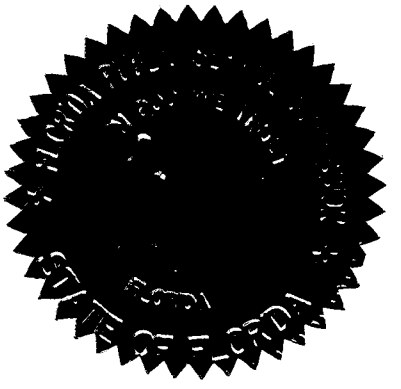
BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of	**DOCKET NO. 990006-WS**
Annual Reestablishment of authorized range of returns on common equity for water and wastewater utilities, pursuant to Section 367.081(4)(f), Florida Statutes.	



PROCEEDINGS: **WORKSHOP**

CONDUCTED BY: DAVID DRAPER
Division of Audit and Financial Analysis

DATE: **Friday, March 12, 1999**

TIME: Commenced at 9:30 a.m.
Concluded at 11:25 a.m.

PLACE: Betty Easley Conference Center
Room 152
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: H. RUTHE POTAMI, CSR, RPR
FPSC Commission Reporter

IN ATTENDANCE:

WALTON HILL, United Water Florida, and **FRANK HANLEY**, AUS Consultants.

DON HALE, STEPHEN BURGESS, Office of Public Counsel, and **MARK CICCHETTI,** appearing as a consultant to the Office of Public Counsel.

TIM VACCARO, FPSC Division of Legal Services.

ANDREW MAUREY and **DAVID DRAPER,** FPSC Division of Auditing & Financial Analysis.

NEIL BETHEA, FPSC Division of Water & Wastewater.

P R O C E E D I N G S

(Workshop convened at 9:30 a.m.)

MR. VACCARO: Pursuant to notice, this time and place have been designated for a Staff workshop in Docket No. 990006-WS, annual reestablishment of authorized range of returns on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), Florida Statutes.

MR. DRAPER: Good morning. I'd like to point out that we're transcribing the workshop today, and the transcriber asked us if you could speak your name before you speak each time so that she can get it in the record.

I'd like to mention that the current leverage formula range is 8.57 to 9.825%, and that we had a previous workshop in November and we agreed to the second workshop. We are here to listen to the companies' input and have you educate us on any points that we need to look into on the leverage formula.

I'd like to have each person introduce themselves so we get it in the record. I guess we could start at the table, and if we would start with Walton.

MR. HILL: Thank you. I'm Walton Hill, United Water Florida.

MR. HANLEY: And Frank Hanley of AUS Consultants. I am here on behalf of United Water Florida.

MR. BETHEA: Neil Bethea, PSC.

MR. CICCHETTI: I'm Mark Cicchetti, Cicchetti & Company on behalf of the Office of Public Counsel.

MR. BURGESS: I'm Steve Burgess here for the Public Counsel's Office. Also with me is Don Hale, sitting behind us, with the Public Counsel's Office.

MR. VACCARO: Tim Vaccaro on behalf of Commission Staff.

MR. DRAPER: Dave Draper, Commission Staff.

I'd like to also point out that we have a sign-up sheet. I would appreciate if everybody would sign in so we can have a record of the persons in the room.

I'd like to open it, the discussion. I'd like to point out that we have issues in the notice that we could speak to or, you know, whatever is on your mind would be fine. I think let's begin on this side and we'll just work our way down.

MR. HILL: Thank you very much. United Water Florida appreciates very much the opportunity to participate in this workshop.

We have engaged the services of Mr. Hanley to present a somewhat condensed study, after his examination of the leverage formula, that makes some recommendations as to how the formula could be revised or modified to produce more appropriate results; and I will let Mr. Hanley present a brief summary description of that study.

We also have here several copies of that study that we would like to leave and have made a part of the materials in this workshop, and we regret that we were unable to have them circulated to everyone prior this -- prior to today.

By way of general statement, though, one of the main points that I have gleaned from Mr. Hanley's study and also from the current proposed agency action process in which United Water Florida is now involved and, as a matter of fact, in which we expect an order either today or very soon, the indicated rate of return on equity for this company was determined through the leverage formula to be 9.57%.

And as you'll see in Mr. Hanley's study, the average return on equity that we have been able -- that Mr. Hanley has been able to determine from those rates of return on equity being currently allowed by other commissions is in the area of 10.84.

Just from an intuitive nonexpert point of view, there does seem to be something wrong with this picture. And, again, we appreciate very much the recognition, or the potential recognition, on the part of the Staff that such may be the case.

In United Water Florida's pending case, that reduction in return on equity from the prior leverage formula were rather from -- I should say from the company's requested return on equity, which was in the area of 11% or thereabouts, was translated in that case to a reduction in the revenue requirement of well over a million dollars.

Now, some would say that that's a good result, but I think that one of the things we're going to try and point out is that these days when, although other utility segments may be involved in questions relating to how much rates should be decreasing, it's very important to recognize that United Water Florida and most other water utilities are facing increasing costs, particularly related to capital requirements that could result from required legislation or regulations regarding water and wastewater treatment and also relating to the need to replace aging infrastructure that may be approaching its useful life.

So those are just introductory comments to get us started here. I welcome the opportunity to participate further, and if it's appropriate at this time, I'd like to introduce Mr. Hanley to present a brief summary and, hopefully, start off some discussion on his study.

MR. HANLEY: Thank you all. And this is Frank Hanley speaking, of AUS Consultants, on behalf of United Water Florida.

I would like to just reiterate Mr. Hill's comments. We're sorry that we were not able to get these in your hands ahead of time, and had I been able to do so, then perhaps I would have been able to shorten this summary a little bit; but in order to make some sort of coherent sense, I will need a few minutes to talk through what perhaps could have all been read.

I believe that the leverage formula concept is an excellent one and it, frankly, is a terrific idea, given the quite large number of water and wastewater utilities regulated by this Commission, many of whom are quite small in size, and the idea of doing away with a lot of litigation over capital, cost of capital, and so forth, particularly for these smaller companies, but in general is a terrific idea.

However, there are some problems associated with trying to have the proverbial glass slipper fit all feet. So that's pretty much what I would like in a general way here to address and make some suggestions.

I find, first of all, that the notion of a 40% equity ratio as a floor, I concur, and United Water concurs that that is reasonable, because I think it is dangerous for companies in general to overleverage, but I do think that there -- with any rule or any principle, there should be a mechanism for some specific consideration if a burden of proof can be met, if there are really mitigating circumstances, I think that there ought to be under those conditions, if the burden of proof is met, some exceptions to the rule to the -- you know, bend the glass slipper a little bit. But in general I think 40% is a good break point for the formula.

I also think it's excellent that a number of different models are employed in the formula. I think it's consistent with efficient market hypotheses. It's -- the investors realize there are a number of models out there. So I think it is a good thing to do to utilize a number of the models.

Now, one of the problems is, as Mr. Hill

noted and I'll get to it more, is that I think there is a widespread belief -- I guess I'd be hard-pressed to say that it's universally accepted by all parties, but that the leverage formula certainly in the last several years has been producing results that are felt by many parties to be inadequate; that the cost of equity derived from application of the formula is just really lower than a market-required cost rate.

So if you're making some suggestions about how to perhaps modify the approach but still keeping intact the general concepts of the formula, I came up with a result -- and what I did rather than trying to work in a vacuum, I took the position of what the 1998 formula produced and then I went back and emulated, so my -- so all my calculations were made on the assumption that they would have been made at that point in time, i.e., on or about May 1, 1998, from information then available so that basically and hopefully we could compare the proverbial apple with an apple and not an apple and an orange.

Now, as a result, to summarize -- first, as a result of my analysis, I concluded that an 11.35% common equity cost rate was appropriately applicable at that point in time to a 40% common equity ratio; and that's, of course, in contrast to the 9.85% that

was actually derived by the current version of the formula.

I believe that at that point in time the assumption of a debt cost rate of 7.72% was a reasonable assumption based on what was then known, and, as a result of my finding, the -- I found the overall cost of capital to have been 9.17%. I concluded that an 11.26% common equity cost rate applied to the group of six water companies, the value line companies, or as Staff refers to them -- and I try to do as often as possible to avoid confusion -- as the water index, I think that that average equity ratio of 40.92% was an appropriate starting point, relative to trying to arrive at a cost rate for a 40% equity ratio.

As I applied the models -- and I'll talk about them a little bit -- I concluded a DCF cost rate of 10.10%, a risk premium cost rate of 10.68%, and a capital asset pricing model cost rate of 10.90%. The average of all three models was 10.56%, and I also concur that the bond yield differential of 45 basis points and also the private placement premium of 25 basis points utilized in the actual application of the 1998 leverage formula were appropriate and reasonable; and taking those added adjustments into account to

reflect risk differentials for the average water/wastewater utility and particularly the small size that need to use the private placement vehicle, that an 11.26% equity cost rate was appropriately applicable to the 40.92% common equity ratio of the six value line water companies.

Now, it might be appropriate to mention, although it's not in the report, but as of yesterday, part of that water index, Consumers Water, ceases to exist. The transaction was consummated yesterday by -- was acquired by Philadelphia Suburban Water; and I note that as of now, Elizabethtown Water Company is included in the group.

So there -- as of the moment, there are once again and will be six water companies, although Consumers will be replaced, in fact, is indeed replaced as of now by Elizabethtown Water Company. And so I think that group will be appropriate to use in the future.

I don't believe as far as the DCF model is concerned, that the use of an historical DCF is appropriate for use in the leverage formula. Again, you've got to keep in mind we're trying to get the glass slipper to fit all the feet.

And I think it's pretty clear that investors

are really concerned about the future, and there are studies that have been made that affirm pretty much what I believe is common sense, that analysts' forecasts of growth in earnings represent the best estimate of expected market prices and, therefore, the best estimate of investors' expectations of growth.

I noticed that some market value weighting was done for 1998. Perhaps it was done -- I'm not sure. I don't even choose to speculate why it was done in '98, but I don't think as a general rule market value rating is appropriate because it can place undue emphasis on either too higher a return or too lower a return depending on the market value or market capitalization of the company in question; and the largest company, if it swings, so swings the result of the weighting. I think as a rule the best measure is the arithmetic mean.

I encourage the use of a single-stage growth model for use in this formula rather than a two-stage growth rate. Certainly two-stage growth models are appropriate, but as a general rule, they seem most appropriate to apply for companies or industries that are in transition. A perfect example would be, for example, in the electric industry in this transition period from the regulated monopoly into a competitive

environment.

We don't really have that. And, furthermore, because I believe the analysts' forecasts of earnings growth are appropriate, to extrapolate a second-stage growth, whether it's a retention growth or whatever, that's basically an offshoot of the same five-year growth rate that's forecast by the analyst, to me in some sense is a form of circular reasoning.

Why not just stay with the best growth rate, one that reflects the past; because the analysts take into account the history of the companies, and they filter those, if you will, through meaningful information, discussions with management and so forth and, therefore, it's the best of both worlds. It reflects the past through the analyst's filter, if you will, to give the best expectation of the future.

Also, I would recommend the use of the value line forecasted growth in earnings per share and also to get other forecasts in there and not rely upon one from the Standard & Poor's earnings guide. They present the mean estimate of the number of IBIS forecasters, the Institutional Brokers Estimate System, that cover these companies.

Now, in some instances, who knows; it may be only one or two analysts. They don't tell you. But

we do know, and it's been confirmed by Standard & Poor's, that it is the mean estimate of those analysts for these particular companies.

I recommend discontinuance of the quarterly compounding model. Frankly, it adds undue complexity to the calculations. It's not typically used by regulators or experts so long as the discrete payment of dividends is recognized in the annual model. I mean, whatever is used in the calculation of the dividend yield should be reflective of the next -- what's expected on average over the next 12-month periods.

That can be done easily without going through the complexities of compounding, and I think we ought to, to some sense, ought to try and simplify that.

As far as the risk premium model is concerned, it's a good model. I see absolutely no reason to have to use gas distribution companies. I think this model can be employed -- can just forget gas distribution companies, and the way I would suggest that it be employed is to use the estimate of the expected yield on A-rated utility bonds, and that can be obtained, you know, from the blue chip financial forecasts. And even if -- and I believe

they have just recently discontinued that -- that can easily be obtained by taking whatever forecast they do have in adjusting for yield differentials so that you basically come up with an A-rated yield, because that's -- companies -- you know, it's specific. An A is an A is an A, and it reflects all of the composite risks because it's a good benchmark starting place to begin.

Now, the bond rating process is comprehensive, and it takes all elements of diversifiable risk into account. As far as the determination of an equity risk premium, I believe it's most appropriate to rely upon a long-term, historical mean average of holding period returns.

Now, one of the problems I have with the way it's currently being done is I believe there's an inherent circularity to the process. There's a DCF calculation made in order to arrive at the equity risk premium. To me, that's circularity. To the extent that the DCF calculations are flawed, there's an inherent flaw in the result in equity risk premium.

So I would suggest we get away from that and look at holding period returns over a very long historical period; for example, those from the Ibbotson Associates that are published in their annual

yearbook.

I also suggest that the arithmetic mean is the proper return rate -- or the proper mean to use -- not the return rate, but -- of those holding period returns, rather than geometric means.

Basically the reason is this; and there's a more detailed explanation in here and along with some of the attachments in the report, but for now I'll try and be a little bit more concise: The expectation that investors have consistent with the long-term investment horizon of common stocks.

And we have little doubt that there's a long-term investment horizon, because, in fact, the standard DCF model presumes an infinite holding period, although we know in reality it's not, but that's what it's -- presumes, a standard model that's applied. So we want to look at a long term.

To the extent that one chooses arbitrarily shorter historical periods of time, that builds an inherent bias into what one might expect. And this goes with the arithmetic mean. So if you're looking at a long-term horizon in the future, what might investors expect? Well, the best expectation is the long-term historical average. Is that true? Because if you go all the way back to 1926, that included, you

know, the Great Depression, World War II, Korea, Viet Nam, et cetera, et cetera.

Well, yeah, because who would have thought -- for example, though, it's been 100 and some years -- and we had a president that was just impeached. Who would have thought that that would have happened? The last time was Andrew Johnson in the 1860s. Who would have thought that the Soviet Union would be no more? Just going back a few years ago, who would have thought the savings and loan institutions would have had the problems that they did, so forth and so on.

So all these -- maybe certain specific events. We're certainly not going to have another Viet Nam, but who knows what we'll have, whether it's in the -- you know, the former Yugoslavia or whatever. Something else can happen. Similar events can happen. So that the best expectation of what can happen is insight derived from the long-term past, and the only way you get that is looking at the arithmetic mean of the long-term past, because if you look at the geometric mean, you smooth out everything to a constant rate of growth and it doesn't take into account the year-to-year changes.

Only the arithmetic mean does that. It

takes into account the distribution of returns, which basically says that the equity risk premium one year is totally unrelated to the equity risk premium of the prior year or the next year. In other words, they're random, and a serial correlation analysis in the Ibbotson studies confirms that they're random, so that the best way to estimate the long-term average future is from the long-term arithmetic mean of the past.

And this result can be allocated by the use of the water companies' average data to get an equity risk premium as shown. And I don't have to talk through step by step, because I think it's all contained in the report. But this general notion of allocating the equity risk premium in this manner is certainly a logical means, because if you've got a market risk premium, a logical way to allocate that to the water companies is through the use of data which is -- relates to the market as a whole.

In the capital asset pricing model, I suggest that there be two forms of the model actually employed; the -- what I call the traditional model, as well as the empirical capital asset pricing model. Studies have shown and there have been numerous studies have shown that the traditional model, even one which already uses an adjusted beta, tends to

understate -- still understate the cost of equity for companies with betas, adjusted betas, lower than 1, and overstate the cost rate for companies with betas greater than 1.

That can be accomplished through use of the empirical capital asset pricing model, which is described in the comments, and there's a related attachment that provides the background, the basis, and support for it.

I also suggest, as with the risk premium model, that the use of the long-term historical information be used from those holding period returns to make the determinations of the return on the market and in computing the property premium, if you will, as associated with the application of each of the two models.

As a result of taking this approach to these three models, I came up with a range of common equity cost rate at a 40% equity ratio from the overall, which would be at 100% equity of 9.17, to 11.35% compared to the current ranges.

Now, having arrived at that, I said to myself, you know, Hanley, this is really great, but is there any semblance of reality to what you come up with. And it would be nice to pat yourself on the

back and just say, this is terrific. And AUS Consultants on behalf of the National Association of Water Companies under contracts conducts quarterly surveys of water companies for their rate activity and report their rates of return and whatnot, their survey forms sent out and they fill in.

Now, to be very candid and put this up front, I never would feel -- other than what's published in the NAWC magazine, we can't just arbitrarily use the information that we get, but I can if it's provided to me by my client now, United Waterworks. The parent of United Water Florida gets the supporting information that we provide to NAWC, and the information that I'm about to discuss in here was, therefore, then provided to me by United Waterworks. That sounds like a circuitous route, but it's something that needs to be. Because of our contract with NAWC, we couldn't on our own give out the data that we do on their behalf.

Having said that, I looked at the awards for the six months prior -- or the two quarters, if you will, that would have been available prior to the time that this analysis would have been done for the 1998 model. So they would have been the quarters ending December, 1997 and March, 1998. And I looked at those

results and found that the average equity ratio -- there were 19 decisions involving 14 different state jurisdictions -- and, incidentally, they are summarized in Attachment 6 in handout -- and the average authorized return on equity during that six-month period was 10.84%.

Now, applying as a test, if you will, the formula -- I'll call it the pro forma formula, if you will -- having been applied in the -- applied the models in the manner I discussed is shown there, which is 7.72% plus 1.449% divided by, in this instance, the 44.54% equity ratio, would have implied a 10.97% equity cost rate, which is close and -- but 13 basis points, in fact, higher than this actual of this recent average period of time.

Then I also took a look what would be implied at a 40% equity ratio, and -- and so by doing that, there were two companies of those 19 decisions, as you could see by visually scanning, that had equity ratios below 40%.

And since we believe that 40% is a good benchmark for it, I pulled those two out of the averages and then saw that the average authorized ROE then for the remaining companies was 10.86% and the average equity ratio for the remaining companies was

45.63% which, in turn, implied applying the formula, the pro forma formula, an ROE of 10.90%, which was then with only four basis points, as you could see, between the 10.86 versus the 10.90 applied by the formula, which gave me some degree of comfort that while any methodology is imperfect, I believe that this methodology described is reasonable and certainly, on this pro forma basis, would have produced a result that is more reasonable, in my opinion, and I believe in United Water Florida's opinion, than produced by the present formula.

Thank you.

MR. DRAPER: Thank you, sir; appreciate the study. Neil, would you like to --

MR. BETHEA: I'm going to defer and may ask some questions.

MR. DRAPER: Mark.

MR. BURGESS: Mark is going to have some comments both with regard to responding a little bit to what you just heard and perhaps back to the underpinning for our recommendations.

I have a question or two, though, about the process in which you anticipate. I appreciate the information that's been passed out by United Water and the completeness of it, but the timing of it is --

makes it a little bit difficult to respond in detail to some of these things; and so I'm questioning as to what process you have with regard to that.

We attempted to participate in the earlier workshops and understand what areas Staff wanted particular inquiry into and that type of thing, and attempted to respond to Staff's presentation of issues and subissues, so that anybody that wanted to address what our positions were, or information we had, or provide additional information to Staff with regard to that, had the capability. And so I'm just wondering whether you anticipate some type of further process whereby this can be addressed after deliberate reflection.

MR. VACCARO: If anybody would like to make written comments in response to any of the presentation made today, we would greatly appreciate it. Given the time frame we're on, we would probably need to get those comments probably by the end of this month for them to be useful.

MR. BURGESS: That's plenty of time for us.

MR. VACCARO: Great.

MR. BURGESS: And then Mark wanted to address some of the points that have been raised.

MR. CICCHETTI: I think Frank made many good

points. There are a couple of things that I would like to address, and we will address them further in our comments, and we would have them to you by the end of the month.

One important point, I think, is the market weighting. I strongly agree with Frank that that's inappropriate for the reasons that he raised. It seemed to me that in general, the differences that Frank and AUS and United Water have raised relative to what the Staff has been doing seem mainly to deal with the way to calculate the cost of the equity, very similar to what you might see in a rate case where different sides have different points of view on how that should be done.

One of the things that he mentioned was with regard to the single-stage model versus the two-stage model, and I would just like to point out that generally in financial textbooks you'll see that if there is a big expected change in growth, that you should recognize that in two distinct stages.

I really don't think that the Staff's model is doing a two-stage process for that purpose. It's, in essence, just recognizing the fact that we have analysts' expectations. And, again, I agree with Frank that analysts' expectations ought to be utilized

and the historical model shouldn't, but the Staff's model basically recognizes that the analysts' expectations only go out so far, and since the model deals with perpetuity, we're taking the longest term expectations and then just using them out into the future. And so I think the model is totally appropriate.

Frank mentioned that earnings per share should be used instead of dividends per share. I don't agree with that. The company does not pay out earnings per share as they earn them. The cost of equity is a function of expected dividends per share and expected change in stock price over some time, which is also a function of dividends per share. I have yet to find any financial textbook that suggests that earnings per share ought to be used in DCF analysis.

With regard to the quarterly compounding, I agree with Frank's point. I don't think it's necessary. As long as there's an appropriate adjustment if the quarterly model is being used in order to tie it back into the equity ratio construct, the amount of equity and how that's being determined, there shouldn't be a problem; but using the annual model and the way that the Staff determines how that's

applied, I think it's -- how the result of the return on equity is applied, I believe, is fine.

And if we are going to use the quarterly model, there should be some recognition of how that impacts the growth in retained earnings and the earnings on dividends paid, which is reflected in the quarterly determination of the cost of equity. And I believe we've got that in our comments, and I have published a paper in that regard, and I believe that's readily available.

With regard to the arithmetic means versus the geometric means, I agree with Frank. I think his points are very well taken. With regard to the risk premium model, he's suggesting that we rely on the earned returns as provided by Ibbotson, and I believe that's inappropriate.

The cost of equity is a function of expectations. Earned returns can differ from those expectations. I've seen instances of people relying on the earned returns, which would show that the cost equity is below the cost of debt if you have holding periods where there's been a negative return. So I think that just underscores the inappropriateness of using earned returns in a risk premium model.

The other part of that is Frank mentioned

that he believes it's circular if you use a DCF model in determining the risk premium cost of equity because if the DCF model is flawed, then your risk premium model is going to be flawed. I assume he would agree, then, if the DCF is not flawed, then the risk premium analysis would not be flawed. I don't see that as being a circularity problem.

I think a risk premium analysis that's determined the risk premium over some long period of time using a DCF model is just going to provide you with what that risk premium difference has been between the required return on equity and the cost of debt, and we'd just be trying to interpolate that into the future.

With regard to relying on a quarterly survey to determine the cost of equity -- and I think Frank was just using this to underscore the reasonableness of his methodologies -- I would just like to point out that to look at what other states have earned and then say that ought to be the cost of equity here incorporates a lot of circular logic.

You can't just say well, they have gotten this and, therefore, we ought to allow our companies this. You can see the problems that that would -- what you would end up with there, the problems that

you would have.

Other than that, I'd just -- will take the chance to look at his study and provide some more comments by the end of the month. I did look at what Wayne Schiefelbein had handed out, Mr. Schiefelbein, and I just wanted to make two quick comments with regard to the general comments listed there.

The first general comment states that the cost of debt for some utilities might exceed the leverage formula of return on equity, and I would just point out that if there's a particular utility that has circumstances which show that the leverage formula should not be relied on because its risk is greater than what might be incorporated in the leverage formula, then a company does not have to rely on the leverage formula. I don't think we should gear the leverage formula for exceptions rather than the general use.

And the only other thing is with regard to the second comment, he states that these practice include -- or Mr. Perry states that these practices include nonrecognition of reuse facilities as 100% used and useful. I believe that was the condition of the Commission, but it's my understanding that that was overturned in court. And so, as I understand it,

the Commission will have to recognize those as 100% used and useful.

And that concludes my comments.

MR. DRAPER: Neil, would you like --

MR. BETHEA: Neil Bethea. First of all, I'd like to clarify that I'm not -- I'm sorry. I'm Neil Bethea with the Public Service Commission.

I'm not an expert in this area, so I'm treading on thin ice. I'm really kind of down in the trenches. I work with the Water and Wastewater Division, not the people who do the cost of capital, but I do have some questions for, I guess, both Mark and Mr. Hanley, and I'm going to ask the folks who are experts to help me out if I'm off base on any of these. But I'm trying to get an education a little bit on this, so bear with me.

First of all, Mark, I -- reading through your comments on the workshop questions, you list in 1(b) the risk factors that are unique to Florida Water and Wastewater Utilities, and so you have several things listed there.

One thing we've talked about in the Division are things like the county option whereby the counties can opt out of our regulation. For one, the -- also, there seems to be -- there is a high incidence of

county or city protest to certification or territorial expansions. And then the other -- one other factor is the environmental conditions in Florida that are sort of unique among many other states, and I wonder if there's any way -- first of all, should we consider those factors and, if so, how do we consider them?

I mean, what could we do to recognize that there is -- that there may be a higher risk associated with Florida companies due to those factors?

MR. CICCHETTI: Now, I think they certainly should be considered on the one hand, and then on the other hand, what should those considerations be?

I would point out that with regard to environmental concerns, wherever there are higher costs involved, I believe the Commission would allow those costs to be recovered, assuming they were reasonable and prudently incurred costs.

And with regard to counties and municipals wanting to maintain territory, I don't know that that's necessarily unique to Florida. I think a lot of water utilities around the country face those same type of concerns.

MR. BETHEA: Do you know any specific states where that is --

MR. CICCHETTI: Well, I haven't --

MR. BETHEA: -- allowed?

MR. CICCHETTI: We could take a closer look at that and investigate that, but --

MR. BETHEA: But you think there are --

MR. CICCHETTI: Generally speaking, without having done any studies.

MR. BETHEA: Okay. Let me direct the same question to Mr. Hanley. Could you respond on that as well? If not, okay.

MR. HANLEY: I guess all I could say is, is that I generally concur with what Mark said in that regard. I don't have any other really specific comments, and I certainly don't have any studies here.

MR. BETHEA: Okay. Now I'm treading on really dangerous ground here. Mark are you familiar with Henry Mulle? I'm not sure I'm saying his name right. Henry G. Mulle, or Mulle?

MR. CICCHETTI: Yes.

MR. BETHEA: How do you pronounce that, first of all --

MR. CICCHETTI: Mulley (phonetic.)

MR. BETHEA: Mulle. Okay.

MR. CICCHETTI: He worked for Frank for quite a --

MR. BETHEA: Oh, he did. Maybe he can help

me out, then. I got an article just yesterday and read through it, and it's called -- it was in the Water Magazine, I guess published by National Association of Water Companies, and it's entitled "It IS the Size of the Dog in the Fight After All". Are you familiar with the article?

MR. CICCHETTI: No.

MR. BETHEA: Have you read it?

MR. HANLEY: I have, yes.

MR. BETHEA: You have. Well, I'm going to try to ask some questions on this, so bear with me. Is it true that all of Florida water and wastewater utilities would classified as small cap companies in terms of market capitalization?

MR. CICCHETTI: Generally speaking, small companies are defined as under a billion dollars of market capitalization. So I believe that all Florida utilities -- I'm not aware -- I'm not sure if Southern States has gotten that large or not.

MR. BETHEA: What about for the rest of the water and wastewater industry in the United States; are those mostly categorized as small caps?

MR. CICCHETTI: That's my understanding, yes.

MR. BETHEA: Are you familiar with the SBBI

yearbook? Is that a recognized publication for --

MR. CICCHETTI: I'm not familiar.

MR. HANLEY: Yes, that's -- basically he uses that, but that's the Ibbotson that I was referring to, "Stocks, Bonds, Bills and Inflation" by Ibbotson Associates. I'm very familiar with --

MR. CICCHETTI: Well, I'm familiar with that. I didn't recognize --

MR. BETHEA: Okay. Well, I --

MR. CICCHETTI: -- SBBI --

MR. BETHEA: Again, I'm not the expert, and I've never heard of it. So I'm just going to read a part of this article. He says the use of beta as the sole risk measurement has come under increasing attack beginning with the 1995 edition of the SBBI Yearbook. SBBI began to fine-tune the risk premiums of small company stocks and even added the term "SP" for size premium to the basic capital asset pricing model formula.

Are you familiar with that approach at all?

MR. CICCHETTI: Well, I haven't seen that particular piece of work, but in general what you're talking about, I'm familiar with it, and I would point out that that's -- the use of that book is what I was referring to when I said relying on earned returns on

a historical basis as being inappropriate.

MR. BETHEA: Okay.

MR. CICCHETTI: But I would agree that using beta solely as your measure of risk would be inappropriate. I believe there's a lot of negatory feelings, for lack of a better term, with regard to beta that are inappropriate. I think from a theoretical standpoint, beta is sound, very sound. It's when you try to apply it in practice that it breaks down, because most people rely on historical analyses when the whole concept is on a forward-looking basis. So to rely on it solely could provide you with some problems.

There's some very famous cases of companies who went bankrupt while their betas were still showing that everything is fine; they weren't very risky. But I believe it's an important tool to rely on in your overall analysis.

MR. BETHEA: Okay.

MR. HANLEY: If it's appropriate, I'd like to --

MR. BETHEA: Sure. Go ahead --

MR. HANLEY: -- just jump in with a comment.

MR. BETHEA: I'm kind of wanting some --

MR. HANLEY: I'm familiar with Mr. Mulle's

article, and I frankly disagree with it completely, and I seriously thought about writing a response to it. But to also be candid, this is an informal workshop. I saw no need to have to tick off a lot of people in the industry by doing so.

But in any event, the models when they're applied really take the size into account. Yes, there is a small size premium, and to the extent that smaller companies pay more for capital, market prices for example, reflect that, and also in this formula that we apply, there certainly is in my view a very serious bona fide attempt to recognize the effects of size.

Will they be adequate in every time? The answer is, I think, no. I believe -- I don't know for a fact, but clearly there have to be out of these several hundred water companies, and I think almost the same kind of number of wastewater companies in the state, there have to be circumstances where their cost of borrowing capital has got to exceed what's in the leverage formula.

And if they can meet the burden of proof, then I think to show that notwithstanding the attempts at equity ratio and everything else, they just cannot borrow at the rates presumed in the leverage formula,

then I think it is appropriate to say, okay, in this instance they've met the burden of proof; let's heat the slipper a little bit, expand it and make it fit.

But this carte blanche thing that Mulle has in his article, I think, frankly is preposterous, and I think there is again -- I'll say it again -- a bona fide effort to recognize this small size. Smaller companies tend to pay more for capital. They would tend to have lower bond ratings, and if they aren't rated or can't or choose not to even get a private rating or it's not required and they use the private placement technique, the institutional investors, in effect, rate them unofficially and say, well, you're a Baa3 or, actually, you're even below investment grade category, and if you want this loan, this is what you have to pay.

And if they can then demonstrate that and meet the burden of proof to the Staff, then I think it would be appropriate to say this is one of those instances where we can make an adjustment over and above what the formula indicates, but this carte blanche thing that Mulle has in his article I think is just dead wrong.

MR. BETHEA: Okay. I appreciate that. Were you saying early on that our leverage formula

adequately considers size, do you think?

MR. HANLEY: I believe that there's a serious effort to consider size, but I don't think, frankly, that in every instance it will have done an adequate job, because there just -- and, honestly, I don't know this; it's pure speculation on my part -- but out of these several hundred water companies and, you know, many other -- I forget if it was 175 or a like number, whatever it is, of wastewater utilities, there just have to be many of them very, very small companies that couldn't possibly borrow, I believe, but don't know for a fact, at the rates presumed in the model, even with those extra adjustments.

I'm not talking about the 7.72, but even taking into account those differentials of accumulating an additional 70 basis points. And if they can demonstrate that and they can demonstrate that they just frankly cannot -- could not do any better, I don't think that they should be punished for that because of their size. Then I think that there needs to be some recognition to the formula to say, well, look they made their best efforts -- and I must confess, I don't know at the moment whether they need to come in every time they finance and get a financing certificate or not. I'm not that familiar with your

rules down here. But if that were the case, then they will already have demonstrated.

But in order to get a financing approval certificate to issue debt or whatever, it has to be presumed to have been a reasonable transaction. And if -- and so they would already have met that burden of proof, and if that type of a certificate isn't required, then they would have to meet the burden of proof on a -- call it an ad hoc basis in conjunction with their case to suggest why there ought to be an exception to the leverage formula.

MR. CICCHETTI: Neil, I have not read Frank's article, but other than that, I agree with everything that Frank is saying. I would just point out that my experience in looking at a lot of these companies that had high costs of debt, in many instances you would look at companies that had either negative equity or no equity or very little equity, and so lenders would require some pretty high premiums.

I think that needs to be considered separately from an adequately capitalized company, and if they're -- and I'm not 100% certain either, but if there are companies that are not -- that are adequately capitalized but still have high costs of

debt, then there should be some recognition.

MR. BETHEA: You're saying there should be some consideration outside the leverage formula to --

MR. CICCHETTI: Right. And my --

MR. BETHEA: -- account --

MR. CICCHETTI: -- understanding is that's available to them. They don't have to --

MR. BETHEA: Is that available in the --

MR. CICCHETTI: They don't have to --

MR. BETHEA: -- current way we do things?

(Inaudible overlapping comments.)

MR. BETHEA: We're not bound by the leverage formula in every case?

MR. DRAPER: I don't believe we are.

MR. BETHEA: And I'm getting educated here.

MR. CICCHETTI: Yeah, you don't have to --

MR. BURGESS: My understanding is that the leverage formula is just if a utility chooses not to put on any testimony.

MR. MAUREY: I'm Andrew Maurey with Staff.

That's correct. They have the option of filing under the leverage formula. Most companies do use the leverage formula, but they are free to propose other methods for determining their return on equity.

MR. CICCHETTI: I imagine one of those could

be, here's our special circumstances. This is why we ought to have a little in addition to the leverage formula rather than going through extensive cost of equity testimony, if that's what they choose to do.

MR. BURGESS: But that's rolled into each case as the company comes in rather than, as Frank is suggesting, it's something in the leverage formula itself. I mean, that's something that -- the fact that it's a departure, so to speak, as I understand it, it is anticipated that that would be dealt with in the rate case as the utility files.

MR. HANLEY: Yeah. I would just like to say one more thing, and here again I agree with Mark. I mean, if you've got some small company or developer's company or whatever and the guy's coming in and he says, well, you've got 5% equity in this thing, and, you know, 95% debt, and he wants like a 40% return on equity or something, I mean, just like if it were -- you know, a real company, you know, with professional management and whatnot, if they overleverage or they've got too thick an equity ratio, commissions general across the country are free to say, well, you can do what you want in terms of running your company, but for ratemaking purposes, that's not reasonable and we can assume a hypothetical.

So, yeah. I mean, I think that has to be taken into account, as Mark suggested, but if they are appropriately capitalized and still can demonstrate a -- you know, an inordinately high cost for whatever the reasons, then I think there ought to be some mechanism for taking that into account, short of them having to go out and hire experts and put on a big, you know, case, which seems ludicrous if the company is that small to begin with.

MR. MAUREY: That's correct. I mean, we do have some companies where they're so undercapitalized with equity, or their operating costs are so high compared to the amount of rate base, that the rate base rate of return formula doesn't really give them the cash flow they need to operate; and those companies need to -- we do have the ability, if they are small enough in size, a Class C, I believe, a Group C, they can opt for an operating margin method of regulation so they can get away from the use of rate base rate of return regulation.

But we still have -- your point is well taken that if a company is negative equity or 5% equity and has some other things going on, they're not going to be in a position to put on an affirmative case to demonstrate why a leverage formula shouldn't

apply to them, other than the fact that someone is looking at their balance sheet and income statement and come to that conclusion themselves. But I agree that those are special cases that would have to be treated outside of the formalistic approach we're looking at here.

MR. BURGESS: But as I understand it, once again the process allows for all of that, including what we haven't mentioned yet, the staff-assisted rate case. If a company is small enough and it has special circumstances, the Staff with its expertise is able to look at that, and if it considers in its discretion that it needs to use one of these alternative methods as opposed to the leverage graph, it has that option, too.

So, you know, I think these special conditions are already anticipated and carved out.

MR. BETHEA: Steve, I'll just point out that in the Staff assisted program we typically use a leverage formula and force them into that model rather than deviate from it.

There have been, I think, only two cases where we've done an operating ratio, and we tried it in others, but there's not -- the Commission has been real reluctant to use that and just widespread in

cases where operating costs, operating expenses far exceed rate base.

MR. BURGESS: Then as we --

MR. BETHEA: -- (inaudible overlap) -- not generally applicable -- you really have to put on your -- you know, show that it's justified, but if --

MR. BURGESS: But it seems to me, and if I -- if what you're saying is you -- Staff has thought it appropriate to take some alternative mechanism to the Commission and the Commission in its discretion as decision maker said no, then that's what they're appointed for --

MR. BETHEA: That's true.

MR. BURGESS: -- and I don't think we want something that says, oh, now we need something to override the Commission's discretion because they have rejected it.

MR. BETHEA: Point well taken.

I guess one last question I have concerning small companies, because the model we have I don't think distinguishes between the As and the Bs and the Cs and it's one size fits all: Should there be consideration given for the Class Cs, for instance, since they are so much smaller and really have unique characteristics? Should that be considered and, if

so, how could we do that to assign an additional premium if we wanted to?

Anybody address that?

MR. CICCHETTI: Neil, I don't think that's unreasonable. If you want to sort of take the leverage formula apart and stretch it out a little bit and say it's more risky from the mean versus less risky or however, it's just -- doesn't sound unreasonable.

MR. HANLEY: Yeah, but see this is where I'm suggesting that, you know, once you've got the formula and you think the formula is good, but you recognize that it's not going to fit every foot, you know, in the kingdom, then you have to say okay; how are we going to make exceptions. Do we want to just have something out there on the platter and suggest that, oh, anybody that feels that it doesn't meet this, I don't think that -- if the tables were reversed and I were in the Commission, I would say no, you meet the burden of proof. Here's the formula. Come in and show me why. Explain why that this ought to be deviated from and what you can apply the formula, come up with a result and then after sitting down with them, make an additional, a yet additional -- in other words, apply the formula, come up with a result, and

then if, after proper discussion, you feel that they meet some degree of proof that they are more risky than what is implicit in the formula, then you can make an additional add-on if there's nothing that prohibits it.

MR. CICCHETTI: I would just like to qualify my statement as saying I think what the Commission is doing is fine. What Neil was proposing is not unreasonable, and I agree with what Frank is saying.

MR. HILL: Can I just add a quick comment here that's sort of ducking the question and maybe expanding the scope of this workshop?

But small water companies are a problem, I understand, not only in this state, but in many states where United Water operates. And I'm really unaware of any affirmative policies that this Commission has implemented to encourage the consolidation of these companies. That's not to say that they don't exist. I'm just not aware of them.

I am aware in other states commissions have drafted and implemented policies to encourage the acquisition, for example, of smaller companies by the larger companies to get rid of some of these problems.

It's certainly not a perfect answer, but one of those incentives would be favorable consideration

of acquisition adjustments and those types of things, where in a -- in a situation here where many times small water company owners believe that their assets are worth a lot more than they really are, and in order to solve some of these problems that relate to small water companies, the only answer is to have them become part of a larger customer base.

And for those reasons, I guess I'm asking whether there are any policies that have been considered or implemented here, even though this may be somewhat outside the scope of this workshop.

MR. BETHEA: I'll try to address that. I guess if we -- we don't have an official policy on that, but our practice has been that the company has to prove that a positive acquisition adjustment is appropriate. The company has to make that case and I'm not -- I couldn't tell you how many times we had done that. It's not been many. But our general policy is that absent any proof to the contrary, we don't recognize positive or negative acquisition adjustments.

MR. CICCHETTI: Neil, isn't it true that in many instances there is a negative acquisition adjustment, but the Commission allows the company to recognize the full rate base --

MR. BETHEA: Yes, that's --

MR. CICCHETTI: -- so it -- doesn't that work in the company's favor.

MR. BETHEA: That's what I meant, that it would not have an impact on the rate base unless the Commission deemed it appropriate.

MR. HILL: That could work to the company's benefit or detriment, depending on the purchase price of the system.

MR. BETHEA: Right.

MR. HILL: I'd be happy to provide, by the way, examples of some incentive policies that have been implemented in other states if there's interest in that.

MR. BETHEA: I'd like to have that.

MR. MAUREY: I just have a couple questions and then a comment; one I want to -- a question I want to give both Mark and Frank an opportunity to address regarding the cost of debt that we use in the leverage formula.

It's already been mentioned that in some cases, some of the utilities in Florida aren't borrowing at the assumed cost of debt that we use in the leverage formula. We presently use an assumed rate of a BBB3, but if either of you have ideas on a

more appropriate cost of debt or how we'd quantify a more appropriate cost of debt for use in this leverage formula, I'd like to hear each of your ideas.

MR. HANLEY: Well, actually, Andrew, I thought, you know, about that and, frankly, trying to stay with the notion of a -- of a formula that works in most instances but we recognize not all, I think the use of a Baa3 or, you know, BBB- equivalent is probably a good one.

I don't think you want to assume in terms of a formula anything lower than that, and that I think by making the additional -- because you don't want to think -- and in terms of a general formula I don't think below investment grade. At least I wouldn't.

So really, no. I mean, I think the thinking in those regards has been right on the money. Again, I would just say and encourage that, to continue that aspect of the model and just really consider exceptions to the rule as they become really apparent and if, in fact, they are really bona fide exceptions rather than irresponsible management.

MR. CICCHETTI: I concur with Frank. Andrew, the last time -- last workshop we -- at the last workshop there was some mention of some programs that may be available from DEP, and I believe that

there is a gentleman here from DEP, and I was just wondering if we could hear how that program might relate to investor-owned utilities in Florida.

MR. MAUREY: Sure. If he's interested in making some comments, we'd like to hear from him. You'll need to step to the microphone and identify yourself for the court reporter, please.

MR. BANKS: Tim Banks with the drinking water funding section at DEP, Bureau of Water Facilities Funding.

We do have a grant and loan program for drinking water systems. We also have a loan program for wastewater facilities. Obviously our section only handles drinking water. Currently our loan program -- it's called the Drinking Water State Revolving Fund Program -- offers 20-year loans at right around 3% interest.

We have a grants program for financially disadvantaged communities with public health risk concerns. Those are 65 or 85% grants, but they do have to have a public health risk problem, as in a bacteriological or a chemical contamination or a violation of certain standards.

We have about 26 million available each year for the loans and the grants. Currently we have about

30 million in projects being funded.

As far as the loan program, they can fund just about anything except projects entirely for future growth. So we can fund infrastructure, we can fund treatment, distribution systems, laboratory facilities, computers; pretty much whatever, like I said, except for future growth.

MR. BURGESS: Could you elaborate a little bit on qualification, the qualification to obtain the loan; ownership -- you've already spoken as to the type of investment that it's allowed for, but, I mean, as far as what --

MR. BANKS: I meant to get that. Actually, when I started talking about wastewater, the wastewater part is limited to governmentally owned entities. The drinking water part doesn't have that kind of limitation, but we do have a limitation on investor-owned utilities of 1500 service connections or less unless the project is for consolidation or regionalization. I think that subject has been brought up. If the project is for consolidation, it's ineligible no matter what size the entity.

MR. BURGESS: Okay. But that being the smaller utilities anyway, I mean, that's what -- that kind of does provide that --

MR. BANKS: Our first loan, in fact, was to a very small private utility.

MR. BETHEA: Well, there are limited funds, though. How do you categorize who you're going to lend to? I mean, can just anyone, small utility, come in and be assured they're going to get the money?

MR. BANKS: It's based on priority. Priority is based on degree of public health risk or a compliance issue. Projects that don't involve either one of those are obviously at the bottom of the list. That doesn't mean they won't get funded.

We do segment large projects which stretches the funding out over several years to allow smaller projects with lesser priority to get funded, so even a project that is, say, a distribution system expansion to a planned community could get funded.

The level of segmentation obviously depends on the need. If we can stretch it a little bit to add these projects, we will.

MR. BETHEA: I wasn't aware that it could be -- the funds could be used for growth.

MR. BANKS: They can't be used for future growth. They can be used for, say, a subdivision that's already there. We can extend a distribution system into that subdivision or one that's planned.

We just can't -- it has to be -- one of the things that's required is a facilities plan. It's an EPA requirement. And if within that plan is this particular subdivision, we can extend the lines to that subdivision. We just can't expand them randomly.

MR. BETHEA: So if we had a small system, let's say or -- under 1500 connections, did you say -- that their distribution system was, or their -- well, this is just water -- so distribution system would be deteriorating, they could get funds for replacement that --

MR. BANKS: Absolutely.

MR. BETHEA: -- and that sort of thing?

MR. BANKS: A number of our projects are for replacement of distribution systems.

MR. BURGESS: Let me ask about the underlying authority under which this process was made available, more specifically to the question of has there been any consideration or thought to opening up the wastewater side to privately owned utilities as well?

MR. BANKS: There's been some discussion. Unfortunately for the privates on the wastewater side, it was funded under a separate act. It's the Clean Water Act that does not allow privates. The

drinking -- the Safe Drinking Water Act that we're funded under specifically does privates.

MR. BURGESS: So it would take statute amendment --

MR. BANKS: It would take a federal --

MR. CICCHETTI: Tim, would a system that was less than 1500 but was part of the larger holding company, would that qualify?

MR. BANKS: That's a good question. I believe so. It kind of depends on how you define ownership. Our rules say that the owner has to -- of the system has to be less than 1500 service connections, but some of these are obviously not real clear-cut. That's an issue we're going to have to address.

MR. BURGESS: Do you have anything in a process of education or dissemination of information, how does a utility -- aware of you? Is it something that you just expect any privately-owned to be aware of?

MR. BANKS: Well, we send out for requests for inclusion on our priority list annually, at least annually, to all public water systems that are community water systems, number one, and then rate based, number two. So everybody that's -- would

qualify does get what we call an RFI, and that program will be expanded at some point in time to other nonrate-based systems.

MR. BETHEA: And just to -- one other clarifying question. If it's an upgrade of treatment plant from -- to, let's say, reverse osmosis, that would clearly fall under --

MR. BANKS: Absolutely, even if it's not a public health risk at that time. If it was just for esthetics even, it could qualify. It could even -- if it's a financially disadvantaged community and it's got, say, half the maximum contaminant level for a particular contaminant, it might even qualify for a grant.

MR. BETHEA: What about stuff like aeration?

MR. BANKS: Aeration for some chemicals is the best available treatment to --

MR. BETHEA: Or just smell or something like that.

MR. BANKS: That would come under secondary, which you would have to have something else to get a grant, but it would certainly qualify for a loan. Compliance and public health risk problems almost always will get -- in fact, always will get funded under the current arrangement with the current funding

levels.

MR. BETHEA: And you said the statute is not clear as to whether it would apply to smaller companies that are owned by larger companies? Wouldn't it -- doesn't it target that community that it's serving?

MR. BANKS: It pretty much specifies the franchise area which --

MR. BETHEA: Okay.

MR. BANKS: -- which I think that's where the gray area gets into -- comes into play. I know there's some utilities out there that even the local utility, even though there's even a parent company to have that -- but the local utility has a number of systems, and each franchise area, the way the rule reads to me right now, could qualify separately; but that is a gray area. We'd have to look at each case and --

MR. BETHEA: But you've probably funded them before, right?

MR. BANKS: Actually our program is very new. Our first loans were made in July of last year and our first construction loans, those first two loans that we made were actually loans and grants to -- for preconstruction. The first construction was

in September.

MR. BETHEA: And a list -- you've got a list available, don't you, of all --

MR. BANKS: Uh-huh.

MR. MAUREY: Well, thank you very much.

Frank, we appreciate the analysis you did, and some of the suggestions that you've made we've considered. I mean, we've added the prospective CAPM analysis based on Dr. Morin's comments from our workshop in '95, and we've -- we're also seriously looking at the use of the gas distribution risk premium, if it's still a reasonable approach, and the historic DCF.

But I did want to ask you a question in regard to your comments about why you're advocating the use of a prospective DCF model not based on historic growth rates. You are recommending that we go to a historic or -- are based on a -- a risk premium based on historic or earned returns, and a CAPM analysis based on historic or earned returns, and I'd like to give you an opportunity to comment on that.

MR. HANLEY: I'm really glad you asked this question, because I was hoping to get onto those topics to respond to some of Mark's comments. So this

certainly provides that opportunity.

As far as the -- in the DCF, yes, I think that the analysts' forecasts -- and there have been studies that show that the analysts' forecasts are appropriate, because you've got to keep in mind you're taking a current price and you're saying, okay; what are you looking for in terms of growth.

Now, it's true in the textbooks they talk about it's growth in dividend, but when you think about the model in practical terms, you have to say to yourself -- which is why I think the analysts' forecast of earnings is the most meaningful -- dividends can grow either way below earnings, rate of earnings growth in the short run, and if it grows above it for over the longer term, the company is in real trouble. So basically over the longer term it's got to grow the way earnings grow.

Now, ideally if we had a 10 or 15 or 20 or 25-year forecast growth in earnings, that would be great, but we don't. They have 5-year earnings forecasts. What really drives market prices? Is it if a company ticks its dividend up two cents? Does that really drive market prices? No.

It's the expectation of future earnings and the related multiples that go along with that that

really drives it up, and that's where the capital appreciation comes from. That's where the growth in the model, the bulk of the growth, really is.

So I think that's what you really need to look at. And the analysts' forecasts take into account, as I said historical, trends and, if you will, they kind of run them through a filter. They have meetings. They get all sorts of questions answered that the average investor certainly wouldn't know what to ask or how to get that information, but those analysts do, and they filter that process and then they come out with earnings estimates that clearly influence investors' decisions and have an impact on market prices.

And to the extent that they impact market prices, they impact the expectations of growth a lot more than other measures; and so I think that they really are appropriate to use more than just looking as an investor at historical information.

Now, you say, okay, what about in the context of, for example, the risk premium analysis; why am I suggesting the use of a long-term historical average. Well, the bond rating process really reflects all the most current assessment of risks of an enterprise, and I've got one of the attachments in

the handout here from Standard & Poor's, and you can see the process that they go through and all the things that they consider.

And I would suggest to you that you'd be hard-pressed to come up with anything in terms of a diversifiable risk, business or financial risk, some element that they really don't contemplate in that bond rating process.

So when you're getting basically the equivalent of a company-specific bond yield, and even -- we adjust even more for recognizing these really little companies with our added increments and so forth, so think in terms of that as well -- then you have to say, okay, now how do we go about equity risk premium.

Well, the bond yield -- or on long-term bonds is a long-term investment horizon, and ideally, ideally, we would want to look for long-term earnings growth, too, in the standard DCF model, except we don't have any. The most we have are five-year projections of growth. But if we look back, what do we have for historical growth measures, and even they aren't particularly meaningful because they're company specific is what you look at in the DCF model. But now when you've got company-specific, a large portion

of your risk is already reflected in the company-specific bond yield.

We want to come up with some idea of a long-term equity risk premium. You're not looking at company-specifics. It is appropriate, in my opinion, to look to the long-term past of market returns -- without repeating what I said earlier about what -- and Mark agrees, the arithmetic mean is appropriate to look at.

But when you look at that long-term average in that regard because it was the market, and now you're getting really beyond diversifiable kind of risk, you're getting into all those socioeconomic macro kind of factors around the world; you know, war and peace; you know, starvation; what Bill Gates says on the witness stand and how it affects the market and all the technology stocks; all sorts of things that have absolutely nothing to do with an individual company or, indeed, a given industry.

And so it is appropriate in my view to look at the long-term average of all those random holding period returns to get -- and then, you know, subtract out the appropriate debt to get the equity risk premium from it and say on average over the long term, that is a reasonable expectation; because as we said,

you know, there's probably not going to be another Viet Nam or a World War II or something like that, but there will be all kinds of events, things that shake up the world.

And while they differ, all these things can, like would happen -- as Ibbotson & Associates says -- and again there's that relevant part as one of the attachments in there -- if a lot of these things didn't happen, who would have ever believed that we would -- what would happen to the savings and loans, the thrift institutions?

Who would have believed -- go back to, you know, 20 years ago. Who would have believed that the Soviet Union would no longer exist? People would have thought it was not possible. So these kinds of things that we say are crazy, and "that's history," will never happen again.

Maybe the same things won't, but over the very long term, other things that may have the same kind of impacts. And they provide the arithmetic mean of those random returns, those holding -- actual market holding returns allocated by the beta do provide insight into a long-term equity risk premium that could be expected again with emphasis on the long term.

Ideally in the DCF, if we had a meaningful, really, you know, an intelligent, long-term forecast of -- on a company-specific basis that one could use, sure, use it. But when you've only got five years to work with, you know, you have to work with that.

And then I would just suggest also that that's why a two-stage in my view is -- a two-stage growth model is basically kind of -- I hate to use the word -- but silly, because you've either got to do two things; one, you either have to make the brash assumption that the second-stage growth is really an outfall of the five-year forecast, which is really what you do; and if you don't do that, then you've got to make the assumption that you're only going to grow impact with the economy. And if you want to, use some long-range forecasts as the FERC has done -- which I think is also kind of silly -- the presumed or estimated growth rate in gross domestic product; but there is absolutely no empirical evidence to suggest that companies are going to be limited to that. It could be less, it could be more.

It's, you know, a great textbook theory that somebody came up with, but there's absolutely no empirical evidence to support it. So absent that, why not use what you have, which is the best expectation

of a long-term growth rate, but it happens to be limited to five years. I mean, insofar as the DCF model is concerned.

MR. MAUREY: Well, the main point of my question was that while it's becoming widely accepted that analysts' forecasts for growth rates in the DCF model is the most appropriate method to use, an historic DCF -- the use of it in our model is somewhat -- goes back to the evolution of the model, if you will.

I believe that we're in a transition point, and whether the historic version of the DCF model continues to be used or not, we will seriously consider that.

But I guess my point was looking at the use of analysts' forecasts in the DCF, which is a forward looking view of where the -- of the inputs, and then you go to the risk premium model where we're looking at earned returns over a long term versus analysts' -- I mean, you can pick up any Merrill Lynch or any other investment banking firm, and they look at prospective risk premiums that are more in the range of 200 to 500 basis points over the current cost of debt as opposed to these long-run historic earned returns, which are in the neighborhood of 600, 700, 800 basis points.

And what we were -- the gist of my question was correlating the use of analysts' forecasts and use of the DCF model and analysts' projections, if you will, in the risk premium model in terms of measuring the risk premium. But I see we've --

MR. HANLEY: Okay. Well, in addition to the reasons that I've already given, I think another reason is, is that when you're talking about forecasting market returns, all you -- you know, keep in mind here we're talking about in the context of a formula that we want to try and keep in place for a year.

Just think about how volatile the market really is and if you want some idea of the forecasted market returns, all you've got to look at the value line, the weekly returns when they forecast a potential appreciation and see how that bounces from week to week and month to month depending on what the market does. The higher the market goes, the more the potential appreciation shrinks.

Back in the fall, or whenever it was, the market dropped way down to below 7500 again, whatever it was. It shot up again, and it's just bouncing like a seesaw. Look, just follow the market, not only from day to day, but even intra-day at the tremendous

volatility. And do we want to set a leverage formula that's going to be in place for a year with that kind of potential market volatility.

I don't think so, because what you want to really look at is if you're assuming that at the time you make the determination of a cost of equity, that that's not for a speculator or not for the guys that play the market and go in today and sell tomorrow or sell two days from now and try and make a killing or take a beating because they're willing to gamble, but for a real investor; and a real investor is going to look over the long-run horizon.

And in that regard, so far as the equity risk premium is concerned, the best clue to that is the long-term average not of some company-specific forecast, but what the market did as a whole, and then allocate that based upon the relative risks on a more current basis in the form of beta.

Now, you mentioned, yeah, they go all the way up. But I came up with an adjusted market equity risk premium of 6.4%, but when you allocated that based on the beta as of May last year for these water companies, it was 3.78, which is -- you know, it's not an 800 points that applies to this or whatever, but I think that it is important especially in a leverage

formula -- again, I hate to keep using this -- this cliche, but in my mind it really applies -- you're trying to make the slipper fit a lot of different sized feet.

I think you want to get away from something that is tremendously volatile. That's one goal. And the other goal is, you want to come up with something that's reasonable. I don't think anybody on the Commission or the Commission Staff says, we want to come up with the worst return we can because we want to drive everybody out of business.

I think the goal of everyone is, is to come up with something that is reasonable. And as far as what Mark said, I didn't look what -- in this survey that was done on behalf of the National Association of Water Companies, incidentally, not of our own volition or decision. We were commissioned to do it, and paid to do it, as a matter of fact, and our pay has nothing to do with the results that we get from the survey. Let me say that right up front.

So it's not what they earned; it's what they were awarded by other regulatory commissions. Now, should the Florida Commission say, oh, my goodness; Pennsylvania did this, California did that, and that's what we ought to do. No. But I think it is a reality

check that if you're applying a formula and the majority of other state commissions are making awards for other companies that basically all do fit into the small cap category, if you will, because there are no huge, large cap water companies, at least not yet, then I -- the only words I could think of is, it's a reality check, and I think the reality check relative to my pro forma, if you will, application of the model as I'm suggesting here, it passes a reality check, but I don't think the existing one does.

MR. MAUREY: Well, the Commission does compare other -- returns awarded in other jurisdictions. I mean, we do that in other industries as well. So it's not -- I mean, we use that same type of reality check.

I guess I did want to make one comment on you were talking about the volatility of prospective returns. But Staff's concern with using earned returns is because there's considerable volatility in those as well. I mean, in some years you're looking at a positive risk premium of 20%, some years it's negative 6. On average over a long term, it may come out to 6.4, 6.8 or -- depending on the period you're measuring over. But there's also 10-year or 20-year periods where that return is very small or negative

because -- just depending on how you choose the period; and that's the concern we've had with that model.

MR. HANLEY: Yeah, but that's exactly right; And so you if you arbitrarily pick some historical period, say, like 10 years, you're building an inherent bias. You're assuming that that 10-year period is going to be representative over a very long period of time in the future.

You know, if you did -- when you take the DCF model and we say, okay, it presumes an infinite horizon. Are there other forms of the model? Yes. But the standard model that's normally used in regulation -- and this Commission is no exception -- presumes an infinite horizon. But in practical terms what does that really mean?

Well, with the present value concept, to get as close to present value as zero as you can normally takes about 40 years. Okay. So that's pretty long-term. It's a lot longer than 10 and -- but it's a lot closer to this long-term historical average. So that's, I think, a better indication of what could be experienced on average over a 40-year period of time in the future than arbitrarily picking the past five or past 10 years or something like that.

MR. MAUREY: What long-term period did your analysis assume?

MR. HANLEY: Well, they -- the Ibbotson Associates in their annual yearbook they accumulated each year, so it's running from -- this would have been from 1926 through 1997.

MR. MAUREY: All right. I had another question regarding your discussion of the two-stage DCF model. I can't recall if you were there. I was at the presentation where Dr. Myron Gordon discussed the -- his evolution, I guess, of the DCF model, and he discussed the appropriateness of a two-stage model in certain circumstances, and did -- he and his son did empirical studies on the reasonableness of that approach.

Have you read his paper, or were you at the SURFA conference last year that -- where he made that presentation?

MR. HANLEY: I was there, and I was also there when Jim VanderWeide asked him a question and said, well, what happens if; and you come up with this kind of result. And then if you remember Gordon's result, he said, well, then the DCF result would be wrong. So, I mean, I think he acknowledged even that the DCF is not a perfect model by any stretch of the

imagination.

And yes, I agree that the two-stage model is certainly appropriate in a number of instances, and it would clearly, clearly be very appropriate, I think, for the typical energy company, or certainly of electrics at least that are entering this new stage of their life, if you will, and so they're going to be going through some transition period, and then they're going to get beyond that, hit that adulthood, if you would, and then they're going to taper off and go to this kind of what they refer to as the steady state. But if you're already in the steady stage, what second stage?

MR. MAUREY: Well, we've dealt with that issue in our recent telecommunications docket where we had what the same -- the witness advocating a multi-stage DCF model made the same argument that you're making, that in transition phases it may be appropriate to have more than one growth rate.

MR. CICCHETTI: Andrew, if I could just make a comment about that.

This two-stage versus one-stage argument really confuses me, because all it is is a mathematical representation that's using the first four years as specific first four-year growth amounts,

and then for the fifth year growth amount, it's just using that into perpetuity.

Would it not be a two-stage model, instead of just showing it mathematically in two stages, to break out each specific year's expected cash flows based on first four years of growth that are available and then using the fifth year? I mean, whether you're using earnings per share or dividends per share, you're getting the same result, other than you're taking a short-term earnings per share growth estimate and using it for all periods versus specifically using the dividend forecasts that are available and then using the longest term dividend forecast as the long-term part of the model.

So I think there's coming some confusion between the two-stage model being used to represent significant changes of growth over periods of time versus using a model that's just trying to represent the analysts' forecasts that are available.

MR. HANLEY: Well, my response to that is, I don't think so. I mean, I hear what Mark is saying. But basically if you take -- you're just taking earnings of the first couple of years or whatever, and then you say, okay, well, for the second-stage growth rate we're going to assume what B times, well -- or

retention growth rate. And that's supposed to be your steady state, and it's supposed to go out, you know, ad infinitum, well, that's absurd to assume that because it doesn't go out, has no implications beyond five years.

And when the analysts are making a five-year growth rate, they're not saying it's 2% this year and 8% next year and whatever and it -- and then it comes -- compounds out the five; they're saying, I predict over the next five years the growth rate is going to be -- and that's what motivates investors.

That single -- that -- you know, that growth rate is what is going to be motivating market -- or driving market prices. And if you really are going to look at a long-term growth rate, then I guess you have to do what the FERC does; but what the FERC does even, if I may say -- and I don't mean to denigrate another regulatory body -- is a joke.

They decided somewhere along the line they were going to use a two-stage model, and for the second stage they use forecasted growth in GDP, but if you're going to do it, it should be a compound growth rate so that they go out five years. They use IBIS growth in earnings, and then they use this long term -- so beyond -- from your sixth out to at least

20 -- the next 16 or so years, they use a forecasted growth in GDP.

Well, normally your growth in earnings is higher, that five-year growth rate, than the forecasted growth in GDP for those other years. Now, I know what happened, but can I prove it? No. But they -- so if you compounded it, took that first rate for the first five years and then the year-to-year rate for the GDP for the remaining 16 years or however far the forecast goes out, they came up with too lower results.

So guess what they did. They began by averaging. They averaged equal the first five years with the next 16 because they wanted a result that in their minds was somewhat realistic. And then when that got too low last fall or whenever it was, they made a new decision. They decided to weight two-thirds to the first five. It's a joke. It's end result driven. Why bother? It's a steady state industry, and when -- you've got the best forecast, which is the analysts' five-year forecast growth in earnings.

MR. CICCHETTI: I just feel strongly that I need to emphasize that from a mathematical perspective, saying earnings per share are going to

grow at 6% into perpetuity and using that versus its dividends are going to grow 4% for the first four years and then 6% into perpetuity with regard to the equation and B times R assumptions and all of that, they're identical.

The distinction in the two-stage that's being made here is somehow that using more current available forecasts for dividends and then using a long-term dividend forecast into perpetuity somehow means the mechanics of the model are wrong is incorrect.

MR. MAUREY: Well, I'd like to -- that's all the questions I had. I did want to make one more comment, that as OPC will be filing comments with us before the end of the month on the analysis that AUS has done on behalf of United Water, we'd also like to extend the opportunity for you to file comments on OPC's filing. I think I saw you get a copy. It was the March 8th filing. I see you have that.

There was one other filing done on behalf -- but there were very -- some limited comments, of -- is it Florida Water?

MR. VACCARO: Yes.

MR. MAUREY: Florida Water filed. Has everyone received a copy of that? And if you want

to --

MR. HILL: This is March 11th comments from Jim Perry.

MR. MAUREY: Yes. That's it.

MR. HILL: We have it.

MR. MAUREY: Okay. I'd also encourage you to, if you had any comments on that filing, to make them as well.

The time line we're looking at is May 20th for a recommendation in this docket. And so to facilitate our review of the analysis that each party has done and the comments that each party has on those analyses, sooner is better than later on us getting those responses.

So while we did talk in terms of the month, I mean, two weeks would be better for us if that's doable. And we will be preparing a report on the workshop, on the results of the workshop, but that is second -- that's not going to be filed. It's not taken to Agenda or anything. It's separate from the recommendation in this docket.

MR. DRAPER: Are there any further comments that anybody would like to make?

MR. HILL: Can I just ask a question about the process? On May 20th the Staff will file a

recommendation and then that will be scheduled for the Commission's consideration at open meeting?

MR. VACCARO: Yes, at the June 1st Agenda Conference here.

MR. DRAPER: Are there any comments from the audience? Anybody who would like to ask any questions? (No response.)

I guess not. I'd like to thank you all for participating. I think this is a really good opportunity for us to get together and discuss some of these issues. I would just encourage that we continue yearly to try to get together when they do these workshops and discuss further issues that come up.

I think if there's nothing further, this concludes our workshop.

(Thereupon, the workshop concluded at 11:25 a.m.)

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STATE OF FLORIDA)
: CERTIFICATE OF REPORTER
COUNTY OF LEON)

I, H. RUTHE POTAMI, CSR, RPR, FPSC Commission Reporter,

DO HEREBY CERTIFY that the Workshop in Docket No. 990006-WS was heard by the Staff of the Florida Public Service Commission at the time and place herein stated; it is further

CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed by me; and that this transcript, consisting of 76 pages, constitutes a true transcription of my notes of said proceedings.

DATED this 16th day of March, 1999.

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