So I have questions on, I just want to make sure I am following you to arrive at those figures, I do not think it is a trick question. So I just want to have the source for the one point forty-three (1.43), I will suggest to you that to arrive at one point forty-three (1.43), what you do, is you take the thirty (30) year Canada twenty-one (21) Q4, so one point sixty-eight percent (1.68%), minus the twenty-one (21) Q4 overnight rate in Canada point twenty-five (.25), so one point sixty-eight (1.68) minus point twenty-five (.25) would be the source for the one point forty-three percent (1.43%). Is that correct?

R. Yes, if you found it, I will accept it.

Q. **[132]** Okay. Well, I want to make sure it is right. I do not want to mislead anyone, so I just wanted to confirm, you are the author of this.

R. No, that’s fine.

Q. **[133]** Okay, okay. Now. And want to do the same thing with the source for the zero point fifty-five percent (0,55%)...

R. Yes.

Q. **[134]** So that would be the Q4 two thousand and three (2003), thirty (30) year Canada, two point thirty percent (2.30%), minus the twenty-four (24) Q3 overnight Canada, at one point seventy-five (1.75), so two point three (2.3) minus one point seven five (1.75), that is where you find zero point five five (0.55)?

R. That’s correct.

Q. **[135]** Okay. Now, and just so we are clear, going back to your report, when you say:

> As a result, the yield spread will significantly decrease from 1.43% at the end of 2021 to 0.55% by the end of 2024.

You meant, by the end of twenty twenty-three (2023).

R. Twenty twenty-three (2023), Q4. That’s correct.

Q. **[136]** Okay. So that’s another typo we should correct, we should write twenty twenty-three (2023) instead of twenty-four (24)?

R. Yes. All of it is referring to the end of Q4 twenty twenty-three (2023).

Q. **[137]** Okay. Now...
R. That's the end of the, of RBC's forecast.
Q. **[138]** Yes. That's what I thought. I just wanted to clarify. Now, if we turn to the next page of your report, page 32, at lines 7 and 8. I'm just going to read:

> For the immediate future, I doubt that long term interest rates will increase much beyond the RBC forecast, but in its 2021 budget briefing the Government of Canada had average private sector forecast data on which it partially based its budget forecast.

So, that's what you're referring to? The Parliament, Parliamentary Officer's forecast?
R. No, that's the budget briefing to the government of Canada.
Q. **[139]** So that's not the same.
R. Based upon the Consensus of which RBC is one of the people that is surveyed in the Consensus.
Q. **[140]** Okay. Okay. Now, so when you refer, when you say:

> For the immediate future, I doubt that long term interest rates will increase

much beyond the RBC forecast,...

Obviously you're referring to the RBC forecast that we're looking at, at page 31 of your report. The one of February nine (9), twenty twenty-two (2022)?

R. That's correct. And I thought they might increase more, but not as much as they have.

Q. **[141]** That's my point so I will continue in that vein. So the RBC forecast that you were referring to at the time you wrote this report was two point three percent (2.3%). Correct?

R. Correct.

Q. **[142]** So, I think there's no disagreement on that, but you'll agree with me that the yield on a long term Bank of Canada bond, as reported by the Bank of Canada, exceeds now this two point three percent (2.3%) forecast since, at least, March fourteenth (14th), twenty twenty-two (2022). Would you agree with that? So before your evidence was filed.

R. I think we saw it coming up, yes. And that's why I put it in the Parliamentary Budget Officer's report which I got while I was doing tidying up and I thought this is important stuff. Because... not just because it got a forecast, but it got a longer term forecast.

And I think the important thing in all of this, is -- I like the RBC forecast, I use it all the time when I recommend a ROE adjustment mechanism, but it's not clear what the majority of the horizon for the test years is for these utilities. And I don't think it is appropriate to use a short run forecast of twenty twenty-two, twenty-three, twenty-four (2022-23-24) yield when we got a longer, a possibility of a longer term horizon before the next, the next rate hearing.

Q. **[143]** But if the rate of return is only set for two or three years, obviously we need to look at the short term figures, correct?

R. Well, you certainly look for the short term figures. And we recommend at least, my recommendation would be that they have another hearing in three years time. But, the last time that Gazifère had a hearing was, I'm not sure about it, but I think it was two thousand and ten (2010) which is twelve (12) years ago.

And, when you're dealing with significant lag between rate hearings and setting a fair ROE, you shouldn't be looking at the near term forecast. Unless you're going to put then on a ROE adjustment mechanism. And then you would automatically pick up changes in the long Canada bond yield forecast.

Q. **[144]** But if we look at only the time horizon during which the rates will be, the rate of return, will be in effect. If, it’s only in effect for three years, than we’ll have to put more weight on those three years. Correct?

R. That’s correct. If in fact, if it was a normal market and I didn’t think that the long Canada yield was distorted because of the actions of central banks, I hundred percent (100%) agree with you. And in fact that was my recommendation way back into two thousand eleven (2011) before the Americans started this massive central bank of buying bonds and messed everything up.

Q. **[145]** Can we put on the screen document B-0374. This is an extract from the Bank of Canada’s website. We can see there, and you see that date March fourteen (14) of two thousand and twenty-two (2022). And my last question to you before we went into this discussion was, I was suggesting to you that the yield on a long term Bank of Canada bond exceeds the two point three percent (2.3%) forecast, since at least March fourteen (14), two thousand and twenty-two (2022). Do you agree with that based on this document?

R. Can you scroll down a little bit. I can see the

seven years.
Q. **[146]** Yes, but...
R. The over 10 year. Yes, was two point four two percent (2.42%) in March.
Q. **[147]** Exact. Exactly. So based on... Well, about three weeks before you finalised your expert evidence, the Bank of Canada showed a long term yield that was higher than the two point three percent (2.3%) RBC forecast based on February data. That's correct?
R. That's correct. And that's what I referenced when I talked about the March PBO forecast which was a Consensus Forecasts which is, I said, I got last minute and insert it my testimony at the last minute. Because I thought that was relevant which is a longer term forecast.
Q. **[148]** And you didn't update the other figures that you thought that were relevant as well?
R. RBC is being very aggressive in their forecasts. And as I said I don't hundred percent (100%) agree in their forecasts. And the PBO forecast, and the government of Canada forecast, I did put on the next page. And I did emphasise that and I built my recommendation around the Parliamentary Budget Officer's forecast. So to some extent I down played

the RBC forecast.

Q. **[149]** Dr. Booth, can you show me where in your evidence you warned the reader that the RBC forecast is aggressive?

R. Well, I did say, as you read out to me that -- line 7 page 32:

> For the immediate future, I doubt that long term interest rates will increase much beyond the RBC forecast,..

But...

Q. **[150]** But that's, but that's wrong. We just saw that now it's over the RBC forecast, it's at two point forty-two percent (2.42%) before the filing of your expert evidence.

R. That's correct. But that's saying, I'm not saying I adopt the RBC forecast. I'm saying, I'm expressing doubt about the RBC forecast. Because, and, right now as I told you the June, as you pointed out the June forecast of long Canada bond yield is going to go down. I have severe problems with that, because I tend to believe that inflation is gonna be low persistent than the Bank of Canada. So, right now, to be actually honest, forecasts are all over the place about what's going on. Because we don't quite know, and as I've expressed, I'm not certain the

Bank of Canada has the ability, and the willingness to push interest rate to a level that actually is going to slow down the economy.

Q. **[151]** So, so just so I understand your evidence correctly. Correct me if I'm wrong but, lines 7 and 8 of page 32 of your expert evidence, is your warning to the reader to be careful about RBC?

R. Well, it's not a warning in the sense of it's double capitalized and bolded warning. I'm not saying, I mean it doesn't say I wholeheartedly adopt the RBC forecast.

Q. **[152]** Okay. Now, as of now, you'll agree with me that the yields on a long term Bank of Canada bonds as reported by the Bank of Canada, are much higher than the two point forty-two percent (2.42%) or the two point three percent (2.3%) that we just looked at, correct?

R. That's correct. They're higher than the forecasts of just about everyone just six months ago, nobody anticipated the inflation that we're actually getting. And Tim Macklem, the governor of the Bank of Canada say, I made, we made a mistake.

Q. **[153]** And just so we're clear. I'm not suggesting that you should have known in November what happened in June. I don't want you to read that into my question. Now if you could, if you could go to document B-0375.

What I am about to show you, Dr. Booth, is the actual yields on long term Bank of Canada bonds, taken from the Bank of Canada website. So if we... I'd like to look at the ten (10) year and the thirty (30) year. So we see here, at the... near the top, ten (10) year, Government of Canada, benchmark bond yields ten (10) year, three point twenty-seven percent (3.27%), you see that?

R. Yes.

Q. **[154]** And Government of Canada benchmark bond yields long term, three point eighteen percent (3.18%), so those are the forecasts, as they stand today, correct?

R. Well, they are not forecasts, those are the actual yields.

Q. **[155]** Okay, I am sorry, I misspoke, you are absolutely right, so those are the yields of the long term and the ten (10) year bonds as of today?

R. That's correct.

Q. **[156]** Okay.

R. Well as of yesterday or whenever... yes.

Q. **[157]** Okay, for sure. So that is... if we take the three point twenty-seven (3.27) compare that with the forecast that you had at three point two (3.2), that is almost, it is almost one percent (1%) higher?

R. That’s correct.

Q. **[158]** Okay. Now, when you say, in your report, the lines we looked at:

> For the immediate future, I doubt that long term interest rates will increase much beyond the RBC forecast.

Had you performed an analysis of some sort, before casting this doubt, what you have said in your report?

R. No, that was my judgment, in looking at the situation, perhaps I should have expressed it more strongly, but I have always relied upon the RBC forecast and as I think I mentioned with the RBC forecast is now predicting in the long Canada bond yield is going to go down.

I have to admit I don’t believe that.

Q. **[159]** And you think it will continue to go up?

R. I think right now, I think, there is more chance that the long Canada bond yield is going to go up rather than it drops down to the RBC forecast, correct.

And the other part to this, is: what does the capital market believe? And I draw your attention to these yields and they got the Government of Canada bond yield on the long term, the thirty (30) year, three point one eight percent (3.18%). Can you see that?

Q. **[160]** Yes.

R. And right below, he has got the real yield, the real yield on the real return bond, which is one point two five four one percent (1.2541%). The difference between those two is what we call the break-even inflation rate, because investors have got a choice, either buying the long term nominal bond, and getting a fixed coupon or buying the real bond and getting a compensation for inflation.

So the difference between those two, which is about one point ninety-three (1.93) is often taken as a long term inflation rate. The long term inflation rate in the capital market.

So right now and throughout this period, we undoubtedly have this increase in inflation. The capital market believed in Bank of Canada, that they will bring down the rate of inflation and as a result, the rate of inflation over the term of those long term bonds is going to be around two percent (2%), the centre of the Bank of Canada's range.

So that's what bond buyers are saying and they are the people that are actually buying the bonds and they are putting their money on their forecast. And then we got RBC which is quite aggressive and right now, all I am saying is that in order to get that down, we've got to slow down the economy.

And if ou look at the yields, the two year bond is yielding three point one percent (3.1%), the five year three point one eight (3.18), the seven year three point two one (3.21), the over ten three point two seven (3.27), the long term three point one eight (3.18). That is what call a flat U curve.

Normally, there is a spread of about one point two five percent (1.25%), long term bond yields over the short term yields we do not see that at the moment. And why we do not see that at the moment, is the Bank has already pushed short term interest rates and the market believes that interest rates are going to come down and that we're going to have a recession. Or at least a slow down.

Personnally, I think the consumer demand is too strong and I wouldn't be at all surprised to see short term interest rate go up even more, an inverted yield curve and will have a heavy... a more serious recession.

So right now, this is one of those situations where the capital market is signalling a soft landing and we get back to one to three percent (1-3%) inflation and all what I am doing is saying that I personally have my doubts. I think there is a serious probability that inflation will get embedded in the system.

And I watch the U.K. news all the time. Transport workers in the U.K. are about to strike. They have got major strikes in the U.K. coming up, because they want to catch-up, they want compensation for the nine percent (9%) inflation in the U.K., over the last year.

And once you start getting catch-up, it will spread to other unions and other people will want compensation, and you then start getting embedded in price increases.

This is what the Bank was slow to react to, because once you start doing that, you have to get more serious increases in interest rates in order to slow down the economy and get that out of the system.

But we are already hearing about people saying they want to catch-up. And that means, it gets reflected in future prices. So I think that we are in a situation, right now, the central banks were late in increasing interest rates and they are worried that it gets out of control. I got a good suspicion that they may already have got out of the control of the central banks.

Q. **[161]** I have a question on that. Do you agree with me that it is unlikely that we will see inflation rate back down to the two percent (2%) target, before at the earliest in two thousand and twenty-five (2025)?

R. I think that is probably correct and I think it all depends, as I said, on the political will of the central bank, and the central bank is independent, but is strongly affected by government policy.

Q. **[162]** I am done speaking about interest rates, changing topic, topic completely. This... I have a very very short topic to do now, so perhaps we could continue.

A. Sure, you didn’t find any more typos on my interest rates?

Q. **[163]** I am sorry?

A. You didn’t find any more typos on my interest rate?

Q. **[164]** Well there is a few, but I do not want to do them all, we will argue that.

Now, we’ll talk about the MRP, an input into the CAPM. You discussed, if you go to your evidence, at page 50. And you will see, I’ll be a lot shorter on this topic than I was on the prior one. But starting at page 50, and if you flip up to page 61 of your evidence, you discuss the market risk premium there, so those eleven (11) pages and you also discuss it at Appendix B of your evidence. Is that correct?

R. That’s correct.

Q. **[165]** And if we look at page 61, so at the end of that section in the... in your report, not in the appendices, you come up with a proposed market risk premium estimate of five point five to six percent (5.5 - 6%), is that correct?

R. That’s correct.

Q. **[166]** Now, to arrive at this number, you look at a variety of sources, as we can see from your Appendix B, but the number you choose, the actual range that you use, is not taken from any of those sources, it is your own number, correct?

R. That’s correct, it’s my judgment of the moment. Two thousand eleven (2011), I think I used five (5) to six percent (6%), because that's where the historic statistical data is. Canada at four point eight (4.8), U.S. at six point two (6.2).

Q. **[167]** Okay. Now, if I were to ask you for your calculation sheet, a mathematical calculation that would show how you arrived at your estimate of between five point five and six percent (5.5-6%), you could not give me one? That is not a calculation that you did, correct?

R. No, that is a judgment. I look at the historic evidence and I look at what other people are saying, I look at what Duff & Phelps is saying and look at what the survey results of Fernandez is saying.

If I did an average of all of those numbers, it would come out at... I don't know, five point six two five (5.625), which gives a spurious degree of accuracy. So if you believe the historic U.S. evidence, it would be a little bit outside of my range. If you believe the Canadian evidence, it would be below that range. If you believe Duff & Phelps and Fernandez, it would be exactly five point five percent (5.5%).

So I am confident that is a reasonable

number.

Q. **[168]** But it is not, despite...

R. It is not a mathematical calculation.

Q. **[169]** That is it, okay. Là... I am just going to speak French, give me one second. Je m'apprête à changer de sujet qui peut être un sujet un peu plus long. Je peux, ça ne me dérange pas de continuer jusqu'à midi et demi (12 h 30) s'il faut, mais je veux juste avertir la Régie que si jamais vous vouliez arrêter avant, là c'est un nouveau sujet.

LE PRÉSIDENT :

Oui oui, allez-y, on peut continuer.

Me PATRICK OUELLET :

Parfait.

Q. **[170]** Now, I'd like you to... Madame St-Cyr, si vous pouviez mettre le document B-0376. I'll show you a document, Dr. Booth, that you will be for sure be familiar with.

R. Never seen it before in my life!

Q. **[171]** So, just before... we see it's a book called Corporate Finance. I actually the original with me.

R. You bought it!

Q. **[172]** I did not.

R. Because I think I sold about two hundreds (200) copies.

Q. **[173]** I borrowed it. I didn’t buy it.
R. Oh, shame on you.
Q. **[174]** I’ll maybe buy it after the cross-examination we’ll see how that goes. So, this book, Dr. Booth, that you authored, should I... well. I won’t ask you if you’re familiar with it. I think it’s yes. But, is this the book that you use to teach your students?
R. No.
Q. **[175]** It’s not. So, what’s that book exactly?
R. This book... Why the Canada people really like that book, Introduction to Corporate Finance, and at the time, there was a lead marketing person that wanted to take that book and sell it in the United States. And it was the first book by Wiley produced in Canada that they wanted to sell into the United States. So they got Pamela Peterson Drake from the US university, I’m trying remember the name of the university she’s at, she Americanised our Canadian book. But, I can tell you in all honesty where Canadian are used to use Canadianised American books, Americans don’t like Americanised Canadian books. And in particular, they had a competing book and not being to trade shows, well, conferences where they had all those books, Wiley never ever

marketed this book in the United States. So, I think we got two or three hundred sales. So you have a rare book. Don't give it back. It could be worth a lot of money in twenty (20) years time.

Q. **[176]** Okay.

R. The rest of them probably have long since been destroyed.

Q. **[177]** So your colleague, Pamela Peterson Drake, was at University of North Carolina. Is that.. or...

R. No. she's not...

Q. **[178]** Miami?

R. No. She was at a university in Virginia and it's...it should be, the name should be on the book. But...

Q. **[179]** I don't think anything will turn on that so, I think we can continue. Unless you want to talk about Pamela Peterson Drake more. I don't want to interrupt you, but...

R. No. I just felt very sorry for her. Because she got the contract to Americanised that book and she reduced it in terms of chapters and put a lot of work into it. And then, they didn't market the book. So, as I said, I think I probably made three or four hundreds of dollars (300-400$) in royalties out of it.

Q. **[180]** Okay. Can we go to page 339 of the extract? So, yes. Page 339, we see there's a subtitle Beta there. I will be reading from the last paragraph of that page.

> Estimating beta coefficients is tricky because we are interested in the extent that an asset's returns move with the market over a future period. We typically estimate beta coefficients by using historical data, which assumes that what has happened in the past is a good predicator for the future. Typically, betas for securities are estimated by using 60 months of monthly returns, but sometimes 52 weekly returns are used.

You see that?

R. I do.

Q. **[181]** So, for the purposes of your report, you used 60 months of monthly returns, is that is?

R. That's correct.

Q. **[182]** Now, but in this book you also write that sometimes fifty-two (52) weekly returns are used. So that's also correct?

R. Yes. We also... they sometimes use daily returns.

Q. **[183]** Sometimes daily returns as well. But that's not as typical as weekly, correct?
R. Well. Weekly isn't typical either. That's why I say sometimes, sometimes people use weekly returns.
Q. **[184]** But surely, if that was wrong, you would have said so in you book, if it was wrong to use fifty-two (52) weekly returns.
R. There's nothing wrong in the sense of making an estimate. You can use a variety of techniques to estimate. But the data tapes that academic use are monthly returns. So it's difficult to estimate betas other than using monthly returns.
Q. **[185]** It's just I have trouble understanding why you go to the trouble of writing in your book that sometimes fifty-two (52) weekly returns are used. Are they used sometimes or they are not used?
R. Well, that sentence says that sometimes fifty-two (52) weekly returns are used. It's not what I would regard... they are not standard but sometimes people using them and as I said sometimes... the data tapes that we academics use are monthly returns and they have daily returns. They do not have weekly returns. So, getting weekly returns sometimes people have used them, because the big problem, you need a lot of observations in order

to reduce estimation error. So sometimes people have used fifty-two (52) weekly returns, but it's not standard.

Q. **[186]** And you'll agree with me that if we were to use one year or fifty-two (52) weekly returns, that would have the effect of increasing the beta in this case, correct?

R. Yes. What we do know is that the shorter the time period of which you're estimating the returns, the more likely you get stalled dat for thinly traded stocks. And as a result, they will appears to be low risk. Well, they are not low risk they just haven't had a price change. And conversely thickly traded stocks, that trade frequently will tend to get higher betas. So it's an estimation problem in what we call the intervalling-effect. So, that using fifty-two (52) weekly returns is more likely to get a slightly highest high estimate for thickly traded stocks versus thinly traded stocks.

Q. **[187]** Can we go to Appendix C of your evidence which is C-ACIG-0040.

R. Yes.

Q. **[188]** We'll just wait for madame St-Cyr to project that on the screen. And, it would be page 12, the actual page number, I don't know if it's the same as the PDF page. Yes. There we go. I think we are good. So, under... you have a kind of a chart, near the middle of that page. And then, at line 10, I'll just read from your report:

> It is also of importance that the way these estimates are derived appears to be consistent with conventional practices. One of the biggest data providers in Canada is the Financial Post, where their Corporate Analyzer data base includes ten year financial data for larger publicly listed Canadian companies. Their definition of beta is...

So we see that you highlight the fact that the Financial Post includes ten years financial data. But let's me read here what is the definition that you quote:

> Beta (Corporate Profiles) Beta factors are derived from a historical regression of percentage share price changes for the selected company on percentage changes in the TSE 300 price index. The unadjusted slope coefficient from this regression is

> the beta factor. Beta factors may be computed on a variety of weekly or monthly data. Betas shown in FP Analyzer are for 52 weeks, 36 months, 60 months and 120 months.

So, the hundred and twenty (120) months is the ten years that you refer to at line 12 of your evidence, correct?

R. No. The ten year financial data is because they provide ten years of things like net income, sales, costs. It's ten years of corporate financial data, not ten years normally of betas estimates. But you can do ten years betas estimates if you want.

Q. **[189]** But, do you agree with the definition there... which says: "Beta factors may be computed on a variety of weekly or monthly data". You agree with that?

R. Yes. You can estimate betas over anytime horizon you like and the frequency. This was an issue before the Alberta Utilities Commission in two thousand and sixteen (2016) and they asked me directly does it matter whether the, the betas estimated are on a weekly versus monthly betas matter. And I said, well, theoretically there's no difference. The risk measure picking it up on a weekly versus a monthly versus a daily basis, shouldn't make any difference. And I said the only problem could be thinly traded stocks. And I left it at to that and then I went back and did some research on it and found this paper by... I forgot his name, Italian name, on betas, where it tends to be that we get this intervalling-effect. Hawawini, Gabriel Hawawini. Which is the thinly traded stocks.

So you can estimate them however you like. The question is whether or not they are biassed or unbiased in what you trying to estimate, which is the beta. And the more frequently, the shorter the time horizon for the return, the more likely you are going to get a thinly traded stock that the price does not change and as a result, it appears to be low risk.

Q. **[190]** Now, pardon my pronunciation here, but you are familiar with Aswatt Damodaran?

R. Your guess is as good as mine.

Q. **[191]** Okay.

R. I have heard him referred to as Damodaran or Damadoran. He is Indian and he is at NYU, and I reference to him in terms of the market risk premium.

Q. **[192]** Yes. Well, I think just, I just want to make sure, he is the same person than the one you refer to at page 25 of your slides that we looked at this morning?
R. Yes, I think there is only one.
Q. **[193]** Yes. That is what I thought.
R. There's lot more than one, but there is only one famous professor with that name, I think.
Q. **[194]** Now, I assume you are aware and correct me if I am wrong, but you do aware that Damodaran uses Bloomberg data and looks at two to five years to establish his betas, correct?
R. Well, I wasn't aware of that, but I believe you subject to check.
Q. **[195]** Okay. But my point here, there is a variety of sources that suggest that betas can be estimated in many different ways but you do it using five years of monthly data, correct?
R. That's correct. That is the standard way of estimating betas.
Q. **[196]** Well, it is...
R. Unless you're writing back to Dr. Vilbert of Brattle that is the way he estimated in two thousand and nine (2009). He estimated five years of monthly data for betas and I think he also used

five years of weekly data. So the game is to try finding the truth rather than being doctrinaire on this.

Q. **[197]** Well, that is... I think we are saying the same thing. There is not only one way to proceed.

R. That’s correct.

Q. **[198]** Okay.

R. But there is not only one way to proceed, but as I said, the shorter the time period, the more likely the beta is going to be overestimated for thickly traded stocks and underestimate for to thinly trading stocks. That is just what appears to happen. Thinly are not traded as much.

Q. **[199]** And for a stock that is not thinly traded or thickly traded...

R. Yes, thickly is traded all the time, so the prices are never stale. But remember, the betas have to average up to one. So thinly traded stocks are less than one, they are underestimated, thickly trading stocks are the opposite, they are overestimated.

Q. **[200]** So, excuse my pronunciation, I have trouble the thin and thick here, but if a stock is not thinly traded nor thickly traded, then that would make a difference, using weekly's or monthly's?

R. True. I mean, at the extreme, you are going to get stocks that are traded all the time and then some stock that are never traded at all. And then, you got stocks in the middle, that basically may not trade every day but they generally trade.

Q. **[201]** Okay.

R. But it depends how big the stocks are.

Q. **[202]** Do you agree with me that betas are a forward looking adjustment?

R. You’ll have to explain what you mean. Betas are historic estimate.

Q. **[203]** Yes, but they...

R. Yesterday's temperature was twenty degrees, it is what it is.

Q. **[204]** Like are they not used to predict the future reaction of the stock?

R. We do use it for some predictions to make, to determine excess returns. So for example, if you got a high beta stock and you want to workout, how did it react to a news' announcement. You need to know what was the normal expected price and then work out the unexpected price, to work out the reaction and we tend to use those, for event studies we actually tend to use daily returns and daily betas, because we want to know how did something react to a rather short window.

But that is not a forecast, it is trying to sort of get an estimate of an excess return to work out how did the market respond, for example to a dividend cut or firing the chief executive officer.

Q. **[205]** I...

R. That to say... sorry.

Q. **[206]** No, I am sorry, I did not want to cut you, I was about to say that was finishing this topics. But if you have something to add, by all means, go ahead.

R. I have seen betas used to forecast volatility and how good beta predictions are, but in all cases, well let's dial back to two thousand and six (2006) or two thousand seven (2007). I cannot remember what I said when Dr. Chrétien was here providing testimony, but that was just after the tech bubble blew up, when all the internet stock blew up, when Nortel went bankrupt and JDSU Uniphase and it brought down the Canadian stock market.

During that period, the realized betas were negative. So if I came here and I said to... if I had come here in two thousand and seven (2007) and said: a beta of minus point one (-.1) for utilities should be used to set the fair rate of return, that is nonsense. It was nonsense, because the realize beta just happens to reflect the circumstances of that term. So we all adjust betas, that is not the question. The question is how do we adjust betas.

Q. **[207]** Donc, ça va... je m'apprête à changer de document. Donc, peut-être que c'est un bon moment pour prendre la pause?

LE PRÉSIDENT :

Oui, c'est un bon moment. Alors, on complète, on arrêterait tout de suite et on reprend à treize heures (13 h 00).

Me PATRICK OUELLET :

Je peux donner une indication aussi, là, j'ai beaucoup plus que la moitié...

LE PRÉSIDENT :

Oui.

Me PATRICK OUELLET :

... j'ai plus que la moitié de mon contre-interrogatoire de fait, donc, si ça peut vous donner déjà une indication, là, pour la suite. J'estime que j'en ai environ pour une heure, encore.

LE PRÉSIDENT :

O.K. Très bien.

Me PATRICK OUELLET :

Merci.

Me PAULE HAMELIN :

Est-ce que, Maître Cloutier, avec votre permission, J'ai vu que vous avez produit d'autres documents. Naturellement, je ne suis pas avec Dr. Booth, là, et ce n'est pas à sa connaissance. Est-ce qu'on peut au moins lui transmettre les documents que vous avez produits?

Me PATRICK OUELLET :

On pourrait vous les envoyer, Maître Hamelin, par courriel puis vous pourrez les faire suivre ou peut-être lui montrer sur le site de la Régie où les trouver, là.

Me PAULE HAMELIN :

Oui, bien c'est ça, mais je ne voulais pas le faire, parce qu'il est en contre-interrogatoire, donc, je voulais juste avoir votre permission pour au moins bien lui identifier ce que vous avez produit.

Me PATRICK OUELLET :

Moi, je n'ai pas d'objection, Maître Hamelin, vous avez toute ma confiance, là, à lui identifier où, sur le site de la Régie, les documents se trouvent.

Me PAULE HAMELIN :

Parfait, merci.

Me PATRICK OUELLET :
Donc, on reprend à une heure (1 h 00)?
LE PRÉSIDENT :
Oui.
Me PATRICK OUELLET :
Parfait, merci beaucoup.
LE PRÉSIDENT :
Merci.
Me PAULE HAMELIN :
So, Dr. Booth, we are resuming for lunch and we are coming back at one o'clock (1 :00).
R. Okay, I will still be here.
Me PAULE HAMELIN :
And just a second, Dr. Booth, I will communicate with you to let you know that some documents have been put in the record. So I am allowed to speak to you, just to identify those exhibits to you.
R. Okay. So we just stay on the line and you are going to show them to me?
Me PAULE HAMELIN :
I can do that.
R. Then everybody knows exactly what we are doing.
Me PAULE HAMELIN :
For sure, no problem.

LE PRÉSIDENT :

Merci.

SUSPENSION DE L'AUDIENCE

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REPRISE DE L'AUDIENCE

LE PRÉSIDENT :

Rebonjour, alors, nous sommes prêts à poursuivre.

Me PATRICK OUELLET :

Bonjour.

Q. **[208]** Good afternoon, Dr. Booth.

R. Good afternoon.

Q. **[209]** Can you please go to Appendix C of your evidence, which is C-ACIG-040.

R. Yes.

Q. **[210]** At page 11.

R. Yes.

Q. **[211]** And then, Madame St-Cyr will put that on the screen for us. O.K. Exactement. Pouvez-vous monter un tout petit peu? O.K. Ça va comme ça, ça va bien.

So we have, around the middle of that page, we have a chart where we see six Canadian utilities. So these six companies, that's not Dr. Villadsen's sample, correct?

R. No, these are the three utilities and the three pipelines that I have used for some time. The only addition is been Pembina, because they bought Fort Chicago Partners that became Veresen. Otherwise, these are the same companies I have been using for some time.

Q. **[212]** Okay, that is your own sample?

R. Well, it is not so much a sample. They are the only ones I could possibly valid with Ontario Hydro's, it's the universe.

Q. **[213]** Okay. So it is all the companies that you used to compare the utility with?

R. They are the ones that I have used for a significant period of time, and obviously they have evolved over that period of time.

Q. **[214]** Okay. I just wanted to make it clear that it’s not a Dr. Villadsen's sample that we are looking at here? It has nothing to do with Dr. Villadsen, correct?

R. That’s correct. Dr. Villadsen adds Ontario Hydro and AltaGas, which I don’t have.

Q. **[215]** Okay. Now, you have, there is a column to the right that is entitled “Booth”, obviously, those are your estimates.

R. That’s correct.

Q. **[216]** Now can one see, from your evidence what time horizon you use for the estimations that we see there?

R. I normally state that I use five years of monthly observations. The select...

Q. **[217]** Well, maybe in order to save time, Dr. Booth, I haven't found it, I see just over, just over the chart, you write:

> CFRA, Reuters, Yahoo and the Royal Bank of Canada, on January twenty (20), as well as my own estimates with data up to December 2021.

But it doesn't say from when.

R. Okay, I'll take that subject to check. They are five years of monthly betas that's... that I update.

Q. **[218]** What I would like to have, Dr. Booth, as an undertaking, well, before I ask the undertaking, you have an estimation for TransCanada, you have one for Enbridge, you have one for Canadian Utilities and we see the result at the column to the right. Does there exist a calculation sheet for each of those calculations that you made here?

Me PAULE HAMELIN :

Je m'objecte, il a déjà répondu à cette question-là, vous lui avez posée avant la pause.

Me PATRICK OUELLET :
Non, ce n'était pas la même, ce n'était pas la même.
Me PAULE HAMELIN :
O.K.
R. If you turn to Schedule 5, of that Appendix.
Me PATRICK OUELLET :
Q. **[219]** Of that Appendix, okay.
R. Yes.
Q. **[220]** Let me just get there. Okay.
R. You'll see that I have all the estimates for all of the companies. So for example, in two thousand and eleven (2011), I was using Veresen in my sample, the old Fort Chicago Partners, and I was using GMI. And then, since then GMI obviously is no longer publicly traded. So the estimates stop to two thousand eighteen (2018) and Veresen was acquired by PP Pembina which I added Pembina.
Q. **[221]** I am not following you. Where are you in your Schedules?
R. Schedule 5.
Q. **[222]** Okay, that is... I have one page on Schedule 5.
R. That’s correct. And I’ve got the estimates for...
Q. **[223]** Okay.

R. ... for all of my companies, and those are the companies, essentially I've been using for a significant period of time, because I need long periods of time in order to assess how the risk has changed over time, if any. And I think... I don't know whether I was asked to provide the underline data as... in answer to an information request. I have may have been... Sometimes I am, and that request normally ask me to lead the way it was estimated in a spreadsheet.
Q. **[224]** Okay.
R. But I cannot remember whether I was asked at this time.
Q. **[225]** Okay. Well, let me see if I am following you. So we have, for TransCanada, back to page 11, we have for TransCanada, you, well... first of all, TransCanada, that is TC Energy, right? That is the same company?
R. That is right, but I mean not many people know who TC Energy is, it's TransCanada.
Q. **[226]** Okay. So you have point seven six (.76) that you come up with your estimate for TransCanada. Where am I going to find that on Schedule 5?
R. If you look at Schedule 5, under TRP.
Q. **[227]** Okay.

R. Which is TransCanada, you find point seven six (.76).
Q. **[228]** Okay, point seven six (.76), I see that, so that, at the end of December twenty twenty-one (2021).
R. Yes.
Q. **[229]** And on...
R. You see point nine seven (.97).
Q. **[230]** Okay, but I do not see, but this Schedule does not allow me to see if you looked five years of monthly data or what not? Can I see that from the Schedule?
R. No, you can't.
Q. **[231]** Okay.
R. And I... let see. The... I am surprised I didn't say it, I must have edited it out at some point in time.
Q. **[232]** Well. What I would like to have is really a... well, I don't want...
R. Page 3.
Q. **[233]** Page 3 of?
R. Of my Appendix C. Where, I am referring to the utility subindex, and if you read on line 7 of page 3...
Q. **[234]** Okay. And Schedule 1, is a graph of rolling

betas on Canadian utility subindex since nineteen eighty-eight (1988)?

R. That is right. And if you read on page 3, line 7, I say:

> Betas are normally estimated over the prior five years since the basic data sources historically used monthly data, so the first observation is from January nineteen eighty-eight (1988) until December nineteen ninety-two (1992) and then each month as a new return is available the five-year estimation window moves forward a year. This process is repeated using two estimation techniques...

And then, I explain them.

That is the way I estimate my betas and I estimate them exactly the same for the Canadian securities as I used to estimate for the utility index.

Q. **[235]** So I think I am following you, but I am not sure. So let me just make sure. So what you are saying is that you looked at data up to nineteen eighty-eight (1988) to estimate the betas?

R. No. When I estimate the betas, the subindex of the

Toronto Stock Exchange was reorganized and the current structure was pushed back to nineteen eight-eight (1988) and then I estimate the betas and then every month, as there is a new month's observation, I drop to five year observation and I add the new one. So the beta is basically re-estimated every month going forward from nineteen eighty-eight (1988).

So that is how I manage to get what looks like a reasonably continuous series of betas estimates.

Q. **[236]** Okay. So if, the minute a new month's data comes out, you drop what is five years and one month prior?

R. That is exactly right.

Q. **[237]** Okay.

R. That way you can look back over a long period of time and get an idea whether the betas are trending towards one or whether they are stable or whether... or what is happening.

Q. **[238]** Okay. So can I get... so I assume there would exist a calculation sheet of some sort, for you to arrive at all the figures that we see in the column “Booth” of page 11? So, for example, TransCanada, we just looked at, is there a calculation sheet that would show me how you arrived at that, with the precise calculations?

R. I could tell you, but I mean, I have estimated using the standard ordinary least squares regression. The beta is simply the slight coefficient of the return on the stock against the return on the market.

Q. **[239]** But... I am sorry.

R. So I built a spreadsheet with all of that.

Q. **[240]** That is what I want.

R. It evolved in a spreadsheet and I thought I was asked to provide that as an information request, as normally I am.

Q. **[241]** Well, excuse me, if you did, I have not seen it and that could very well be my mistake, but I don’t think I have seen it and... well I know I haven’t seen it, and I don’t think it is there, so what I would like to have are the calculations, as an undertaking...

R. Okay.

Q. **[242]** ... so the calculation sheets for all of the six figures that we see in the column “Booth”, so the one for TransCanada, Enbridge, Canadian Utilities, Emera, Fortis and Pembina. So I would like to have the calculation sheets to arrive at all those numbers.

E-5 (ACIG): Transmit the calculation sheets for all of the six figures seen in the column "Booth" (asked by EGI)

R. That's fine. As you can see, they are almost exactly the same as the Royal Bank of Canada's, but what I could do is extract that data, put it in an Excel file and provide it as an undertaking. Because that's one... it's one observation for each of the six companies including the last year of December twenty twenty-one (2021).

Me PAULE HAMELIN :

Alors, j'ai bien noté la... I have taken note of the undertaking. The only thing I just question Dr. Booth, do you have any confidentiality issue with respect supplying the spreadsheet?

R. No, none of my data is confidential.

Me PAULE HAMELIN :

Okay, perfect, I just wanted to make sure, thank you.

Me PATRICK OUELLET :

Q. **[243]** Now, we see still on page 11, the column in the middle is Yahoo. Do you see that? Is it to your knowledge that Yahoo uses three years of monthly data, to calculate its betas?

R. No, Yahoo uses five years of monthly data.

Q. **[244]** You are sure of that?

R. I am positive about that, because I was asked that in an information request and I've provided it.

Q. **[245]** Okay. So I will see that in the information request. So you have backup to show that Yahoo uses five years?

R. Absolutely, what I did was take a screen capture of one of the company's profile in Yahoo, and under the beta, it had five years monthly data.

Q. **[246]** Are you sure that is Yahoo?

R. Positive it is Yahoo, I use Yahoo all the time.

Q. **[247]** Okay.

R. In fact, I can pick it up right now and verify it.

Q. **[248]** Okay.

R. If you want it...

Q. **[249]** Well, we will see at the break if it is necessary or not. Okay, so we have your average at point seven four (.74), we have your median at point six seven (.67), but if we look at page 13 of your Appendix C, lines 18 to 20.

R. Yes.

Q. **[250]** I will just let, Madame St-Cyr, we have that here, so, what you say at the end of that Appendix is... given the marginal increases in the... I guess you mean betas, here?

R. Yes, I am afraid I'm -- constantly Words changes, whenever I am writing beta, that's another word that Words doesn't seem to recognize.

Q. **[251]** Okay, that is one I hadn't picked-up on that yet... so:

> Given the marginal increases in the betas, I would therefore tend to be conservative and increase the range to point five to point five five (.5-.55) with a mid-point of point five two five (.525) which has historically been about the grand mean of the utility betas.

R. That's correct.

Q. **[252]** So the beta that you use, the beta that you use is point five two five (.525), correct?

R. Yes. Point five (.5), I got two estimates, point five (.5), point five five (.55), the mean is point five two five (.525).

Q. **[253]** Now, your report obviously does not contain any mathematical calculation to show how this estimate of point five two five (.525) is arrived at, correct?

R. Well, it is an average of point five (.5) and, point five five (.55).

Q. **[254]** No, no. I am not, I am not... that is not my question. Maybe I misspoke but what I am saying is: forget the point five two five (.525), I am talking about the range, point five (.5) to point five five (.55). I don't see any calculation that brings you there. I see calculations that bring you to point seven four (.74), to point sixty-seven (.67). I don't see anywhere a calculation to bring us to that range of point five (.5) to point five five (.55). Is that correct?

R. But there is no calculation that brings me to point seven four (.74) because that is the calculation for the average of the three pipelines as well as the three utilities. The... I have used the range of point four five (.45) to point five five (.55) for the betas for utilities for at least the last decade, and when I look at this, the... I had the estimate of point five eight (.58) for Canadian Utilities. So if you look at the CUL on Schedule 5, you see the CUL is the only utility that is really a Canadian utility. In the sense it owns ATCO Gas, ATCO Electrical, ATCO Pipe, it owns other things, but both Emera and Fortis have increasingly bought a lot of US operations. And they're involved in a lot of mergers and acquisitions activities. So while we would look at this and saying well, the only pure Canadian utility there is Canadian Utilities at point five eight (0.58).

When I look at the, the mean for the betas, the grand mean coming out of my beta estimation model was point five two five (0.525). When I look at the, the betas over the last, the last most recent period two thousand and seventeen to two thousand and twenty-two (2017-2022) on Schedule 2, the beta is point four nine four (0.494) which is basically point five (0.5). So, we've got point five (0.5) for the Utilities subindex, the most recent beta. We got point five eight (0.58) for Canadian Utilities and we've got point five two five (0.525) or five point two (5.2) as the beta, long-run betas' tendencies for the grand mean in Canada. So, I'm comfortable basically saying that betas have increased a little bit.

Q. **[255]** Do you want me to repeat my question Dr. Booth?

R. You asked me about if I got a specific calculation?

Q. **[256]** I want to see the calculation, not for the point five eight (0.58) of Canadian Utilities, not for anything else. I want to see the calculation that brings you to what you use, which is a beta in the range of point five (0.5) to point five five (0.55).

R. O.K. Well, the point five (0.5) comes from the value in Schedule 2. If you look at Schedule 2...

Q. **[257]** Of Appendix C?

R. Of Appendix C. And if you look at the, there's two regression results there.

Q. **[258]** Hum hum.

R. And on the left it's the long run regression results going back to the overall period to nineteen eighty-seven (1987). And the beta there is point three (0.3). And the beta for the last five year period is point four nine four (0.494).

Q. **[259]** I'm losing you. Just can you point. You can't show me with your finger obviously but,...

R. Well if you look at the... it's the coefficient on the TSX, which is what the beta covers.

Q. **[260]** Okay.

R. So, on Schedule 2, the second set of regression results, for two thousand and seventeen to two thousand and twenty-two (2017 to 2022) the TSX is nought point four nine four (0.494). So if you want to be precise, I could say my values is point four nine four (0.494) to point five five (0.55).

Q. **[261]** Can you, please, repeat.

R. But if you really want to be precise, it will be point four nine four (0.494) to point five eight (0.58).

Q. **[262]** And, so your point five eight (0.58) is still... is found in that schedule as well or is Canadian Utilities?

R. Point five eight (0.58) is Canadian Utilities, it's the only utility in Canada that we've got, that has not gone hell to scale through mergers activities over the last ten years.

Q. **[263]** Okay. But, my understanding is that the point five eight (0.58) for Canadian Utilities you actually came up with using five years of monthly data. Correct?

R. The last five years.

Q. **[264]** Now, I'm asking you, so that's the far end of the range. I just don't see any calculations using five years of monthly beta for various companies that brings you to that range of point five (0.5) to point five five (0.55) that you're using.

R. Well, the point five (0.5) as I said, basically is the sub utility, the Utilities subindex which is point four nine four (0.494). Now you might privilege a new point four nine four (0.494) instead of point five (0.5), but with regards they are not that precise, so...

Q. **[265]** But the Utilities subindex that is with data going back in nineteen eighty-seven (1987), correct?

R. No no no. There's two... if you check Schedule 2, there are two estimates. One covering the overall period which is to the left and one covering the most recent five year period. Which is, which is the Utilities subindex, the last sixty (60) observations and the coefficient on the TSX which is the beta coefficient is nought point four nine four (0.494). So that point four nine four (0.494) on the second set of results per Schedule 2, that is the most recent beta estimate of the last five years monthly returns for the Utilities subindex of the Toronto Stock Exchange.

Q. **[266]** Okay.

R. If you want it to be absolutely precise, point four nine four (0.494) to point five eight (0.58). But as far as I'm concerned... these things are not that precise. Point five (0.5) to point five five (0.55) I think is a reasonable range. Because I haven't seen a point five eight (0.58) number like Canadian Utilities for a long time.

Q. **[267]** If we look at Appendix C again. If we look at the schedules in Appendix C. There's various schedules. Schedule 1.

R. Yes.

Q. **[268]** So. This, here you look at data from the mid point in twenty twenty-one (2021) all the way back to nineteen ninety-two (1992). Correct? It's what I see here?

R. It's to December twenty twenty-one (2021). It's just that the schedule has them every, every three months I guess, to avoid putting a whole bunch of numbers at the bottom for the times.

Q. **[269]** Okay.

R. But the last observation is December twenty twenty-one (2021).

Q. **[270]** Okay. So, that would be data from nineteen ninety-two (1992) to the end of December twenty twenty-one (2021). Correct?

R. Data from nineteen eighty-eight (1988) because it takes five years to estimate. So the first observation is for the five, prior five year period.

Q. **[271]** Okay.

R. And that is the longest period for which we've got data for the Utilities subindex. Because they reorganized it nineteen ninety-five (1995) or nineteen ninety-six (1996) something like that.

Q. **[272]** And your reference would be the same as Schedule 3. So it's the same set of data that we see...

R. It's exactly the same data. Except that the first set of results is one estimate for the whole period rather then looking at each month updating one. And the second one is for the last five year period. Which is in fact the last observation in the graph at Schedule 1.

Q. **[273]** Give me on second.

R. Okay.

Q. **[274]** I'm changing subject. So, going back to, Madame St-Cyr, vous pouvez enlever, you can take that away from the, from the screen. So Dr. Booth, I'm gonna go back to a topic that we touched upon at the beginning of the cross-examination. So, since the filing of your evidence, and I'll just state a few assertions and you tell if you agree with me, I think it's not controversial.

So since the filing of your evidence, the Bank of Canada raised its policy interest rate from point two five (0.25) or point five (0.5) depending on the date you look, to one point five (1.5). You agree with that?

R. Yes. Correct.

Q. **[275]** Now, the market is expecting that the Bank of Canada will raise the rates again, possibly as soon as next month. Correct?

R. Correct. Probably nought point seven five (0.75%)

Q. **[276]** Probably not point seven five (0.75)?

R. Nought is zero point seven five percent (0.75%)

Q. **[277]** Okay. So seventy-five (75) basis points?

R. That's correct.

Q. **[278]** Okay. And you are aware the Federal Reserve raised its Federal Funds rate by seventy-five (75) basis points last week as well?

R. That's correct.

Q. **[279]** Now, the inflation rate went up to six point eight (6.8) from five point one percent (5.1%) at the time of the writing of your report.

R. That's correct.

Q. **[280]** The RBC...

R. That could go to seven point three (7.3) or seven point two (7.2) or something like that.

Q. **[281]** Yes, well it's going, it's going up, we know it's going up again in July. Yes.

R. Yes.

Q. **[282]** Now the RBC forecast for the overnight rate doubled since the filing of your report. From point two five (0.25) to point five (0.5).

R. Yes.

Q. **[283]** The RBC forecast for the overnight rate as of Q4 twenty twenty-two (2022) also doubled? Going from one point twenty-five (1.25) to two point five percent (2.5%)?

R. So, you say that one again.

Q. **[284]** Yes, I'm sorry. It's a lot of numbers. The RBC forecast for the overnight rate, as of Q4 twenty twenty-two (2022) doubled also?

R. Yes.

Q. **[285]** So, from one point twenty-five (1.25) to two point five percent (2.5%).

R. That's correct.

Q. **[286]** And all these changes that happened since the filing of your report have had zero impact on your recommended ROE of seven point five percent (7.5%). Correct?

R. That's correct. Because the long Canada forecast hasn't reach my trigger point of three point eight percent (3.8%). It's been a period of very low long Canada rates. And the base for the fair ROE in

Canada is the forecast long Canada rate.

Q. **[287]** And I think you've established that you expected the three point eight (3.8) to be reached in, in the near future. Correct?

R. I didn't say that. I did expect it. And then RBC came up with this forecast that they expected it to go down. It's entirely contingent upon the success of the Bank of Canada slowing down the economy and bringing down interest rates. Right now, we're in a period where is not at all certain that the actions of the Central Bank are enough to slow down inflation. I'm sceptical. RBC seems to be more optimistic.

Q. **[288]** And your opinion is that the three point eight (3.8) will be surpassed in the near term.

R. It depends who defined near term.

Q. **[289]** In the coming two years.

R. I think we're going to get very close to it. I don't think we're going to get passed it. The... and the reason for that is that currently the forecast is about three point three six (3.36) by the Parliamentary Budget Officer, but that includes the thirty seven (37) basis points for the long Canada driving the ten year rate. And right now, there is no premium of the thirty (30) year over the ten year rate. If fact the thirty (30) year rate is less than the ten year rate.

So effectively we’re at a three percent (3%) forecast now. Do I see any basis point increase? That would mean that the Bank of Canada has not been able to control inflation and the demand has overwhelmed the willingness of the Bank of Canada to increase interest rates. And that comes down on what on earth the government of Canada is saying to the Bank of Canada, about the political implications of rising interest rates.

If we were in the United States, Biden’s facing his interims in November, and politically the Fed is under a lot of pressure not to increase interest rates too much, because you trigger in a recession and high inflation just when the government go to election. The democrats are gonna have a serious problem with the midterms. So there’s obviously a political element to all of this.

Q. **[290]** Can we please go to page 46 of Dr. Booth’s evidence. So C-ACIG-0037.

R. Yes.

Q. **[291]** Okay. I’ll just wait for madame St-Cyr to put that on the screen. So it’s la page 46 de

C-ACIG-0037. Voilà, tout en haut complètement. At the very top of the page 46. There we go. Okay. So. The question you were asked is how would you compare conditions now versus your twenty eleven (2011) GMI report? And your answer is: "I would say that in many respects they are quite similar". So that is what you wrote in, I think it would have been... early this year. Early twenty twenty-two (2022). So you're still of the opinion that, you're still of the opinion that the conditions compare, conditions now are comparable to two thousand eleven (2011)?

R. I have to say, I'm not sure that I said than we were further along in the business circle then we were in two thousand eleven (2011). Because, it's the story of the, the clock that says, 2 o'clock, twice a day, which is completely different. One time is in the afternoon, one time it's early in the morning. And that's the business cycle. I think a lot... backing to two thousand eleven (2011), as I said, we were waiting for Godot, we were waiting for the Americans to recover and it's like calling the Americans: get your act together, start growing, start increasing employment. And we waited for the Americans for several years. Now, we're at the other stage. We're not in the early stage of the business cycle we are at the late stage of the business cycle. So a lot of the indicators are exactly the same in terms of capacity indicators, for example, the break-even inflation rate is a bit lower. CPI is definitely higher. The unemployment rate, you never mentioned that one...

Q. **[292]** Pardon me...

R. ... unemployment rate was six percent (6%) when I put my testimony together. Now it's five point one (5.1%). This is literally unheard of, the... it signifies, we soaked up all of the excess labour in the Canadian market, and we're short of people. All of these indicate late cycle for the economy, and as a result the central banks slowing down the economy.

Actually a lot of them as I said, are very very similar. The position of loan officers, the stressing indicators, credit spreads are sort of similar. The major factor is the long term Canada bond yield and otherwise, if we hadn't had this thirteen (13) years of bond buying by central banks, and interest rates were where they should be, three, four, five percent, I would say it is very similar to two thousand eleven (2011).

Q. **[293]** Okay.
R. It sets the world on the down instead of on the up.
Q. **[294]** So I will ask you several questions on what I suggest are differences between the market now and the market back in two thousand eleven (2011).
Obviously, things change, can change in eleven years. But you are aware that the rate of return that was set for Énergir, as it was known Gaz Métro back then, was eight point nine percent (8.9%) in two thousand eleven (2011).
R. That's correct.
Q. **[295]** Okay.
R. And that was a thirty (30) basis points spread over the eight point six (8.6), I guess, which was the generic ROE.
Q. **[296]** So what you are suggesting to the Régie is that despite similar market conditions and a similar risk, the rate of return should decrease from the actual eight point nine percent (8.9%) to your recommended seven point five percent (7.5%), is that your suggestion?
R. I think the correct suggestion, is that I made a recommendation in two thousand eleven (2011), I think it was seven point seven five percent (7.75%) and my recommendation now is seven point five

percent (7.5%) which is slightly lower, no where near as much as they decline in the long Canada bond yield, but it is slightly lower and I would say at the moment, the eight point nine percent (8.9%) is slightly higher by about twenty-five (25) basis points.

But I remind you, I think it was two years after the two thousand eleven (2011) hearing, the lawyer for IGUA at the time called me up and talked about the settlement...

Q. **[297]** You can't talk about a privileged information. I mean, you can say what you want, but privileged is... is something protected by our constitution, so be careful.

R. Okay, I won't say another word, okay, but I have no problem with the fact that independent of any settlement, I have no problem, since I've said specifically on so many occasions, that my seven point five percent (7.5%), I would not lower it, because of lower interest rates and I would not change it until the long Canada bond yield got to about three point eight (3.8%) percent and the conditions in the bond market started to become normal, that is that they are established by ordinary people, not the central banks.

So I would say that the Régie got it right basically, given the fact it's a little bit higher than I think is reasonable, but keeping it the same, I think it has been perfectly reasonable.

Now, this is probably my easiest question since the beginning of this cross-examination, but you will agree with me that in two thousand eleven (2011), there was no global COVID-19 pandemic?

R. That's correct.

Q. **[298]** Okay. And you will agree with me that the inflation rate back in two thousand eleven (2011) was not nearly as high as it is today, correct?

R. True, but we are looking at the long term inflation rate, and I draw your attention to the fact that in the July two thousand eleven (2011), the break-even inflation rate was two point five one (2.51), now it is one point eight percent (1.8%), in both cases, they are within the one to three percent (1-3%) range.

Q. **[299]** And do you recall...

R. And you'll remember, there was no COVID, but we have had SARS and we have had that fear of other sources of pandemics.

Q. **[300]** Well, sure, you are not going to compare SARS to what happened with the COVID-19, correct?

R. Of course not, but I am saying that at the time, we were worried about SARS.
Q. **[301]** Okay. But now, we are not just worried about COVID-19, it happened, we have been living with it for over two years now, right?
R. Oh, absolutely and in fact, word is out that there is yet another bickering of COVID-19 and Europe is bracing for another round of infections, because this seems to be an extremely infectious disease.
Q. **[302]** Do you recall that the GMI hearing, if I may call it that, in two thousand eleven (2011), took place in September, just so we know when the hearing took place? September twenty eleven (2011)?
R. I will accept that, I can't remember exactly when it was.
Q. **[303]** Well I can tell you, it was from the seventh (7 th) to the twenty-third (23rd) of September twenty eleven (2011), but my purpose of this is : do you agree with me that back in September twenty eleven (2011), CPI inflations stood at three point two percent (3.2%) versus six point eight percent (6.8%) today?
R. Oh, I'll accept that obviously. My memory, as I get older, days merge, years merge, and I can't remember exactly what the rate of inflation was at

a particular point in time.

Q. **[304]** No, no, I understand, I understand that, but I have put a document, we have put in the document which is B-0377, if you want to have a look at it.

R. No, I'll take that subject to check.

Q. **[305]** Okay.

R. In my opinion, that must be the headlines CPI rate...

Q. **[306]** Yes.

R. ... rather than....

Q. **[307]** I will give you the three, the three, all the initials CPI, total CPI three point two (3.2), CPI-trim was two point one (2.1), CPI median was two (2) and so was CPI-common.

R. Yes, so all three of the core ones were well within the one to three percent (1-3%) range. So clearly, there must have been, I would have to remember whether that was commodity prices causing problems.

But I mean, the problem in Canada is that oil and gas prices have reasonably big impact.

Q. **[308]** Yes. But these inflation figures are way different than they are today, correct?

R. Oh, that is correct, there is no question about that, whatsoever. The question is whether it is permanent, whether it is transitory. And whether the Bank of Canada can get a hold on the second stage, when it drifts into wage increases and underlying inflation.

Q. **[309]** Now do you agree with me that labour shortages were not as present in two thousand eleven (2011) as they are today?

R. Mr. Ouellet, we always thought of six percent (6%) as the lowest the unemployment rate could go in Canada. Anything below six percent (6%) we called narrow the non-accelerating inflation rate of unemployment. Which meant that if unemployment got below six percent (6%), we would get inflation. And now, we got five point one percent (5.1%). So I cannot remember how many decades you have to go back to find an unemployment rate in Canada of five point one percent (5.1%), but it is a long long way.

Q. **[310]** So just so it is clear for the record, for the transcript, you do agree that there were no labour shortages as much, or they were not as much labour shortages back in twenty eleven (2011), than there are today?

R. Absolutely correct.

Q. **[311]** Okay. And the same question with regard to supply chain bottlenecks. That was not as present in twenty eleven (2011) as it is today, correct?

R. We never heard of it at that time, because every one was talking about how efficient the supply chains were. Now we have discovered how critical China is.

Q. **[312]** And another obvious one but back in two thousand eleven (2011), there was no war in Ukraine causing the imposition of global economic sanctions against Russia?

R. That’s correct. I am sure there was a war somewhere, but obviously not as important as war in Eastern Europe.

Q. **[313]** Now, I would like to quickly discuss the stand-alone principle. You are familiar with the principle?

R. I am.

Q. **[314]** Can we go to your direct testimony, so C-ACIG-0037, page 101.

R. Yes.

Q. **[315]** Okay, and I will just read for the record. So question, I am at line fifteen (15).

R. Yes.

Q. **[316]** Okay, page 101, so just next page. Un petit peu plus bas encore, voilà. À partir de la page... de la ligne 15. So I am starting, I am going to reach target line 15, so there was a question.

> Doesn't the "isolation" principle justify Gazifere's higher common equity ratio based on its small size?

Now I will read the answer :

> No. The isolation or stand-alone principle is justified based on a holding company or sister company charging uneconomic costs to the operating subsidiary. For example, prior to the PUHCA in the US electricity companies owned unregulated electric tram, streetcar companies apparently were charged uneconomic prices by the regulated electric companies. After the passage of the PUHCA these streetcar operations were divested and many of them went out of business. The point is that "stand-alone" was meant to mean that the charges to the utility were fair and reasonable, not that a small uneconomic subsidiary should remain in business protected by regulation. In this respect Gazifère

is an artificially small business and seems to be integrated with EGI. Note Gazifère pays Enbridge interest based on a BBB low bond rating when EGI is the strongest gas distribution utility in Canada covering almost all of Ontario. I regard this as charging uneconomic costs to Gazifère.

So...

R. Gazifère’s ratepayers.

Q. **[317]** Yes. So you still agree with that answer that you gave?

R. Yes, I expected questions on this because I am fully aware that the Régie regulates a legal entity called Gazifère and he has to do that according to regulations in Ontario. But as an economist, Gazifère seems to be integrated with Enbridge. And I say, “seems” because I asked a series of questions on this and they refuse to answer. So I went to Enbridge's annual information form to see what Enbridge talks about Gazifère, and all I could find, was that the senior executive in charge of Enbridge is also in charge of Gazifère.

Q. **[318]** So Dr. Booth, I know you expected questions on this, but maybe you can wait for my questions

before you start answering them?
R. Oh, sorry, sorry.
Q. **[319]** Thank you. So you heard Jean-Benoît Trahan, his evidence, did you hear his evidence from Gazifère?
R. No, I didn't.
Q. **[320]** Okay.
R. But...
Q. **[321]** Now, you did not hear Mr. Trahan explain that Enbridge and Gazifère operate independently from each other?
R. Isn't he the Senior executive in charge of Gazifère?
Q. **[322]** Yes, he's the president of Gazifère.
R. Oh, I am not surprised if he would say that, yes.
Q. **[323]** So, but you were not present during his testimony, right?
R. I was not, I do know him from previous work, but...
Q. **[324]** Do you recall, so you are not aware that Mr. Trahan explained that Gazifère and Enbridge are subject to different legislative and regulatory frameworks? Do you agree with that?
R. They are subject to different regulations within Ontario versus Québec, of course.
Q. **[325]** And obviously, subject to different

regulators?
R. And different regulators, yes.
Q. **[326]** And the...
R. Sorry.
Q. **[327]** Sorry. Okay go ahead.
R. No, it is all right, carry on.
Q. **[328]** Okay, so you are aware that their clients have different consumption habits?
R. When you mean that the regulator, the clientele of Gazifère is not the same as the clientele of Enbridge.
Q. **[329]** Of Enbridge, yes.
R. Enbridge gas distribution in Ontario used to be very much residential. In the purchase of Central Gas Ontario, in Northwest Ontario and Union gas, it acquired a much bigger clientele of industrial users, pipeline assets and storage assets. So the composition of Enbridge gas has changed as a result of acquisitions, whereas Gazifère, as we know, is primarily a residential utility.
Q. **[330]** I would like to put before you, unfortunately, I do not have the Régie exhibit, but it is EGI-52.6. It is two thousand and ten (2010) decision, D-2010-147. I will try and see if someone can help me with the Régie quote. So it would be

B-0384, B-0384.

So what I am going to put before you, Dr. Booth, is the Régie decision in the two thousand and ten (2010) Gazifère case. In which I believe you did... well, in which you testified, correct?

R. I did, and I am fully aware of the decision of the Régie in terms of the isolation principle.

Q. **[331]** Okay. So we will look at that together. Donc, c'est le B-0384. Unfortunately, Dr. Booth, I don't think we have an English version of that. So what I'll do, is I will translate it, if Me Hamelin can correct me if she does not agree with my translation.

Me PAULE HAMELIN :

I think we have an unofficial translation of that decision.

Me PATRICK OUELLET :

Great, even better.

Me PAULE HAMELIN :

So, let me just check.

Me PATRICK OUELLET :

Yes. That would obviously be better than doing the French.

Me PAULE HAMELIN :

If you give me five minutes, I can...

Me PATRICK OUELLET :

No problem.

Me PAULE HAMELIN :

Few minutes.

Me PATRICK OUELLET :

Okay. So if we could, sorry, is this the English one or it is the French one?

Me PAULE HAMELIN :

This is the French one, and I have, it was not... the English unofficial translation was not filed but I have it in front of me, so...

Me PATRICK OUELLET :

Okay. Do you want to... maybe, we can just... we will use the English, but maybe we can file it afterwards, just so everybody has that but if, Me Hamelin, if you could just email it to me and to Dr. Booth and we will both have the same thing, we can read from the decision and then perhaps file it in the record. Si ça vous convient, Monsieur le Président et Mesdames les Régisseurs?

LE PRÉSIDENT :

Oui, ça va, merci.

Me PATRICK OUELLET :

Parfait. Donc, je vais juste laisser, là, le temps à maître Hamelin de me l'envoyer par courriel. Je vais fermer mon micro puis je vais prendre ma décision.

PAUSE

Me PAULE HAMELIN :

Alors je viens de l'envoyer je ne sais pas s'il y avait des annotations là-dessus parce que c'est ma copie. Alors...

Me PATRICK OUELLET :

S'il y en a, Maître Hamelin, je vais les ignorer. Je regarde deux paragraphes seulement. Ce sont les paragraphes 158 et 165.

LE PRÉSIDENT :

Bien, ça nous intéresse!

Me PATRICK OUELLET :

Q. **[332]** Have you received it Dr, Booth? I haven't received it yet. O.K., je l'ai.

R. Yes, I've got it.

Q. **[333]** Okay. So I will go to paragraph 158. Il y a du jaune, Maître Hamelin. Je le constate en faisant le scroll down.

Me PAULE HAMELIN :

Je pense que les paragraphes dont vous faites référence, il n'y a pas de... de toute façon vous allez les, les lire si ma compréhension est bonne.

Me PATRICK OUELLET :

Oui oui, exact.

Me PAULE HAMELIN :

Alors on verra à produire une version « clean ».

Me PATRICK OUELLET :

Q. **[334]** Ça va. Donc m'y voilà. So I'll start by reading the unofficial translation of paragraph 158, Dr. Booth. So:

> According to Dr. Booth, if there were no provincial boundaries, Gazifère's assets would not be distinct from Enbridge's and the two would be integrated. On this basis, and in view of the economic principle that similar assets should generate equivalent returns, Gazifère should have the same capital structure, the same cost of debt, and the same rate of return as Enbridge.

So you recall that was your position back in two thousand and ten (2010), Dr. Booth?

R. Really I can't remember the exact words whether that reflects exactly what I said. But I'm happy to see that my view hasn't changed in thirteen (13) years. And I'd say that I was once asked in a BC utility's hearing by the opposing lawyer, he gave me a question and I gave the same answer. And he said: "Well, Professor Booth, three years ago I asked you the same question and you gave the same answer." And he went back to something like nine years earlier. He asked me the same question and I gave the same answer. So, in substance, my view is simply that Gazifère...

Q. **[335]** I haven't asked my question yet.

R. I thought you asked me whether I agree with that...

Q. **[336]** Well, my question was, was that your, was that your evidence, your position back in two thousand eleven (2011) or two thousand and ten (2010)?

R. I would assume it was. I mean, I can't remember exactly what I said but as I read it, I would not disagree with that now.

Q. **[337]** Now, at paragraph 165, I will just read the Régie's decision here:

> The Régie has long established Gazifère's cost of debt on the basis of the stand-alone principle. The Régie finds that the evidence does not support a change in this approach.

So, do you recall that the Régie did not agree with you that Gazifère should be viewed as the same as Enbridge?

R. That is exactly what I expected the cross-examination on this.

Q. **[338]** Okay. So, despite the Régie not agreeing with you back in two thousand and ten (2010), you're presenting the same position. Correct?

R. Currents in Economics haven't changed. That, as far as I can see, the person running Gazifère is also running Enbridge Gas, the whole of the utility. So, clearly it's a separate legal subsidiary, but my view would be that the isolation or the stand-alone principle should not trump fair and reasonable rates.

And the question that we should ask, is if in fact Enbridge is in... sorry Gazifère is integrated with Enbridge, as I strongly suspect it is, but I couldn't get any answers out of Gazifère on this, if it is really integrated, how really significantly different, do you think, the Gazifère ratios would be, from say Scarborough in Toronto, which is Enbridge Gas Distribution. Or anywhere else where it is predominant residential and serviced by Enbridge. There maybe some of these new risks that we have yet to work out how they actually manifest in the inability to Gazifère to earn its allowed ROE. But we're talking about part of what I might term greater Ottawa, in terms of... is that substantially different Enbridge serving that component versus serving another part of, say, Greater Toronto. And I would believe that the fair, a reasonable standard should mean that, that should trump, we should look beyond that.

And there is a phrase that we use all the time in legal decisions: piercing the corporate veil. Which is to say, looking beyond the legal entity of Gazifère to the substance of the transaction. And that's all I'm saying here, that for what I can see, Gazifère seems to be integrated with Enbridge. And I'm not quite so sure why it should be charged a BBB rate on its debt, when that debt is coming from an entity which is way better than a BBB debt. And it's got one of the lower cost of debt of any utilities.

So I would say that was charging Gazifère's customers, almost certainly, certainly probably a unfair cost of debt. And the rates, probably are unfair and unreasonable as a result. But I fully recognize that the Régie has a responsibility to regulate a separate legal entity in Québec.

Q. **[339]** Okay. So I just want to... I have a few clarification questions on that. So, your position that you just explained, it's the same position you had in two thousand and ten (2010). Correct?

R. Well, I can't remember word for word what I said in two thousand and ten (2010), but I think in substance it's the same because the economic position of Gazifère hasn't changed.

Q. **[340]** But Dr. Booth, my point here is that you've been very very critical of Dr. Villadsen in your direct evidence when she brings an argument that was dismiss by the Régie at the latest hearing. So am I to understand that when you do the exact same thing that's correct?

R. No. That's a misrepresentation I would say. What I'm saying here is the Régie should look at fair and reasonable rates. And basically look at Gazifère and say whether the, the underline functional role of Gazifère within Enbridge means that the rates should then be unfair and unreasonable.

On the other hand when I'm looking at Dr. Villadsen, she's doing things that are unacceptable to me as a finance professor. And I would say that in the strongest way they are unacceptable.

Adjusted betas, there is no statistical evidence for adjusted betas for utilities. I've never seen any study that looked at utilities and say they should adjust their betas towards one. And I've never seen anybody use the theoretical Capital Asset Pricing Model in a way the doctor Villadsen, and before her Dr. Vilbert used them. And the way when she uses the ATWACC, using market values fixing with, with book value weights, was described by the AUC that they'd be derelict in their responsibilities to accept that. So...

Q. **[341]** So Dr...

R. So I'm just... You asked me about this and...

Q. **[342]** I did, I did.

R. These are unacceptable. I'm sorry. I can't say anything else. I was worn by counsel to be very friendly and not be provocative, but to my -- wearing my professor finance's hat, these are unacceptable. While, all I'm saying to the Régie, is I fully recognize legal responsibilities to treat Gazifère as a legal entity, but there is also piercing the corporate veil and responsibility to have fair and reasonable rates, which trumps, I think, the isolation or the stand-alone principle.

Q. **[343]** Are you aware, Dr. Booth, that piercing the corporate veil in Québec can only be done in the case of a fraud, contravention to rules of public order?

R. I wasn't aware of that in Québec. I was aware that it happens all the time before Canada Revenue Agency.

Q. **[344]** But you're surely not a specialist in piercing corporate veil. Correct? You're not a legal specialist?

R. I'm actually not. I've said many many times I am not a lawyer. I am not licenced to practice law. What I am is a professor of finance that deals with contracts all the time, they are all legal implications.

Q. **[345]** So, if I understand your testimony correctly, what we should take from your evidence, is that the Régie set an unfair and an unreasonable rate of return for Gazifère in two thousand and ten (2010)?

R. No. I'm not saying that at all. I'm saying that the standard is fair and reasonable rates. And that trumps, in my opinion, the stand-alone principle or the isolation principle. And I'm sure the Régie set what it felts was fair and reasonable rates.

And just to reflect on this, I'm recommending for Gazifère a forty percent (40%)

common equity ratio which is more than a smaller utility in Alberta get, which is thirty-nine percent (39%). So it's not as if I'm being... saying they should have Enbridge thirty-six percent (36%) allowed return. So, it's not like I'm sort of being, sort of particularly hard saying: give them exactly what Enbridge gets. But, I would just point out to the Régie the over riding criteria to earn reasonable rates.

Q. **[346]** And if you could go to page 98 of your report please.

R. Yes.

Q. **[347]** So, we'll ask madame St-Cyr to put that on the screen. I'm almost done, Monsieur le Président, a few more minutes. Donc la pièce, le même, la même pièce, le témoignage en chef du docteur Booth, à la page 98. Je crois que c'est 0037. Donc la prochaine page je crois. Voilà. Et c'est en haut ici. So, I'm directing you, Dr. Booth, starting at line 3.

R. Yes.

Q. **[348]** The question was:

> Are you saying that climate change is not a risk factor that has increased risk for the Québec Utilities?

And I'll read your answer:

> No. I am simply pointing out that all provinces must try and reduce the use of fossil fuels and their impact on climate change. However, the tools available to them to do that are different given different energy endowments. According to the Premier "of all the states and Canadian provinces, Quebec emits the fewest greenhouse gases per capita." In this respect, Quebec is exceedingly lucky, similar in some respects to BC and Manitoba, in having significant access to low-cost cheap hydroelectricity. As a result, reducing the use of natural gas is higher up the priority list.

So, you still agree with that answer, Dr. Booth?

R. Yes. It's... Québec is extremely lucky. It's... when I think of the nuclear plants that we've got in Ontario, because we've used up all of the Niagara generated hydro. We don't have the luxury of cheap cost electricity. So, the people in Ontario agree that natural gas is not the best choice but it's better than burning coal or better than burning oil. And we talked a little bit about

Ukraine and Europe. They're dying for gas. They're putting new liquified natural gas facilities because they want to get off Russian gas and they still want to... they still treat natural gas as a halfway fuel.

So when we look at the provinces, every province wants to do the right thing. When Québec turns around to do the right thing, what it regards as the right thing, is in fact something in other provinces that they regard as the best thing that's available.

And, when you look at this, climate change is a global phenomenon. And it's something that everybody has to deal with. The best way, with my economist hat on, of reducing climate change is to stop the Indian and Chinese using low quality coal to burn for electricity. So it's much better that we reduce greenhouse gas by getting India or China to reduce pollution than it is for Québec to shut down natural gas.

So, I know every province is different, every province has a legal requirement and got a political agenda, but with my economist global economy hat's on, I'd say the best possible solution is to, for Québec, to pay China not to pollute. Because China's greenhouse gas is the same no matter where it's produced.

Q. **[349]** Okay. So, let's leave China and India and instead stay in Canada for now.

R. Well we are stopping coal, but Nova-Scotia still has coal plants.

Q. **[350]** I have a question at some point.

R. Okay. Sorry.

Q. **[351]** Okay. So, Dr. Booth, you'll agree with me that the situation is not the same in every Canadian province.

R. Absolutely. Yes.

Q. **[352]** Okay. Now, last Friday, you suggested that long term risk is relevant when there is evidence that such risk will prejudice the shareholders return on investment. Do you recall that part of your testimony?

R. I don't, I was probably thinking of TransCanada, the mainline where long term risk was reduction of his load because people wee dropping off the system and it was a quantifiable reduction in load that had implications for the mainline. And that was because the long term contracts where not being renewed.

Q. **[353]** Are you aware or can you point me to any regulatory principle or author who would confirm that long term risk is relevant when there is evidence that such prejudice, that it will prejudice the shareholders return on investment.

R. No, the only... I can’t remember whether I said exactly that but what I... if I didn't say exactly that, what I meant was long term risk has to become short term risk. It has to affect the ability of the utility to earn it's allowed ROE.

And just saying: well, there’s risks out there in the future, then there is always risks out there in the future, isn’t enough. You show how... and I am pretty sure I said, where the rubber meets the road. When we had this before the National Energy Board, the long term risks were definite. We could see the forecasts for the TransCanada mainline and it was going to have problems with a lower load, rebalancing rates to make sure that people stayed on the system.

So, in that sense, the long term risk was quantifiable and affected the recovery of the mainline's cost. So in that sense, it was, it was quantitative. You could look at it and it was definite.

Q. **[354]** But, my question to you is: can you point me to an author or regulatory principle that says that long term risk is relevant only when there is evidence that the shareholders return on investment will be prejudiced?

R. Well, that is common sense. If the long term...

Q. **[355]** I'm asking you if you can point to an author or book or principle that says that?

R. Risk exist... Okay, well...

Q. **[356]** You have to answer my question and then, you can explain that it is common sense, but first, can you answer my question?

R. No I can't, because it is obvious.

Q. **[357]** Okay.

R. And it is obvious because risk reflects two things: it reflects the situation and your exposure to that risk. If the risk occurs and has no harm, your exposure to that risk is negligible, then is no real material risk. It has to affect the investor.

I talked to my students about supposed bond defaults. If the bond defaults and you get a hundred percent (100%) of your money back, then there is no risk. So the probability of default does not have an impact. It has to have a probability of something happening and a cost to that incident.

And if something happens and is never a loss to the shareholder, it is not a risk. And that is what...

Q. **[358]** I have...

R. ... has to be accounted for.

Q. **[359]** I have one last topic that I would like to address with you, Dr. Booth.

R. Yes.

Q. **[360]** I will show you, if Madame St-Cyr could put on the screen exhibit R-0378, so you will see Dr. Booth, it is a chapter in a book that you authored.

LE PRÉSIDENT :

Est-ce que c'est B-0378?

Me PATRICK OUELLET :

Oui, j'ai dit R, hein, mon R a l'air d'un B, mais c'est B, oui, je m'excuse.

Q. **[361]** This is the cover page of the book, but if we want to look at your article, we have to go to the next page. It’s an article titled "The cost of equity capital and the fair rate of return on equity for Canadian Utility".

R. Yes.

Q. **[362]** So you authored obviously this article?

R. True, it’s, I think if I remember correctly, Gordon Kaiser wanted something from me and something from

Kathy Shane, just to get the opposing fears on the cost of capital.

Q. **[363]** Okay. Now, this was written in two thousand eleven (2011), correct?

R. Well, I will accept that, I cannot remember exactly but...

Q. **[364]** What I, just to be transparent with you, I took the book and I looked at the book, and it says : copyright two thousand eleven (2011), so it is where I got the date from, so I think...

R. Probably from two thousand and ten (2010).

Q. **[365]** Okay, okay. Now if we go to page 487 of this, of the chapter that I have put, that we've put in the record. Talking about Canadian utilities... 487, voilà et plus bas, un petit peu plus bas. O.K.

So you see, maybe we will make this bigger, so just before "Fairness revisited", you write, in two thousand eleven (2011) or two thousand and ten (2010) :

> Overall, I continue to use a beta estimate of no more than point five (.5) for Canadian utilities, which means that two hundred fifty (250) basis point utility risk premium. If this is added to a flotation cost

allowance of point five percent (.5%) and a forecast long Canada bond yield, the fair ROE for a Canadian utility is about seven point five percent (7.5%) which is less than the current formula AROE.

R. Allowed ROE.

Q. **[366]** Yes. So Dr. Booth, and I think you touched on this during your direct examination as well, so basically, what I understand from that is your bench..., your recommendation for a benchmark utility in Canada is seven point five percent (7.5%) ROE, correct?

R. That's correct.

Q. **[367]** And it has been so, this was written in two thousand and ten (2010), so twelve (12) years ago, and your recommendation for the benchmark utility has not changed, it is still seven point five percent (7.5%), correct?

R. That's correct. And when you look at it, the beta estimate I have got there is no more than nought point five (0.5), that was in the range point four five (.45) to point five five (.55), I've now increased slightly, point five (.5) to point five five (.55) but the flotation cost is the same. The main feature of that is the long Canada bond yield. And I don't believe the long Canada bond yield is now a fair reflection of the opportunity cost for somebody trading off bonds and equities.

Q. **[368]** But the underlying financial data changes, but it has no effect ever on your result. It remains at seven point five (7.5), no matter the interest rate, no matter the inflation, it will always come down, come up to seven point five (7.5) and that has been the case since two thousand and ten (2010), correct?

R. You can thank the Government of Canada, for that.

Q. **[369]** Okay, but the answer is yes?

R. The answer is yes, as long as, ever since nineteen ninety-six (1996), when the Government of Canada and the Bank of Canada agreed to a two percent (2%) target rate of inflation.

Without a dramatic reduction in the uncertainty, the inflationary environment, bond yields, the market risk premium, and that is reflected in the capital markets. It has been reflected in the information, for example, Duff and Phelps. When I put up Duff and Phelps' estimate of the unruled market return. You have to go back fifteen (15) years to get something above ten percent (10%) otherwise the overall market returns is in a relatively now on range. We are no longer in a situation the way we were in the sixties (60's), seventies (70's), eighties (80's), and nineties (90's), where the allowed ROE has fluctuated significantly. We are in... we are in a very stable, we were in a very stable environment up until these dramatically long term bond yields.

And I am not going to change my view until we see a long Canada bond yield above one point eight (1.8), sorry, three point eight percent (3.8%).

So if we have another hearing in three years, Mr. Ouellet, you could ask me all exactly the same questions. Because unless the long Canada bond yield has exceeded three point eight percent (3.8%), you can say : ah, ah, Dr. Booth, you said you were not going to change your opinion, unless the long Canada bond yield is above three point eight percent (3.8%) and it is still below three point eight percent (3.8%).

Q. **[370]** So basically, if I understand you correctly, as long at the long term yield is below three point eight percent (3.8%), there is no use for rate of return hearings, it is just... it should be seven point five (7.5), nothing changes, no matter the interest rates.

R. The Régie hasn't changed the allowed ROE for Gaz Metro, sorry, Énergir since two thousand eleven (2011). So I would say the Régie agrees with me as well.

Q. **[371]** No, but we are doing this hearing now.

R. Well, that's true, but you have to do it periodically, just to have an evidentiary record that either something has changed or something hasn't changed. It can go on forever, unless the companies generally ask for a rate hearing, just to make sure everything is fair, or the Board or the Régie brings companies in to make sure everything is fair, but...

Q. **[372]** Just to speed things up a little, during the lunch break, did you have a chance to look at the documents that we have put in the system?

R. No, I didn't. I thought you were going to present them to me and ask questions.

Q. **[373]** Well then, okay, so let us forget about speeding things up. So, you tell me if you need to review the documents, but we have put in the system, the SDÉ, your reports from other testimonies elsewhere in Canada and your recommendations.

So first off... we can put it on the screen if necessary but let us know if you want to see it. I will give you my questions and perhaps you will agree and we won't have to look at the documents.

R. Okay.

Q. **[374]** So do you recall you testified in the fair return hearing for Fortis BC Energy in two thousand and twelve-thirteen (2012-13)?

R. Yes, that is a long, that is almost ten (10) years ago, but yes.

Q. **[375]** I know. And your recommendation for Fortis BC Energy, was an ROE of seven point five percent (7.5%), correct?

R. It does not surprise me, yes, I'll accept that.

Q. **[376]** Okay. Now, going to two thousand and sixteen (2016) in Alberta, there was a generic return on equity and common equity ratio hearing for ATCO Pipelines and in that hearing, in which you also testified, your recommendation was a seven point five percent (7.5%) ROE, correct?

R. That is correct, and just to correct you, these are generic recommendations, they are not specific recommendations for a particular company.

They are the generic based upon the capital structure being adjusted for business risk and the generic ROE being a base for ROE's for other utilities. So for example, in the BC Utilities Commission hearing, it was the Fortis BC Energy knowing that other BC utilities would get premiums on top of the generic ROE, or the benchmark ROE.

Q. **[377]** My suggestion to you was that for ATCO Pipelines, it wasn't a benchmark ROE, you suggested or your suggestion was seven point five percent (7.5%) ROE, for ATCO Pipelines...

R. That's right.

Q. **[378]** ... on a thirty percent (30%) common equity, correct?

R. But it was a generic ROE hearing. So that was the generic ROE.

Q. **[379]** Okay. Now two thousand and sixteen (2016) British Columbia in their fair return and capital structure hearing for Fortis BC Energy, your recommendation again was seven point five percent (7.5%) ROE.

R. That's correct.

Q. **[380]** That's correct.

R. But the two thousand and twelve thirteen (2012-13), I am pretty sure there was an automatic ROE adjustment mechanism involved as well and I recommended an automatic ROE adjustment mechanism, and I think I also recommended that the automatic ROE adjustment mechanism only varied if the forecast long Canada rate got above three point eight percent (3.8%).

Q. **[381]** Now, two thousand and...

R. There are other elements to the decision.

Q. **[382]** Okay. The two thousand eighteen (2018), Labrador and Newfoundland...

R. Yes.

Q. **[383]** ... in the fair return for Newfoundland Power. You recommendation was seven point five percent (7.5%) on...

R. And forty percent (40%) common equity which was three percent (3%) more than the... than the generic gas distributor... sorry electric distributor. You got to remember, you can't look at the... these are generic ROEs. Adjustments for the utilities are made in terms of their common equity ratios.

Q. **[384]** So for you, the seven point five (7.5) generic ROE is the same, if we are in BC in two thousand and twelve (2012), Alberta in two thousand and sixteen (2016), British Columbia in two thousand and sixteen (2016), Newfoundland and

Labrador in two thousand and eighteen (2018), nothing changes, basic ROE always seven point five percent (7.5%), just like the one you're recommending here?

R. Not correct.

Q. **[385]** Not correct?

R. Not correct at all. My recommendation was seven point five percent (7.5%) going in to thousand and eleven (2011), and I think I recommended for GMI seven point seven five percent (7.75%), but I would have to go back and check that. And then, we had the watershed events. We had this massive bond buying by the central banks, that have depressed long term Canada bond yields far below any tradeoff that a normal person makes between bonds and equities.

We had bond yields last year of one percent (1%), when inflation was still above one percent (1%). So when you take into account those bond yields are fully taxable for all the investors. We had seriously negative bond yields. No rational investor, invest on seriously negative bond yields. So the argument then, after two thousand and eleven (2011), when we got into two thousand and twelve thirteen (2012-13), the waiting for Godot period, I said: I am not going to change my allowed ROE until we get a bond market that reflects automatics... reflects a tradeoff between equity and bond investors trading off risk versus return, instead of having a central bank determining the long term bond yield.

And you're forgetting that during these periods, I recommended a base rate and I also recommended an automatic adjustment ROE formula. As I did for Gazifère, which the Régie adopted in two thousand and ten (2010), and as I did for Énergir, I think in two thousand eleven (2011) which was adopted. So, there also is the automatic ROE formula which would have adjusted the allowed ROE based upon my recommendations.

Q. **[386]** Dr. Booth, when did you start working on your expert evidence for this case? I don't need a precise date, but we know it was filed in April of twenty twenty-two (2022). Do you know when you started working on it?

R. I could go back and look at my files. It would be when IGUA approached me and they sent me some documents so... I would say must have been November. I'm just guessing but...

Q. **[387]** Okay. Late twenty twenty-one (2021) would be fair enough, or fall of twenty twenty-one (2021)?

R. Yes.

Q. **[388]** Now, is it fair to say, Dr. Booth, that when you started to work on your expert evidence, or even before you started to your work on your expert evidence, in late two thousand and twenty-one (2021), you already knew that you were going to recommend seven point five percent (7.5%) ROE for Énergir. Correct?

R. That's correct. The key feature really was the business risk. Not the ROE.

Q. **[389]** I might be done. Est-ce que vous pouvez, Monsieur le Président, me donner quelques minutes? Je vais consulter mes... j'ai peut-être besoin de plus de temps qu'habituellement parce que les experts ne sont pas avec moi dans la salle. Je dois les rejoindre.

LE PRÉSIDENT :

Oui, faites vos vérifications puis...

Me PATRICK OUELLET :

Peut-être un dix (10) minutes?

LE PRÉSIDENT :

Bien, dans ce cas-là on va prendre, on va prendre la pause tout de suite.

Me PATRICK OUELLET :

Parfait.

LE PRÉSIDENT :

Et au retour, bien on verra si vous avez des questions additionnelles.

Me PATRICK OUELLET :

Excellent. Parfait, merci beaucoup.

LE PRÉSIDENT :

Donc... quatorze heures vingt (14 h 20). Donc on se revoit à quatorze heures trente-cinq (14 h 35).

Me PATRICK OUELLET :

Parfait, merci.

Me PAULE HAMELIN :

Dr. Booth there's a small recess.

SUSPENSION DE L'AUDIENCE

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REPRISE DE L'AUDIENCE

LE PRÉSIDENT :

Bonjour. Alors, Maître Ouellet, est-ce que vous avez d'autres questions?

Me PATRICK OUELLET :

Je n'ai pas d'autres questions. So I have no further questions for you Dr. Booth. Thank you very much.

R. Thank you, Mr. Ouellet, I'll see you in three years time.

Me PATRICK OUELLET :

It will be my pleasure.

Dr. LAURENCE BOOTH :

And mine.

LE PRÉSIDENT :

Okay. Alors questions de la Régie, Maître Legault.

Me LOUIS LEGAULT :

Oui, Monsieur le Président, merci.

EXAMINED BY Me LOUIS LEGAULT:

Q. **[390]** Dr. Booth you'll have a chance to see me in two different angles so chose what's better. Nice to see you again. It's since two thousand and ten (2010) and eleven (2011), it's been a while.

Dr. Booth, I will be referring you to two exhibits. First, Exhibit B-0015 which is Dr. Villadsen's direct testimony. At page 61 and this is what she answered to question 56. Page 61, question 56.

R. Yes.

Q. **[391]** So, the question was: "What values do you use for the risk-free rate of interest?" And Dr. Villadsen answered the following:

> I use the yield on a 30-year Canadian Government Bond as the risk-free rate

> for purposes of my analysis. Recognizing the fact that the cost of capital set in this proceeding will begin in 2022, I rely on the forecasted yield on Canadian Government bond yields in 2022. Specifically, Consensus Forecasts predicts that the yield on a 10-year Canadian Government bond yield will be 1.9% in 2022. I then adjust this forecasted yield upwards by 40 basis points, which is my estimate of the representative maturity premium for the 30-year over the 10-year Canadian Government Bond. This gives me a lower bound on the risk-free rate of 2.30%. Additionally, I consider a scenario where the risk-free rate of interest is 2.47%.

Now, in your evidence, C-ACIG-0037 at page 2, in the Executive Summary, you write the following:

> I base my LTC yield on the forecast from the Parliamentary Budget Officer and the Federal government’s budget briefing which itself was based on

> Consensus values from the private sector. Consequently, I use a forecast LTC Yield of 3.37%, which is still below the 3.8% rate I use as a trigger for changing my estimate of the allowed ROE. Further it is also 1.13% lower than the 4.5% I used in the 2011 GMI hearing.

Now we've talked about this abundantly in your testimony and then in your cross-examination. Taking into account the various economic, financial and geopolitical uncertainties that we're facing right now and that we're living through, can you please provide your thoughts on a likely range of long term government of Canada bond yields over the twenty twenty-two (2022), twenty twenty-four (2024) horizon?

And in your answer, if you can provide your assumptions about the role or actions of the central banks in the financial markets.

R. Wow! That's a very very... You know, how long have we got, how many days? If you're dealing with twenty twenty-two (2022), twenty twenty-three (2023) and twenty twenty-four (2024), then I think clearly twenty twenty-two (2022) is halfway through. So, I think if I look at RBC's June forecast, which has basically their forecast for twenty twenty-two (2022) now then half of it is gone, would about two and half percent (2.5%) for twenty twenty-two (2022). And then, they're basically saying the government is gonna be successful in bringing down inflation and we're gonna have two and a half percent (2.5%), or there about, for the next couple of years.

So, I would say that there's one scenario, which is the government could bring down the rate of inflation. And we see the U curve short term interest rates are basically the same as long term interest rates. So, they definitively try to slow down the economy, which means putting people out of work. RBC seems to think that's gonna be successful, so I would say, a range of two and a quarter to two and three quarter percent (2.25%) to three and a quarter percent (3.25%) based upon RBC's optimistic scenario.

I personally believe that the consumers spending is too strong to be brought down without more significant interest rate increases. In which case, we could easily see a continuation of the inflation and we could say three to three and a half percent (3 to 3.5%) interest rates over that same period. Not quite as high as I anticipate based upon the PBO’s forecast because they look in a little bit longer they’re looking tout to twenty twenty-five (2025). But I don’t think we get to my three point eight percent (3.8%) trigger.

But I do think, that there is a strong possibility that the Bank of Canada won’t have the stomach to put short term interest rates up high enough to break the inflationary spiral. And I wouldn’t have said this a month ago. I would have put more faith in the Bank of Canada. But as I said in my direct, we’re beginning to see the signs of unions asking for catch up. Catch up on the rate of inflation that they see over twenty twenty-two (2022). And that will flow through into higher prices and make it that much more difficult for the Bank of Canada to bring down the rate of inflation.

They’re committed to doing that, but I’m just wondering whether the government got the stomach for interest rates going up. Not just another seventy-five (75) basis point but going up another two percent (2%).

Q. **[392]** Thank you. What would be, in your view, an increase in long term interest rates, in Canada, that you would consider unusual? For an unusual drop. So, so, what would be a... rise and a drop. In one or the other scenario, can you please explain how such an unusual rise or fall could occur?

R. Okay. Can we go to my Appendix B, Schedule 6.

Me PAULE HAMELIN :

I think it’s C-ACIG-0039.

R. Schedule 6 of my Appendix B.

Me PAULE HAMELIN :

So it’s C-ACIG-0039.

Me LOUIS LEGAULT :

C’est ça, ce n’est pas quarante (40), c’est trente-neuf (39).

R. So this is a model I’ve been using for some time now, to address some of these questions. The two primary drivers of long Canada interest rates are the risk involved in holding those bonds, which is interest rate volatility. And the supply of those bonds which is basically the government’s deficit. Governments run deficits, they increased the supply of bonds to the market. And that shows us how government deficit’s, the supply side of risk, affects the interest rate. The long Canada rate minus inflation: the real interest rate.

And then you’ve got politics. I’m really a political economist because you cannot separate politics from economics. And I’ve got four dummy variables there. Which just indicate it’s a special period, obviously the Second World War is a special period, during that period given the deficit the government of Canada was running, interest rates were five percent (5%) below where they should have been. They were controlled.

Then in the nineteen seventy-two to eighty period (1972-80), they were three point six percent (3.6%) below where they should be. And that was a period what we call Petrodollar recycling. Where enormous increases in price of oil acted as tax on oil importing countries like Canada as we were at that time.

More recently I’ve been including periods for Dum 3 and Dum 4. Dum 3 is the period basically that we’ve been leaving in. Since the two thousand eleven (2011) GMI hearing. Since that period, my best estimate is the actions of central banks have depress the real interest rates by about two point six (2.6%). Huge reduction in the real interest rates because they’ve been buying bonds. You do not take twenty (20) trillion dollars of bonds of the bond market without having an impact. So an other way of saying that is if we had that twenty (20) trillion dollars dump from the bond market interest rates would have been two point six percent (2.6%) higher.

Then, on top of that, we got the special years twenty twenty and twenty-one (2020 et 2021) which are the COVID years when even the Bank of Canada started buying government bonds.

But to put things in perspective, Mr, Legault, the government of Canada has doubled the national debt in the last six years. Doubled. We have twice as many government of Canada bonds out there then we had six years ago. They're not being held by private investors, they are predominantly being held by the Bank of Canada. And if those government bonds were being dump on the market, we wouldn't being seen these dramatically low interest rates.

Now, this is up until twenty twenty-one (2021) since then, the Bank of Canada is starting letting bonds run off not being reinvesting. So we've seen some reversion of interest rates to where they should be. But where they should be right now, several percentage points higher than they actually are. Based upon the amount of government debt that we have, they amount of deficit financing and a volatility of interest rates.

So, what we’ve got is essentially a special situation resulting for this massive bond buying on the part of central banks. And I don’t see that that’s gonna end very soon because the impact particularly, as I said, on the Millennials, Generation Z, younger people trying to buy houses. If we suddenly bumped up interest rates to the order of two, three, four percent (2,3,4%), there will be a lot of unrest and a lot of people would start losing their houses and house prices will come down.

So, there’s a political economic, sort of nexus, between where interest rates can go and the level before the government starts losing bi-elections and loses office. And as I said, we are probably going to see problems in the United States with the midterms in November.

Q. **[393]** Thank you. Under the hypothesis that the Régie would approve a seven point five (7.5) ROE for the Québec gas utilities as per your recommendation, if such an unusual rise was to occur within the next three years, do you think that the seven point five (7.5) rate of return would still be appropriate? And the same for an unusual fall, I mean, strong variations?

R. Unusual fall, forget about it, it is not going to happen and nonetheless we get another pandemic, the interest rates are going to go up, not go down and how fast they go up, depends upon the actions of the central banks and whether we continue that deficit financing at the federal level.

Remember, every time the government runs a deficit, it is basically increasing the supply of bonds and as the supply of bonds increases, the price would then go down and the yield would go up.

So I think the interest rates are only going to go up. I'm a firm believer, as you probably know, in automatic ROE adjustment model, it's being less of a factor for the last ten (10) years, because my recommendation, as Mr. Ouellet pointed out, is basically been the same, because I do not buy the idea that current low interest rate's affect the overall equity return.

Equity and bond markets are separate markets in the capital market and it is not an automatic one to one relationship in a fair rate of return and the government bond yield.

So I would prefer an automatic ROE adjustment mechanism, this is not on the table in this hearing, but I recommend that if interest rates go up significantly above my trigger of three point eight percent (3.8%) at the very least the allowed ROE should go up by seventy-five percent (75%) of the increase in the long Canada bond yield, forecast long Canada bond yield.

That was the beauty of automatic ROE adjustment mechanisms. Basically we stop using them about two thousand and fifteen (2015) or so, when people started facing up to the problem with unusual low interest rates.

Q. **[394]** Again, in your direct evidence, C-ACIG-0037, page 25, this time, you mentioned that:

> The Bank of Canada’s two percent (2.0%) target rate of inflation, within a one to three percent (1%-3%) band, was renewed with the Government of Canada on December thirteenth (13) of twenty twenty-one (2021).

In Exhibit C-ACIG-0064, which are your answers to Dr. Villadsen's IR, number 1, and I would refer you to page 12, your answer to her question 12.1.

R. Yes.

Q. **[395]** So question 12.1 was:

> In Dr. Booth's view, will the presence of high inflation would cause investors to require a higher equity rate of return?

The answer was :

> Possibly, but the important fact is that the break-even inflation rate is so far well within the one to three percent (1-3%) target inflation range so the markets do not believe that the current high headline CPI inflation rate will continue. Dr. Booth believes that the Bank of Canada will get core inflation under control, since they recently, in December twenty twenty-one (2021), signed an agreement with the Government of Canada to continue the two percent (2%) target inflation rate in a one to three percent (1-3%) range.

If during the twenty twenty-two-twenty twenty-four (2022-2024) period, a scenario of stagflation caused in particular by the geopolitical situation, lead inflation significantly above the one to three percent (1-3%) band, by... set by the government of Canada, can you indicate and explain what would be the likely level of Canada's long term bond yields?

R. First of all, we have...

Q. **[396]** I would love you to have a crystal ball, I know you do not have one, but your best guess?

R. Well Mr. Ouellet has just pointed out that I was wrong in the February, March, but I was wrong just in the way the government of Canada and the Bank of Canada was wrong, and all economic forecasters were wrong.

The reason being, we were looking at supply side effects and I have to say, I mean, I have got no crystal ball, I look primarily at the capital markets, for what the capital market is telling me, which is the break-even inflation rate, which is well within the one to three percent (1-3%) range and close to the two percent (2%) target.

So that is what the capital markets are telling me, they are telling me that Tim Macklem is going to get inflation down.

Now the question you asked is: is he going to get it down over the test year periods of the next say three years, for example. There, I think, is a real credibility problem with the Bank of Canada, and the Bank of England, and the Federal Reserve, and the European Central Bank, because they all missed this. They looked at the supplies side and said: well, these supplies side shortages, China will get back, we will get all the chips we need, we will get our supply chains in order and everything will sort to get back to normal, within a year. It is a short term effect.

What I think they ignored was the demand side which is this enormous amount of savings and pent up demand and the power of us as individuals.

The fact is we are causing inflation, not so much the supply shocks, it is us. Now, I don't know about you Mr. Legault, but my wife has be going to Paris in July. And she wants to go to Paris, because we haven't been anywhere for two years. So we are going to spend our anniversary in Paris, and we are going to travel around Switzerland, and we are not usual in that, a lot of Canadians are travelling and a lot of Canadians are spending money.

So, it is the power of the consumer that is driving inflation at the moment, as much if not more than the bottlenecks. And I do not see...

perhaps Tim is going to get it right and we are going to get a soft landing, but my fear at the moment is more chance that inflation will gather speed and sort of get a little bit embedded and the Bank of Canada won't have the courage to put interest rates to where they should be to slow down the economy.

So I would suspect over the next three years, inflation is not going to get down to two percent (2%), despite what the Bank of Canada says. So this is where Mr. Ouellet put me to task to say I doubt, but when I say I doubt, it is because I am looking at some of these forecasts and I just see how strong the consumer is.

Currently, RBC has a credit card tracker. We collectively are spending thirty percent (30%) more than we did before the pandemic and that is the butt after all of this spending by Canadian consumers and that may be starting to taper off in the face of interest rates, people may start to be a little bit more conservative but I would say there is more possibility of an upside then there is of a downside, i.e. inflation coming down to two percent (2%) rather than having some embedded high rate of inflation for the next three years.

Q. **[397]** I hear you, but my question was in the scenario and it’s been, it has been talked about here in Québec, I mean, Gérard Filion, who is a well-known economic commentator at Radio-Canada, mentioned it only last week, that economists in Québec are fearing a stagflation scenario.

So my specific question is in a scenario of stagflation: what would you think that the bond yields of Canada, long term bond should be or would be?

R. Sorry not to be specific, Mr. Legault, but we do not have stagflation, we have a very strong consumer, we have three point one percent (3.1%) real economic growth at the moment and as strong as the consumer, as long as the consumer keeps spending, it is going to take a lot for the Bank of Canada to slow down the rate of economic growth.

So stagflation means basically stagnant economy with inflation. We had that in the nineteen seventies (1970's) into the nineteen eighties (1980's) because of this huge cut, sorry, this huge tax increase imposed on us by OPEC, in terms of oil prices. We do not have that now, we just have an incredibly strong Canadian consumer and we don’t have stagflation and I don’t think we will have stagflation. We are more likely to have a strong economy growing faster than the underlined real economic growth and a Bank of Canada unwilling to increase interest rates enough to slow that down.

So, and that's not stagflation, that's economic growth old fashioned Phillips curve of rapid economic growth and inflation.

Q. **[398]** Okay. Maybe more of a general question but could you tell us about the difference between the inflation that should be taken into account in the rate of return and the one that should be taken into account when looking at the revenue requirement? Are they two different things and what differentiates them?

R. They are different. In terms of the revenue requirement, you have to take into account inflation of the costs that Énergir and Gazifère have, which reflect whatever they negociate in their labour agreements and what they are paying for the commodities, which reflects current inflation.

So whereas in the capital markets, capital markets look beyond the current next three months or six months. So particularly in the bond market, as I said, we see the break-even inflation rate, the core underlining inflation rate assumed by bond holders, two percent (2%), not the current inflation rate.

But in the revenue requirement, you have to take into account whatever the rate of inflation is or cost increases on the items that go into the revenue requirement, which is not the low run inflation as in the capital market.

Q. **[399]** I'll ask the question anyways. I know you don't believe that there is a situation of stagflation and you don't see one coming in the near future. But in the event that there was stagflation attributable to the current geopolitical situation, and that any economic situation would cause inflation levels above the one to three percent (1-3%) band, can you comment on the relevance of taking this inflation into account in Énergir, Gazifère's and Intragaz rate of return by a premium or a compensation factor?

R. Now, I have been doing this since nineteen eighty-five (1985), Mr. Legault, so my memory goes back a long way but when we had stagflation, even I wasn't providing testimony at that stage and it was a period as you correctly stated of stagnant economy, very low growth and significant inflation.

The equity markets feed on growth, so with a low growth environment, equities did not perform very well, during the nineteen seventies (1970's). So if we go back in... I have to think of myself in terms of the nineteen seventies (1970's), it will pick-up in terms of the equity required rate of return because equities do not like a lack of real economic growth, they expect to see real growth, inflationary growth fair enough, that is a tradeoff between bonds and equities, but a lack of economic growth is bad for the stock market and the seventies (70's) were bad for the Canadian stock market.

It is not an accident that after the Bank of Canada broke inflation in nineteen eighty-one (1981), by very very high interest rates, and as I said, that is when I had mortgage and I was paying over twenty-two, twenty-two-twenty-three percent (22-23%) on my mortgage, my students throw up there hands, they just do not believe it, but that’s what I was paying for a third mortgage.

We broke the back of inflation and we had a huge boom in the equity markets, ever since. So the equity market likes real growth and likes low inflation, it makes things predictable.

So if we get stagflation, I suspect the equity cost will go up quite significantly. And you might even see me recommend more than seven point five percent (7.5%). That's a joke, by the way.

Q. **[400]** Looking at the issue of preferred shares in the capital structure. Now, we know and we've heard Dr. Villadsen say that she gets rid of them. She doesn't take them into account because they don't exist. Essentially. They're not there so let's, let's get rid of this in the formula.

You maintained them for your own reasons, but, in this debate about preferred shares, how should... when setting the rate of return, how should the deemed income taxes or the fiscal aspect be factored in in the Régie's decision for the three gas utilities?

R. So, you're talking about the fact that if you deem preferred shares of five percent (5%), then it basically means that there's a higher income tax component? Is that...

Q. **[401]** Yes.

R. I view Énergir has having fifty-six percent (56%) of common equity. Because there are no preferred shares. It really is fifty-six (56)... sorry forty-six percent (46%) common equity. And an equity rate of return about eight point two five percent (8.25%). Because that's the average of the eight point nine (8.9) and I think the preferred were deemed at five percent (5%).

So, I view Énergir has being forty-six (46%) equity financed. The rating agencies view Énergir has being forty-six (46%) equity financed. And that's a support for the bond rating and it is expensive. Whenever you look a debt versus equity, it's not a comparison of say, I think Dr. Villadsen had a three point two percent (3.2%) A bond yield in her, in some of her equations. And the equity cost say is ten point five percent (10.5%). That's not the comparison. The comparison is, has to be on the same tax basis. And equity at ten point five percent (10.5%) if you gross it up for the tax component it's really costing close to thirteen percent (13%). So, there's a tax penalty to equity that you'll have to take into account.

So, that's why you only give equity to a firm that really needs it in order to balance off the business risk. And I'm happy with my forty-six percent (46%) equity recommendation and a continuation of the preferred deemed component. Because I regard Énergir has being risky. And significantly risky. Otherwise, I’d be given, recommend the same thirty-seven percent (37%) as ATCO Gas or the same thirty-six (36%) as Enbridge or the same thirty-eight point five percent (38.5%) as Fortis BC Energy.

So, I ear you on the tax component, but you’ve got of sort of think in terms of what is a fair rate of return, the overall cost, bearing in mind the risk of the utility. And I’m happy with forty-six percent (46%) equity with seven and a half percent (7,5%) deeming. It worked and I think that’s the right way, traditionally I’ve said that’s the right way of adjusting for this higher business risk.

I don’t agree with the extra thirty (30) basis points on the generic ROE because that sort of take in the higher risk of Énergir and Intragaz in two ways. One in the ROE and one in the common equity ratio. And the common equity ratio, basically forty-six (46%) is so large relative to other gas utilities, I think that’s more than enough compensation. And that’s the same as I’ve been saying in every hearing, going back at least to two thousand and seven (2007).

Q. **[402]** Thank you, Dr. Booth. No more questions, Mr.

Chair.

LE PRÉSIDENT :

Merci, Monsieur Legault. Madame Falardeau.

EXAMINED BY THE FORMATION

Mme ESTHER FALARDEAU :

Q. **[403]** Hello, Dr. Booth. I think you answered most of my questions. But just, just so I don't find myself having to decide and wishing you were there. This question of keeping the preferred shares, I'm having a difficult time identifying the advantages and disadvantages. One of the things you said last Friday was you're proposing that we keep the preferred shares in the capital structure because, well if it isn't broken well you said... Why change something that works. If it works, don't change it.

So, what I'm understanding today is that you're saying: well Énergir does present or have greater risk so it would be compensated by having preferred shares. So, did I understand correctly? Because to compensate a greater risk... I understand we've been saying there's no business risk and the financial risk is taken into account, you know, with other things. But now you're saying no there is greater risk and, and keeping the preferred shares in the structure is going to compensate that risk. Did I understand that correctly?

R. I think generally you got it correctly. The National Energy Board had a very nice quote which said that it understands that deferral accounts reduce the short term risk. The adverse is the actual. But in long run you cannot deny the forces of supply and demand. And, the same thing applies to Énergir. And as I think I mentioned in that presentation when I'd said, years ago that Énergir earn is allowed ROE, the Chairman of the Régie at that time, I'm pretty sure, I can't remember the exact things he said but what he said was to the effect: Yes, but we have to protect the utility. They have lots of deferral accounts in order to make sure that they earn their allowed ROE.

So, the real business risk is the extent to which the regulator has to dip into its powers to protect the utility and make sure that the rates are fair. And we saw that, for example, with the National Energy Board in the mainline when it faces this huge drop in the... the throughput on the mainline in two thousand eleven (2011). It relaxed interruptible service. I did thing to allowed the mainline to do things to continue to earn the allowed ROE. More risky utilities may earn the same allowed ROE, but the regulator has to do things in the case of a riskier utility to make sure that happens.

So, in the case of Énergir, I always felt that the competitive picture of electricity versus natural gas in Quebec is more tenuous than it is in other provinces. So, there's actually no questions that ATCO Gas, as far as I'm concerned, and Enbridge are very low risk gas utilities. We don't have a lot of competition from electricity in Ontario. In fact, we have... we lost... the previous provincial government lost the election because of high electricity prices in Ontario. So, that's not the situation you have in Québec. And ATCO Gas simply has very little costs in delivering gas in Alberta.

So, when you compare Énergir with the other three big utilities, I've no questions whatsoever that the underlining business risk of ATCO, of Énergir is higher than the other utilities. And that is only gonna increase in the future when you get, start getting even more carbon taxes, when the margin of competition between electricity and gas gets lower and smaller.

I don't see it is a problem for the next three years, but as the gas carbon tax increases it's going to be a big threat to Énergir. And that's why I would like to see Énergir and Gazifère putting together a proper filing in which they actually specify the forecast demand, they gather demand equation, they specify all of their costs and they illustrate how their rates are gonna have to change and what the margin of competition is over the future test period. So we can actually assess the risk that the utility is facing.

But at the moment we don't really have a record apart from this generic: "Oh! There's risks out there", we don't have an assessment of how that risk is gonna affect the utility. Is that answer your question?

Q. **[404]** Yes. Thank you very much you were very generous. And just one more question. Then could we apply that same logic to Gazifère and consider that since it's a Québec distributor it's also facing greater risk and therefore should have the similar capital structure to compensate and have preferred shares in its structure to compensate for the greater risk?

R. I would like to see Gazifère doing... I'm using the

Fortis Energy BC analysis of Énergir in Montreal gas versus electricity and the size of Énergir. Those are sort of definite things that I could hang my analysis on. Gazifère, I just look at it as integrated within Enbridge. It don't get his gas of TQM, it gets it from the same system as Ottawa or other... From the Enbridge system and from TransCanada Northern Ontario line. So, it doesn't have the same problems as Énergir is some areas, but it is primarily residential. And has yet I do not have a clear handle on how that higher regulation from the province of Québec is gonna affect Gazifère. So, and in particular, I've heard a lot about what of the City of Montreal is going to do, I haven't heard a lot, or at least as much on what Gatineau is going to do and exactly whether they're gonna put restrictions on gas in certain areas. So, I can honestly say I'm not as comfortable with Gazifère. Except for the fact that's integrated with... de facto is integrated with Enbridge.

But I repeat again, I'm not recommending a thirty-six percent (36%) common equity ratio for Gazifère which I would obviously but the provincial boundaries and these special factors attached to that part of the Enbridge system. But I view it as being part of the Enbridge system.

Q. **[405]** O.K. But you are recommending it for Intragaz since being integrated or almost with Énergir than it's facing similar risks as Énergir is facing?

R. That's correct. I actually went back to my testimony for Intragaz. And at that point Intragaz was a relatively new storage and most of the risk attached to the storage occur -- it's operational risk -- it occurs in the first two years of a development of a storage facility. And of that, originally Énergir wanted Intragaz in its rate base. At least that was my understanding.

And at that time the Régie said avoidable costs because you can possibly get the same services by other means. Back holding from Dawn and using other vehicles rather than using Intragaz. I basically said well it's sort of like Union storage. Except that Union can sell storage facilities to other pipelines that access its system at Dawn, where is Intragaz is completely integrated with Énergir.

So, I would really recommend exactly the same rate of return and financial parameters for, for Intragaz. The only thing different is it got a minority ownership and it got a ten year contract just renewed with Énergir so... On one hand I say there's no risk or very limited risk. On the other hand I say why treat it any differently from any other assets that Énergir has got to provide service to its whole system. And it needs some form of storage to provide seasonal supplies of natural gas.

R. Thank you very much, that's all my questions. Thank you.

LE PRÉSIDENT :

Merci, Madame Falardeau. Il n'y aura pas d'autres questions de la Régie. Alors, Maître Hamelin, est-ce que vous avez d'autres questions pour le docteur Booth?

Me PAULE HAMELIN :

Est-ce que vous me donner cinq minutes? En fait, peut-être moins que ça, juste pour que je confère avec mes gens.

LE PRÉSIDENT :

D'accord.

Me PAULE HAMELIN :

Merci.

PAUSE

Me PAUL HAMELIN:

Mister Chairman I will have no further questions for Dr. Booth.

LE PRÉSIDENT :

Merci. So, Dr. Booth thank you very much for your availability so there will be no further questions for you. So you're done with the Régie for today.

R. Thank you. I just wish I could have come to Montréal. Thank you.

LE PRÉSIDENT :

Thank you very much.

Me PAULE HAMELIN :

Merci, Dr. Booth.

R. Thank you.

Me PAULE HAMELIN :

Subject to your undertaking, I'll be contacting you on that.

R. Okay.

LE PRÉSIDENT :

Juste deux petits points que je veux vérifier avec vous, Maître Hamelin. Donc vous allez nous déposer la décision D-2020-147 en anglais, sans vos commentaires.

Me PAULE HAMELIN :

C'est D-2010...

LE PRÉSIDENT :

C'est deux mille dix (2010)? Oh excusez-moi. Oui oui. Et comme vous venez de mentionner vous avez pris note de l'engagement numéro 5 sur les, pour les feuilles de calcul dans le document du docteur Booth.

Me PAULE HAMELIN :

Tout à fait.

LE PRÉSIDENT :

Et on se revoit demain. Ça va être assez pour aujourd'hui je pense. Et on va se revoir demain à neuf heures (9 h) pour la présentation du panel numéro 4 de l'ACIG.

Me PAULE HAMELIN :

Parfait. Merci.

LE PRÉSIDENT :

Bonne fin de journée tout le monde. Au revoir.

AJOURNEMENT DE L'AUDIENCE

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Riopel Gagnon Larose & associés.