UNITED STATES OF AMERICA

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SURFACE TRANSPORTATION BOARD

PUBLIC HEARING

METHODOLOGY TO BE EMPLOYED IN

DETERMINING THE RAILROAD INDUSTRY'S

COST OF CAPITAL

EX PARTE NO. 664

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TUESDAY, DECEMBER 4, 2007

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The Public Hearing convened in the Hearing Room, 1st Floor, Patriots Plaza, 395 E Street, S.W., Washington, D.C., pursuant to notice, at 10:00 a.m., Chairman Charles Nottingham, presiding.

SURFACE TRANSPORTATION MEMBERS PRESENT:

CHARLES NOTTINGHAM	Chairman
W. DOUGLAS BUTTREY	Vice Chairman
FRANCIS P. MULVEY	Commissioner

PANEL I: GOVERNMENT

CLIFFORD C. EBY	UNITED STATES DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION

PANEL II: CONSULTANTS

STEWART C. MYERS	ASSOCIATION OF AMERICAN RAILROADS
BRUCE E. STANGLE	ASSOCIATION OF AMERICAN RAILROADS
THOMAS D. CROWLEY	WESTERN COAL TRAFFIC LEAGUE
JAMES E. HODDER	WESTERN COAL TRAFFIC LEAGUE

PANEL III: FREIGHT RAILROADS

JAMES R. YOUNG	UNION PACIFIC RAILROAD COMPANY
THOMAS N. HUND	BNSF RAILWAY COMPANY
DAVID A. BOOR	CSX TRANSPORTATION, INC.
MICHAEL K. BORROWS	KANSAS CITY SOUTHERN RAILWAY COMPANY
WILLIAM J. ROMIG	NORFOLK SOUTHERN RAILWAY COMPANY

PANEL IV: OTHER INTERESTS

HEATH WATKIN	ATTICUS CAPITAL LLP

PANEL V: ASSOCIATIONS

G. PAUL MOATES	ASSOCIATION OF AMERICAN RAILROADS
NICHOLAS J. DIMICHAEL	NATIONAL INDUSTRIAL TRANSPORTATION LEAGUE
ROBERT D. ROSENBERG	WESTERN COAL TRAFFIC LEAGUE

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P-R-O-C-E-E-D-I-N-G-S

(10:02 a.m.)

CHAIRMAN NOTTINGHAM: Good morning and welcome. Today, we will hear further testimony on the methodology that the Board should use to determine the railroad industry's cost of capital.

We are required by statute to make an annual determination of the revenue adequacy of the railroads and the cost of capital is an integral part of that inquiry.

The cost of capital also plays a key role in various other agency functions, including our rate cases. Therefore, this proceeding and the resolution of the issues presented is a high priority of the agency.

The focus of this hearing is narrow. While parties have raised a number of ancillary points, the key issue and subject of this hearing is the most suitable method for calculating the cost of equity of the railroads.

The cost of equity is the return that investors require of the railroads, but unlike the cost of debt, the true cost of equity never reveals itself. We must therefore use economic and financial tools to estimate this component of the cost of capital.

For over 25 years, this agency has used a relatively simple discounted dividend model to estimate the cost of equity. This approach served the agency well by offering a transparent means of calculating the cost of equity without requiring protracted litigation every year.

This approach was used without any objection for over 20 years, but in our proceeding to calculate the 2005 cost of capital, a trade association of interested shippers filed comments suggesting that a simple discounted dividend model may have outlived its usefulness. They asked that we replace the established approach with a more modern approach that the agency had rejected in the early 1980s.

That model is called the Capital Asset Pricing Model or CAPM, for short, which the shippers claimed had grown in acceptance in the financial community since the early 1980s when it was last examined by this agency.

The shippers' testimony was insufficient to support such a significant departure from agency precedent at that time. Therefore, we used our established approach for the 2005 cost of capital determination but instituted this broader rulemaking proceeding to explore this complex issue in far greater depth.

We held a hearing last January where we heard from interested parties, finance experts and other agencies, such as the Federal Reserve, on standard financial practices. The Board also instructed our staff to meet with other agencies that conduct a similar analysis in their industries.

Based on that large record, we asked for comment on whether we should replace the existing approach with a specified CAPM approach. The public comments reveal a welcome degree of consensus. All parties agree that the Board should set aside its current approach in favor of the more modern techniques.

Now, we are no longer debating the merits of the simple discounted dividend model we have been using but rather can turn our attention solely to the merits of the modern approaches to replace it.

The second point of agreement is more surprising. Although we had proposed to use just a CAPM model, we are hearing from all parties that we should also use a multistage discounted cash flow model. The argument, as I understand it, is that both models are accepted modern approaches, each has different strengths and weaknesses, and that by taking an average of the cost of equity produced by each, we would develop a more reliable, less volatile and ultimately superior estimate.

Naturally the parties are not in complete agreement on how we should apply either the CAPM or multistage discounted cash flow models. While there are some minor disagreements, I see a number of key areas in dispute that I would like the witnesses to address today, including how far back we should look to determine the market premium for the CAPM model, how far back we should look to determine the riskiness of the railroad industry as compared to the entire stock market, sometimes just called the beta, whether the multistage DCF model should look at cash flows rather than dividends, how long the various stages of the DCF model should be, and the corresponding growth rates within each period.

In sum, the record has revealed broad agreement that we should modernize our approach, but the record also clearly illustrates how delicate a matter it is to get the CAPM or multistage DCF models to function properly.

But our task, if not simple, is at least straightforward. We seek a suitable replacement method that is transparent, conforms with modern practices, and is appropriate for our regulatory purposes.

Just a few procedural notes regarding the testimony itself. As usual, we will hear from all the speakers on the panel prior to questions from the commissioners.

Speakers, please note that the timing lights are in front of me on the dais. You will see a yellow light when you have one minute remaining and a red light when your time has expired. Please do your best to keep to the time you've been allotted.

I assure you that we have read all of your submissions and there is no need for you to read them all today here.

After hearing from the entire panel, we will rotate with questions from each board member until we've exhausted the questions.

Additionally, just a reminder to please turn off your cell phones.

I look forward to hearing the testimony of the parties.

I would now like to turn to Vice Chairman Buttrey for his opening remarks.

VICE CHAIRMAN BUTTREY: Mr. Chairman, I don't have an opening statement.

I just want to add my welcome to the witnesses we have today. I'm a little bit surprised we don't have a full hearing room today. We've stirred up a hornets' nest here, I think, which is not always bad, sometimes good.

So, I look forward to the testimony.

CHAIRMAN NOTTINGHAM: Mr. Mulvey?

COMMISSIONER MULVEY: Thank you, Chairman Nottingham.

Good morning and welcome to our panelists and guests.

As the Chairman has noted, over the past 15 months, we have undertaken a searching inquiry through several hours of evidence-gathering to determine the best method for calculating the real cost of capital, especially the cost of equity capital, and this hearing today will be extremely influential in finalizing our proposed rules.

As I have noted previously in re-examining our methods, we are fulfilling several Board mandates and policy objectives. One is to periodically review our cost accounting rules and make changes to those rules as necessary. Another is to ensure the availability of accurate cost information in regulatory proceedings and yet another is to encourage honest and efficient management of the railroads.

I am well aware that the approach we take in calculating the cost of capital not only determines our revenue adequacy calculation but also impacts our rate cases, abandonment proceedings, and the uniform railroad costing system or URCS.

The ICC adopted our current calculation method, the single-stage discounted cash flow approach or DCF model, approximately 25 years ago.

In our Notice of Proposed Rulemaking for this proceeding, we attempted to account for advances in finance theory over the past few decades and proposed a shift to the Capital Asset Pricing Model.

Many parties now advocate, as the

Chairman has noted, using both the CAPM method and a variant of the DCF method that would address some of the potential flaws in our current approach.

Despite this movement among the parties towards consensus, important differences remain. I hope today's proceeding will illuminate those remaining differences, provide suggestions to reconcile them, and ultimately lead us to a solution that will best reflect the true cost of capital for the railroads.

I am pleased that the various stakeholders appear to be reaching a level of common ground here. My goal in this matter has always been to ensure that we are using the most accurate and acceptable method of calculating the real cost of capital.

In that vein, I am eager to hear today's testimony and engage in the dialogue with our witnesses.

Thank you, Chairman.

CHAIRMAN NOTTINGHAM: Thank you, Commissioner Mulvey.

We'll now call forward our first panel, representing the Federal Government. From the U.S. Department of Transportation, we are honored today to have the distinguished Deputy Administrator of the Federal Railroad Administration, Mr. Clifford C. Eby.

Welcome, Mr. Eby or Cliff, as I'm more accustomed to calling you.

Take your time, get comfortable, and the floor is yours.

Panel I: Federal Government

MR. EBY: Is this on or do I need to turn it on?

CHAIRMAN NOTTINGHAM: It should be.

MR. EBY: It sounds good, it sounds good. I can hear.

Chairman Nottingham, Vice

Chairman Buttrey, Commissioner Mulvey, good morning.

My name is Cliff Eby. I'm the Deputy Administrator at the Federal Railroad Administration.

It's my distinct privilege to present the comments of the United States Department of Transportation today. You have our written statement, and I'd like to focus really on three points in that written statement: the importance of capital expenditures today in the transportation industry, some comments on the proposed cost of equity methodology, and then the future development of the revenue adequacy standard.

With respect to capital expenditures, the Department of Transportation believes that any cost of capital and revenue adequacy regulation should encourage consumer-driven investment and minimize the total logistics costs for our country, and we agree with the STB that the ability to earn the cost of capital as a sole criterion is the most efficient in encouraging that investment.

But now more than ever, I think it's important that cost of equity be estimated at a reasonable level and that's the key point that I want to make here and let me explain.

Probably the biggest surprise from my perspective of the Staggers Act was the fact that real rates for captive shippers had declined over the 25 plus year period and how did that happen?

Railroads did that through plant rationalization. They did through mergers and acquisitions. Both of those were pretty much expected in the Staggers Act, but they also did it through the fixed cost absorption of intermodal traffic, the unregulated traffic, and that was pretty much unanticipated, but all three factors have really reduced the excess capacity in the railroad industry.

I believe we pretty much reached the limit. You had hearings before, earlier ths year, on the subject. Everybody's stressing the fact that we're very close to reaching the capacity that the railroad industry has to offer and that means there's a real need going forward, much more than in the past, for capital expenditures, capital expenditures for track, for equipment, for technology, technology that improves capacity, technology that improves safety, and almost every forecast that I've seen that's been produced suggests that we're at that tipping point.

I'm very concerned when I hear railroad officials and the industry talk about the fact that they have no illusion that they can meet these demands by themselves. Yet the standard that we're establishing says that, you know, if you earn your cost of capital, there will be enough investment coming forward.

From a financial officer standpoint, one of the early principles that a financial officer learns is the DROM principle. That stands for don't run out of money. If you do the math and figure this all out, what it really says is that you can't grow any faster than your return on equity and if that return on equity is capped by a cost of equity in some regulatory proceeding, it really limits -- it sends a signal to the market that here's the appropriate growth level for that industry and could possibly limit capital spending.

Let me turn to the proposed standard and offer some comments. This is somewhat of a homecoming for me. 25 years ago, I testified before the Interstate Commerce Commission, I believe it was Ex Parte 363 or 381, on the cost of capital.

At that time, the railroads were proposing a CAPM model and shippers were proposing a single-stage discounted cash flow model.

Well, as nominal interest rates have declined, as growth rates for the railroad industry have increased, kind of predictably, the parties have switched allegiances here.

But my conclusion for following this for over 25 years, there's really no single cost of equity method that applies to all economic conditions, and I think that any single method or single set of assumptions that are developed will be short-lived and so the message that I have on the cost of equity is there's no single silver bullet that you should be looking for in this.

I think the ICC's choice back in the 1980s of a discounted cash flow model was wrong as a single choice. It was a downward-biased model. At the time, railroad growth rates were well below market growth for any other industries, and it put a downward bias on it today, just as I would think any approach today that doesn't consider the growth in the railroad industry and doesn't consider that growth in the model would be wrong.

There's an old English proverb that says don't put all your eggs in one basket, and the Capital Asset Pricing Model is the first mathematical proof to validate that theory. It actually proved that diversifying -- selecting a proper mix of assets diversifies your risk and actually lowers your risk, and it's somewhat ironic that selecting the -- by selecting the CAPM model as the sole method, you'd actually be contradicting the very principle that it proves and perhaps Mark Twain probably said it, you know, best. If you're going to put all your eggs in one basket, you better really closely watch that basket.

So, at a minimum, DOT suggests that we have a transition if we're going to be looking at a change in methodology and make sure that we consider growth in that.

My final comments are on the revenue adequacy standard. Irrespective of the cost of capital methodology, we expect some railroads to be -- to earn their cost of capital and while we have a standard, we have stand-alone pricing under contestable market theory, and it's defined for the non-revenue adequate railroads, we neither have the time period or pricing theory developed for a revenue-adequate railroad, and this is increasingly a topic of railroad industry analysts and it's really introducing some uncertainty into growth expectations, and I think by eliminating that uncertainty, with a reasonable standard, it would be a good thing for the industry.

That concludes my oral remarks,

and I'd welcome any questions.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Eby.

I'd like to step back with you and just ask how you see this proceeding and the issues we're discussing today impacting or potentially impacting what I understand to be the Department's top priority, sort of side-by-side, of course, with safety which you, of course, play a key role there, but I'm referencing, of course, our nation's congestion challenge, and what we need to do as a country to make sure that the freight rail system and network is where it needs to be to actually pick up more and more traffic off the highways and to pull its fair weight, so to speak, in the battle on congestion that we're going to be facing in the coming years.

MR. EBY: Well, clearly, railroads have a great opportunity to minimize the congestion that we're seeing on the highways, but as I mentioned, we're reaching a tipping point even in the rail sector of seeing congestion out there, and the only way to eliminate that congestion is to have the capital expenditures to invest in track and equipment and technologies that allow us to reduce that.

CHAIRMAN NOTTINGHAM: Thank you. And while we're not -- the agenda today is not anticipated to be one focused on an ancillary issue, I'll describe it as, it has come up in the record and I think you're a good person to maybe put this question to, given your extensive experience in the industry and also your very recent and current hands-on experience looking at track conditions, the condition of the infrastructure, tunnels, safety concerns.

What I'm getting at is the issue of replacement costs. It's been suggested by some parties that the Board either now or some time soon should look at giving railroads so-called credit for the actual replacement costs of its infrastructure.

One of the -- as a former head of a state highway agency, that concept intrigues me because I would have loved back then to have had a system I could have valued at whatever -- however many hundreds of billions it would have been in Virginia to actually value the replacement costs of that system of bridges and tunnels and highways.

It occurs to me that you probably encounter the full breadth and depth of the rail system in a way that probably we maybe don't on a day to day basis here at the Board, although we see it on paper. You see it in person.

What I'm getting at is do you believe that the rail industry would, if given the opportunity to and given sort of the financial incentive to, would actually spend the money that it would take to replace over a period of years the entire system that it currently operates?

MR. EBY: Let me talk a little bit about the replacement cost standard and my perspective on it.

Theoretically, I think it is clearly the proper standard to use for a rate of return-type rulemaking-type decision. It does have some real implementation problems and those primarily relate to obsolescence and the use and useful concept.

It's pretty easy to go out and value the price of new assets, as you do in the stand-alone cost approach, but when you have to value those assets on a replacement cost basis, you don't necessarily have to build exactly what was built out there before, and it's very difficult to come up with, to me, meaningful numbers when you're looking at a total replacement cost investment base, and I think the approach that the ICC and the STB has endorsed here is probably the right way.

Use the cost of capital on a historical basis as the threshold and then when you're setting prices for the captive traffic, use the stand-alone costs and the stand-alone cost process does have that replacement cost base that you're creating the prices on, but I would think you would spend tremendous amounts of energy and time coming up with a true replacement cost base on an annual basis for the railroads.

CHAIRMAN NOTTINGHAM: Just as a follow-up, would you agree that there are probably sections of track and perhaps certain underused bridges or tunnels that, when faced with the actual cost of replacement, a reasonable railroad would actually say no, we're going to actually mothball that or --

MR. EBY: That's really my point, is how do you value that on a replacement cost basis? You probably wouldn't build that today. It does have some value. The railroad should be able to earn some return on it but probably not at its full replacement cost because it's technically obsolete.

So, it's a real -- you know, theoretically, the replacement cost works just great, but in practice trying to come up with a value there would be very difficult to put in a proceeding for replacement cost.

CHAIRMAN NOTTINGHAM: Thank you, and I'll turn it over to Vice Chairman Buttrey for any questions. Commissioner Mulvey?

COMMISSIONER MULVEY: I want to follow up on that.

Of course, the problem is that in calculating revenue adequacy, we do have a return on investment measure which is based upon book value rather than replacement value, and it strikes me that that causes a problem in the sense that we're overstating the return, if indeed we can't replace these capital assets as they wear out, given the historic prices for them.

Do you see any way of compromising this, that we could get a figure that is somewhere between the full replacement value and the book value?

This is especially important today as the railroads are reaching capacity. You don't have that much excess capital stock out there as you did when there was -- when we were further from operating at full capacity.

MR. EBY: I really haven't thought about it from that perspective. I do think that using stand-alone costs for the pricing, for the ultimate test, does provide that basis for you.

COMMISSIONER MULVEY: It does for the stand-alone cost analysis for rate cases with captive shippers, but for the overall determination of revenue adequacy, we have the whole return on the railroad capital stock which you agree is, by using the historic cost, understates the replacement cost.

MR. EBY: Right.

COMMISSIONER MULVEY: Okay. In your opinion, if we do find that the railroads are revenue adequate or we find that a railroad is revenue adequate in one particular year, if we change the way we measure the cost of capital, how long of a period do you think we should be finding railroads individually or as a group to be revenue adequate before we declare that the industry is revenue adequate?

MR. EBY: Very good question. Something I've thought about, have some personal opinions. I haven't had a chance to talk to Jeff Shane and others in the Policy Group back at DOT on what would make sense there.

I do think there's a precedent set that railroads, for a year, have been deemed revenue adequate and there hasn't been a revenue adequacy determination for that railroad.

So, I think it's at least one year, at least more than one year.

COMMISSIONER MULVEY: It's more than one year, yes.

MR. EBY: But beyond that, part of it has to do with, well, what adjustments will be made to the contestable market theory and stand-alone pricing, and how will those be implemented before you would say should it be two years, should it be five years, should it be X number of years?

COMMISSIONER MULVEY: Another problem that arises is we have two major railroads in the East and two major railroads in the West. If you come up with a situation where one of the railroads in the East and one of the railroads in the West is revenue adequate and the other one isn't, then you wind up with different approaches to addressing large rate cases --

MR. EBY: Sure.

COMMISSIONER MULVEY: -- and that causes a problem.

MR. EBY: And you really shift the competitive balance.

COMMISSIONER MULVEY: Exactly. In your written comments, you state the Board should employ the multistage DCF and CAPM methodologies with the appropriate inputs and assumptions for a transition period as a check on one another.

What transition period do you have in mind? How long do you think it would take us to do the changeover or --

MR. EBY: Well, from my perspective, at a minimum, you'd be looking at three to five years, but because, as I said in my comments, because I don't -- the economic conditions can change just as we've seen they've changed between 1980, mid '80s and today.

Interest rates can change. Growth rates can change. The changing yield curve has a big effect here. An inverted yield curve, you know, drives some of these models differently.

So, I'm not sure that there's ever an end to it, but I think as a minimum, you need to look for three to five years and then periodically test again to make sure that both models are producing similar results.

COMMISSIONER MULVEY: That was my next question, was you pointed out that the best-laid plans of mice and men have after gone awry, and you try to do the right thing but then circumstances change and you need to rethink.

Do you think we should be revisiting this issue every five years or so or periodically or --

MR. EBY: I would think a five-year standard would be appropriate.

COMMISSIONER MULVEY: We'll everybody then in 2012.

Thank you very much.

CHAIRMAN NOTTINGHAM: Any other questions for this witness?

COMMISSIONER MULVEY: No, thank you.

CHAIRMAN NOTTINGHAM: Seeing none, Cliff, thank you very much.

MS. EDWARDS: Thank you, Mr. Chairman.

CHAIRMAN NOTTINGHAM: Your comments were greatly appreciated and come with a lot of knowledge and experience. We hope you'll come back and participate in future hearings and please give my personal regards to Secretary Peters and her team there back at DOT.

MR. EBY: Be my privilege.

CHAIRMAN NOTTINGHAM: Thank you.

I'll now call up our second panel. This is Mr. Stewart C. Myers and Mr. Bruce E. Stangle from the Association of American Railroads, and Mr. Thomas D. Crowley and James E. Hodder representing the Western Coal Traffic League.

Each two-person team has been allocated 30 minutes and we look forward to substantive presentation and discussion.

Welcome. Take your time to get comfortable and then we will start off with, I believe, Mr. Myers and Mr. Stangle first, when you're ready.

Please, Mr. Myers and Mr. Stangle.

Panel II: Consultants

MR. MYERS: Okay. I will start, I guess.

Thank you for having me. I appreciate it. I'm a finance professor at MIT and as you know, I've submitted a couple of statements on the CAPM and how it's proposed to be used here.

So, let's go right to the chase. If you are going to use the CAPM, the main issues are the beta and the market risk rate.

Okay. So, I've got a couple plots. Let's take a look at the betas, if we could.

I thought it was going to pop up on the screen. I'm sorry. I thought we were all set.

Let's do the market risk rating first. How about that? Market risk rating. Let me try to summarize where I stand on this and what I'd recommend for the Board.

In order to get the market risk stream, you've got to start with the historical evidence. The standard practice starts with data going back to 1926 from Ibbotson SBBI because 1926 is where the good data started. That gives you about 7 percent as a market risk stream over long-term bonds, 20-year bonds.

Now, that was the standard practice going back into the 1980s, early 1990s, and over time, concerns accumulated that those averages from 1926 were too high and particularly as we rode through the boom of the late 1990s and those 1926 -- those averages that started in 1926 kept creeping up and up and up, the thought was that those averages could not be repeated in the future and that intuition was particularly strong if you were standing at the peak of the market, let's say, in 1999 or 2000.

So, then the question is how would you adjust those long-term averages if you believed that they were too high looking forward, and there's basically two ways to do it.

The Ibbotson SBBI data source actually proposes an adjustment of the following sort. They note that part of the cumulative return over that long period of time comes from an upward trend in the price earnings ratio that is not from growth in earnings, not from dividends but from the change in the pricing in the market.

It turns out that that change in pricing over the long period, 1926 to date, contributes about .6 to .7 percent to the cumulative return, and so Ibbotson SBBI says, well, let's take that out, and I think that's a sensible adjustment. That would take you down to about the mid sixes.

The other reaction to, let's say, questions about the Ibbotson series from 1926 is, well, maybe the United States just had good luck compared to other countries or maybe there was something about 1926 which was a low starting point and gave you a high number.

So, there's been some serious research getting data for other countries and taking all of the data series back to 1900.

Okay. If you do that for the U.S., it again takes your risk down to about mid sixes and by the way, the U.S. is pretty much in the center of the pack. It doesn't have an unusually high market risk stream historically compared to other developed countries.

So, my view is that the condition could set a range of the market risk stream of somewhere between five and seven. I say mid sixes, but I say five because there's other financial research which argues that numbers below six might be better going forward. We can talk about that other research at some other time. It's not much reflected in the record in this case. So, I say in the market it's five to seven.

Now let's look at the betas. Here are monthly betas for the four major railroads plotted over -- I can't read it myself -- 10 to 15 years. They're coming up now to about .8 and more recently to pretty close to 1 in the very latest data. Now these are five-year monthly returns. They're rolling in the sense that each point on that chart shows you the beta you would get looking at the monthly returns over the previous five years.

I also checked to get weekly betas and I was interested to find for this industry, which has four big actively-traded companies, that the weekly series is smoother and it has much tighter standard errors, much tighter accuracy, statistical accuracy.

So, I recommend the Commission consider weekly betas, betas weighed based on weekly rates of return here, as well as monthly.

I know there's a concern that using just five years monthly data as is customary in this business would leave too much noise in the beta estimates and therefore not give good forecasts.

My recommendation, however, is if

you're worried about the noise in the monthly -- in the betas based on the monthly data, rather than taking a longer period of monthly returns, you switch to weekly because you can cut the weekly noise down substantially by going to weekly returns, and if you go to weekly returns, you can do five years and get away from the problem that the 10-year period now would reach back into the 1998 to 2003 period where the normal relationships -- where normal betas for industries of this type were all screwed up compared to what happened previously and what happened later.

So, if you take a range of betas, let's say -- I gave an example in my reply statement of something like .85 to 1.05, and a range of market risk streams, let's say from 5 to 7, you get a range for the cost of capital.

I think it would be a good thing for the Commission to explicitly state a range rather than to leave the impression that the CAPM is something where you turn a crank and just come out with one number.

If you can set a range, then the question, of course, is where do you want to be in the range? I don't think you want to be at the bottom of it. You want to be at the heart of it, and in fact, I would argue that it would be better to be -- it would be safer, I should say, to be above the midpoint of the range than below.

You're not going to get it right. No human being can know the cost of capital precisely and therefore as a policy matter, I would think that you would want to weigh the costs of getting the number too low against the costs of getting the number too high.

My view is that the costs of getting it too low are greater than the costs of getting it too high if you're seriously concerned about making sure that adequate CAPX, capital investment goes into this industry.

Now, I gave some examples in my testimony of what I would consider standard practice of getting the cost of capital for the CAPM. I come out around 11 percent, but I recognize that some people could argue for somewhat higher numbers. Some could argue for somewhat lower numbers and that's why we have the range to make it explicit what a reasonable difference of opinion could be.

I repeat, I don't think the Commission wants to be at the bottom of a reasonable range. The bottom of a reasonable range is not a reasonable place to be, as I said in my statement.

Now, if you have this inevitable imprecision in getting the cost of capital, I think you should want -- I think others equal, you should follow standard practice and that's what I've tried to recommend, but given the imprecision, it makes sense to turn to other sources of information, and the natural one is the multistage DCF.

I did not tackle the task of coming up with a good multistage DCF. I wasn't asked to and I didn't have time. So, I hope what I say now will not be read as a negative statement, but I must say that I don't think the record on the multistage DCF is ready or well enough prepared for you, the commissioners, to pick the best one or to pick the right one.

Your Notice of Proposed Rulemaking did have a three-stage DCF in it, but it has some spreadsheet errors. It used a long-run GDP growth rate which was one of the lowest of the normal candidates, and it frankly had some arbitrary choices about the length of the first growth stage.

So, I view that model that was put forth in the Notice as an example of how one might do a multistage DCF and not the best way to do it. In order to -- let me try to be more positive.

How would you know when you've

got a multistage DCF that made sense? Well, it's obviously got to make arithmetic sense, but it seems to me that it has to handle or address three issues. It has to be fit to the facts of the industry and the facts of the industry include the large capital expenditures that the industry is facing.

I believe or understand that the growth in the industry is going to be driven by capital expenditure growth and not just by increasing profitability. If that's the case, we have to ask how long will growth driven by capital expenditures in this industry last? Will it be five years? Will it be 10 years? Or will it be five with some tapering off as capacity catches up with demand or new capital investment solves the problems that have been noted?

That's a question that could be addressed on the facts of this industry, and it seems to me that those facts ought to be set out before we arbitrarily decide, oh, five years for the first stage or seven years for the first stage or 20 years for the first stage.

Second, the model has to deal with this issue of payout to investors which increasingly comes not as cash dividends but as stock repurchases. The standard DCF models we've seen so far just look at dividends and assume that the payout ratio of dividends versus earnings is constant over time. That's not likely to be true.

Third, the model has to worry about -- well, I've already hinted at this -- has to worry about changes in the payout ratio over time. Let's suppose the growth is driven by capital investment. In a period of heavy capital investment, you get rapid expansion of the assets but also low payout because the money has to be plowed back in order to expand.

But if and as the growth slows down, payout can increase and increased payout adds to the return eventually that the investors get out of the business. If you run a model that assumes that today's relatively low payouts and relatively low dividend yields continue in perpetuity, you're going to understate the return that the investors can get out of the sale.

So, these are, I think, the three criteria that a discounted cash flow model needs to cover. It needs to handle growth from investment, it needs to worry about total payout and not just dividends, and it needs to track how payout is likely to change over time.

I've put these forward as criticisms of the model that was presented in the Notice, but they also apply to the model that Mr. Crowley and Mr. Fapp have put forward in their reply statements.

Okay. Let's see. I think I will stop there and turn it over to Bruce Stangle, who I know has also thought about these discounted cash flow models.

I did touch on capital structure issues and some other topics in my reply statement, but I'll leave those and if they come up later, I'll address them then.

So, thanks for your time.

MR. STANGLE: Thank you. It is an honor to be here again since last February.

My co-author, Dean Hubbard, sends his regrets, but he had a longstanding commitment at Columbia University today and couldn't be here.

For me, it's a special honor also to be here on this panel with Professor Myers who was my finance professor when I was a graduate student at MIT. So, pleased to be here in that regard, too.

I want to make just two general observations initially. First, Dean Hubbard and I do not think that the Board actually needs to be making de novo calculations of the inputs to either a DCF or CAPM model.

These sorts of data are available from reputable financial providers and the Board could use one of them to save yourselves a lot of work and the process would be more straightforward and efficient as a result.

In particular, we recommend that you look at the Ibbotson Associates data that Professor Myers just referred to. It's typically reliable, sensible, and well-documented.

Second, as we've noted in our written statements, finance theory does not really tell you what the right answer is and that's why we've recommend that you adopt two approaches, and Chairman Nottingham referred to both of them, but neither one is going to give you the right answer necessarily. So, we suggest you use two and use them as cross-checks on each other.

On the market risk premium, our

suggestion is that you look at the so-called long horizon market risk premium estimate that's calculated annually by the Ibbotson Associates. That's the S&P Index from 1926 forward.

There's a recent book out by Nobel winner Edward Prescott who described the period from 1926 to the present as "the golden age with regard to accurate financial data."

In contrast, the Board up to now has been advocating the use of a 50-year time horizon which I think is not correct and is actually an arbitrary period. I have an exhibit to illustrate this point.

If you can see that, the left-most column is the 81-year period that starts from 1926 through 2006. The fourth bar to the right of that is the 50-year period that the Board has apparently endorsed. That is a 5.2 percent market risk premium, and I believe that's too low and it's too low for a couple of reasons.

Primarily that includes the years of 1973 and '74 oil embargo, if you remember the gas lines. Those two years alone were minus 21 percent and minus 34 percent, respectively, for the annual equity risk premium those two years, and when you take a longer picture of 81 years, the effect of those is dampened.

Ibbotson Associates, in defending why they start from 1926, says the following, "Without an appreciation of the 1920s and '30s, no one would believe that such events could happen. The 81-year period starting with 1926 is representative of what can happen. It includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period."

Another reason for why I think the 50-year period is not reasonable is offered by Professor Steven Penman of Columbia University. He has summarized the possible range of market risk premia as going between 4.5 percent and 9.2 percent, slightly wider than Professor Myers', and he says it's virtually a crap shoot as to what number is the right one in there, but again note that the Board's number of 5.2 is at the very low end of that range offered by Professor Penman.

Ibbotson also says in defending why you take a long view, they say, "Using a long series makes it less likely that the analyst can justify any number he or she wants."

On the issue of beta, I believe five years or less is the right way to think about that, and I have a second exhibit here which unfortunately doesn't -- it's not very easy to see, but what it is is a series of beta estimates for a five-year period using either monthly or weekly data, a three-year period or a two-year period, and what the data show there are that, just as Professor Myers had indicated earlier, the precision you get when you use weekly data is much greater.

The standard errors are lower and it also indicates that beta has probably increased over time, looking at the present, and that you could use weekly data and get a much more precise answer.

The Board has expressed some concern about undue volatility if they depart from a 10-year estimation period, and frankly I think this is the right -- that's quite the right way to think about it. I think beta actually is a measure of volatility. So, why be afraid of measuring volatility? Let's embrace it and let's pursue accuracy by having tighter standard errors.

On the issue of multistage DCF,

there was a question that the Board put out about a 10-year phase-down period proposed by the Coal League.

I have some concern about that proposal. In fact, I would offer as an alternative that the Board consider the Ibbotson approach. They have a multistage DCF which they publish in their annual book called The Cost of Capital Yearbook, and there's a page in there for the railroad industry and they show for 2007 a three-stage DCF yielding 11.4 cost of capital -- cost of equity capital.

To me, that's a better approach to take than the other estimates that I've seen in the record, either proposed by Mr. Crowley and Fapp or the Board's own DCF model.

Professor Myers in his testimony pointed out that the Board's DCF model had committed the cardinal sin at least of double discounting. When you correct for that, rather than a 7.2 percent cost of capital, Professor Myers indicated that you would get a 9.8 percent cost of capital -- cost of equity.

In addition, if you correct for the effect of buybacks because investors would get stock price appreciation, that number goes to 11.83 percent, and I think Mr. Moates is going to refer to this later in his summary, but the DCF models that are in the record, I think, are unduly low, seriously flawed, and yield biased estimates and that's why we suggest you consider using the Ibbotson model. It's right there in the book. It has a reasonable approach, and I think it's worthy of consideration.

I think I will stop there, unless there are questions.

CHAIRMAN NOTTINGHAM: Thank you. We'll now turn to Mr. Crowley and Mr. Hodder.

MR. CROWLEY: Thank you. Good morning and thank you. My name is Tom

Crowley. I'm with L.E. Peabody and Associates. I'm alongside Jim Hodder, Professor of Finance at the University of Wisconsin. We represent the Western Coal Traffic League.

This morning, our presentation will focus on the eight questions raised in the Board's December -- November 27, 2007, Order. We have developed a few PowerPoint slides that will assist us in discussing each of the eight issues addressed by the Board.

MR. HODDER: Yay. The slide's working.

Anyway, as Tom said, I'm Jim Hodder. Glad to be back. The weather's cooperating, at least in Wisconsin at the moment, and I managed to get here.

I think the first thing that we wanted to mention is there's considerable agreement, I think, between our view and those of the railroad experts regarding the use of the risk-free rate.

The Board used a 10-year Treasury bond. I think that's reasonable. I have a preference for the 20-year bond and I believe that Professor Myers and Dr. Stangle and Dean Hubbard have also come out on that direction.

I'd like to point out that the main issue here is you're trying to build in an inflation estimate or inflation forecast that's consistent with the life of the equipment, the investment that you're talking about, and, hence, it's appropriate to be using something that's long-term, not a three-month or a 30-day T-bill rate.

I don't think there's any disagreement on this issue. There has been discussion as to what rate should be used in estimating beta. Professor Myers has argued that you should use a short-term rate because basically you're doing monthly-style calculations. We concur that that's perfectly sensible.

The slide here is an attempt to

illustrate, although you can't see the colors -- well, Yes, you can if you look closely -- that these rates, they don't move exactly together, but the upshot of it is if you use the 10-year rate as you did, you basically wind up with very similar bets to what you get with using a monthly rate.

Tom Crowley and Dan Fapp ran those numbers and they came out the same, to like the third decimal point. So, you know, using the 10-year rate was not unreasonable, but we would concur that it probably is more sensible to use a short-term rate.

MR. CROWLEY: The next issue raised in the Board's Order is the marketwide risk premium. The STB proposed using the monthly New York Stock Exchange data for a 50-year time period to calculate the annual market risk premium.

We believe that using the 50-year period as proposed by the STB is reasonable. However, we suggest using publicly-available data, like the S&P 500 return data, instead of the proprietary New York Stock Exchange data used by the STB.

The next slide is a market risk premium developed by the STB. It shows that that value is within the range of reasonable estimates of the market risk premium developed by researchers and practitioners.

MR. HODDER: Here, I want to elaborate a little bit on some things that Professor Myers alluded to.

The Ibbotson numbers are historical. It gets referred to as the market risk premium, but the reality is that it is the excess return on the market. It's a realized return. It is not necessarily an expected risk premium, and over, roughly speaking, the last seven to 10 years, this has created a considerable debate in the finance and economics profession, as Professor Myers mentioned, especially as people were watching the run-up of the market in the late '90s, they said wait a minute, what's happening here is in a sense we're seeing that the higher market prices get higher returns and that is supposed to lead to a higher risk premium? This doesn't seem right.

They started trying to figure out what was going on and came up with some alternative views which are what yielded the substantially lower numbers that are at the lower end of the range he talks about.

So, there's been a lot of focus in the discussion here on how one should go back historically. In the Hubbard and Stangle comments, they're using Ibbotson back 81 years. In the Myers' comment, he refers to some work done by Dimson, Marsh and Staunton in going back, I guess, a 106 years.

The Board went back 50 years. The Board's been getting criticized for only going back 50 years. I think our view is that there's a different way to look at this without going back hist, with instead trying to go prospective and the people who are doing that are getting much lower numbers.

There is in fact one in the KCS submission that came from Morgan Stanley that was like 4 percent. Now, I said Morgan Stanley's using that. They didn't say exactly where it's coming from, but very likely where it's coming from is an application of a dividend growth projection based on the S&P 500 estimating growth and looking forward.

There's been a lot of that work done and it's coming up with numbers that are sort of in the 3 to 4 to 5 percent range.

We also, to add a little completeness to the discussion here, threw some survey results. A number of these items were actually mentioned in the Brealey, Myers and Allen text. There's a couple of surveys that have been done by Eva Welsh of Academics. Interestingly, he did one, started in '97, finished in '99, got published in 2000, where he came out with 7.1 percent. He went back and essentially asked the same question prospectively, what do you expect the return to be going forward, and in 2001, he got 5.5 percent.

There was some conjecture there that what was going on is people were becoming aware of work that was being done, including work by Fama and French, this is not the Fama and French three-factor model, this is Fama and French on the equity risk premium, where they went back as 1872 and what they discovered and documented was that from 1872 up to 1950 and they looked at '49 and '51, you know, they didn't just look in one year, but essentially what they found is that returns, realized returns, in other words, the return on the market minus the risk-free rate, was roughly comparable to what people would have expected using a dividend capitalization-type approach.

What they found subsequent to 1950 was the returns in the markets were way higher than what one would have expected using a dividend capitalization approach, and they concluded that something had changed, that market efficiency had increased, access to the market, lower transaction costs, easier diversification had allowed people to invest and anticipate lower expected returns going forward than what'd they gotten in the past.

This sort of work was also -- or something similar was carried out in the Dimson, Marsh and Staunton. There are surveys of CFOs by Graham and Harvey to get even lower numbers, and I think fairly that the summary and the text of Graham and Myers and Allen of 5 to 8 percent is actually a pretty good summary of what people are finding.

Now, the key point here is that is based on using Treasury bills as a risk-free rate. If you use T bonds as the risk-free rate, you need to subtract off approximately 1.2 percent, that's the number that's in their text, which gives us this bottom line here of 3.8 to 6.8 percent.

The low end of that is the prospective folks, the high end of that is the historical folks, and the middle is 5.3 which is roughly where the Board is. Our conclusion on this is that there is reasonable range and in fact, you're in the middle of it.

MR. CROWLEY: Moving on the beta estimates, the STB proposed using each carrier's monthly merger-adjusted stock returns for the prior 10 years in developing beta estimates.

We concur with the STB that a 10-year beta was reasonable. This is supported by research and produces beta estimates which are stable. We also noted that most providers of financial data use a five-year period when developing their beta estimates.

We suggest that the STB not use periods of less than five years to produce beta estimates. We have plotted the five- and 10-year beta estimates using the STB's proposed procedures which show less variation year over year than using the 10-year beta estimates.

MR. HODDER: Okay. So, we have a picture here where there is some difference between five and 10. We don't see all that much.

There is some, very little but some research that has been done looking at longer forecasting periods. The most thoughtful thing we were able to find was a study that's been done in Australia looking at utilities and trying to figure out what is a reasonable or what is the most effective way to estimate beta in terms of accuracy of forecasting.

Frankly, they didn't find

anything that was very good, but what they actually found that was best was seven years. We don't see a huge difference here between five and 10. However, I would point out that the concern raised about the tech bubble in the '98 to 2000 period is exactly the reason that you don't want to go below five.

If you start talking two years, three years, you have a situation where that kind of anomaly could seriously distort the beta and it seems to me like you want to avoid that.

Professor Myers has raised the -- and provided some evidence that suggests that going to weekly observations might be a useful thing to do. The issue here, and very few people have looked at this, at least I was not able to find much in the literature on it, the issue is that you start to worry about the liquidity of the stocks and how often they're trading.

You can be pretty confident that

you can get a number for the S&P as of the close of business any day you want where the trade was within the last minute. The question is how far back was the trade for the railroad in question and so as you go to shorter and shorter time intervals, that becomes a deeper and deeper problem.

I don't know what he found there on the weekly data, but if the weekly data shows fairly good liquidity, then that may be a sensible thing to explore, but it seems like we need a little bit more information before we actually go and endorse shifting from weekly to monthly.

MR. CROWLEY: The next issue is the multistage discounted cash flow or DCF model.

The STB proposed not to use the multistage DCF model to estimate the railroad industry cost of equity because it could not find a reasonable way to select the time period over which to phase down the initial growth rate.

We concur with the STB that there is no definitive answer in how best to phase in different growth rates in a multistage DCF model and that this could lead to results-oriented manipulation of the model.

We also believe that if the STB were to adopt a multistage DCF model as a cross-check to the CAPM, phasing in the long-term growth rate over a 10-year period after initial growth phase-in would be a reasonable approach. This graph on the screen displays a 10-year phase-in based on 2006 railroad growth estimates and a 6 percent long-term growth factor.

We suggest that the multistage DCF would be used only as a check on the CAPM calculation. If the multistage DCF and CAPM results are more than, say, 3 percentage points apart, the assumptions underlying both models would be more fully analyzed and the differences explained.

MR. HODDER: I think in fairness here to what Tom Crowley and Dan Fapp did, none of us viewed the Board's mandate as exploring what would be the optimal DCF procedure to use, and so I suggested to them at one point, okay, well, why don't you just look at, if you use the standard truncated five-year growth for the first five years and you use an economy-wide growth estimate starting, let's say, 10 years later and just do something simple like a straightline adjustment between the two, let's see what happens.

The thought here was to come up with something simple and I would certainly encourage the Board, particularly when using this as a cross-check, to stick with something simple.

The difficulty when you don't understand what's inside the black box is that everybody can throw in comments on it and everybody can criticize it, but you can't really defend the situation because you don't know what's being generated.

Dr. Stangle and Dean Hubbard have suggested the Ibbotson three-phase growth model. Well, I looked at that. I looked at the Ibbotson explanation. I don't exactly understand what they're doing. One thing that's clear is they got eight railroads in there and not four.

So, for openers, I know that you can't just use it straight out of their book. On top of that, it appears that what they did is they used a five-year forecast for industry growth for years six through 10.

Now, if we're doing this for the industry, de facto, I think what we've got is we've got 10 years of industry average growth and then apparently we jump down to a long-term growth phase but with no transition.

So, in my view, what they've got is something that is actually less sensible than what we proposed in the sense that they're doing 10 years of growth instead of five and instead of doing some kind of smooth transition, they just do a jump.

Whether it takes 10 years to phase down or less, I think 10 years is sort of kind of at the outer end of what's reasonable for a transition. I think less than five is not reasonable. Somewhere in between sort of makes sense, and I think that, you know, if the Board really wants to seriously look at three-phased DCF as something they were going to average as opposed to something that they're going to just use as a check, then people have got to look at this thing more carefully.

But our suggestion here was that it be used as a check to see whether or not in particular the beta estimates and the market risk premium estimates make sense in terms of what kinds of results are coming out of the DCF model.

MR. CROWLEY: The next issue is

the long-term railroad growth.

The STB does not currently utilize a separate long-term growth factor in its development of the railroad industry cost of equity.

We believe, as others have suggested in this proceeding, that the railroads will grow in the long term, that a rate equal to the growth in the general U.S. economy as measured by the nominal change in the GDP.

The dividend growth factors which is the next issue raised. In employing its single-stage DCF model, the STB used, de facto, one plus g, divided by two, to account for annualized growth in dividend yields.

If the STB were to adopt a multistage DCF model as a component of the cost of equity calculation, the use of the one plus g over two factor to estimate the first period cash flow is not required.

We recommend that the STB not

make this adjustment.

Moving on to the last series of requests of using both CAPM and multistage DCF, the STB has historically relied upon the use of a single methodology for estimating the railroad industry cost of equity.

We propose that if the STB were to adopt a multistage DCF approach in developing the railroad industry cost of equity, that this approach be used as a check and not a replacement for a CAPM approach.

As we mentioned earlier, in the multistage DCF approach produced a cost of equity result which is different than that of the CAPM by 3 percentage points and the underlying assumptions of each model would be thoroughly investigated and adjusted accordingly.

The slide that's up on the screen shows the cost of equity results from the STB CAPM proposed and WCTL's multistage DCF proposal.

MR. HODDER: And as you can see in most years, there's a surprising amount of similarity or maybe I shouldn't say surprising. There's an encouraging amount of similarity.

A couple things I would point out and, first of all, there's a pretty substantial difference here, particularly in 1997.

We went back and looked at that. It looked like there'd been a bump-up both in the risk-free rate and also in the betas in that period. We didn't go back and drill down in detail, but the point here is that you could. If you get that kind of differential, you could go back and look at and say, well, where is it coming from?

A second kind of thing is there was a big jump-up here between 1999 and 2000 and then it jumped back down in 2001. You know, if I saw that and I was sitting in your shoes, I would say why? Why did it jump up by a percent and a half and then down by 2 and ask the parties involved to go back and come up with some plausible economic explanations for what's going on.

Kind of as a related issue here, Dr. Stangle has talked about the beta increasing in recent years. Well, I think it's fair to ask, well, if the leverage is going down, why is the beta going up, and, you know, it's a little counterintuitive.

So, any time that you see something that doesn't seem consistent with what you were seeing before and it doesn't seem consistent with the cross-check, then I think it's fair to say, okay, what's the economics that's going on, not just the numbers that's coming out of the black box?

MR. CROWLEY: The last issue that the Board asked for comments on was the departure from established standards.

In developing its railroad industry cost of equity estimates, the STB has historically relied upon strict formulaic calculations.

We have indicated that it is appropriate for the STB to apply whatever cost of equity methodology it selects in a consistent manner. However, with such an approach, the STB should remain open to a demonstration that the results in a particular year have left the realm of reasonableness.

We have an example on the screen that indicates just such a departure from reasonable norm. In 2006, an independent source, Standard and Poor's, indicated that the railroad industry cost of capital equaled 8.7 percent.

The AAR's estimate of 13.8 percent was clearly out of the norm and reflects a case where a demonstration of the unreasonableness of the estimate would be called for.

MR. HODDER: Just to reiterate, I

think that, you know, if you saw a situation like this, you'd go back and say why are you so different, and both the cross-checking using a three-stage DCF approach as well as looking at what is out there in the industry gives you the potential to do that, and I think it makes a lot of sense to do so.

I think it makes more sense to use the DCF as a cross-check mechanism rather than trying to do averaging. I think you would be better served if you understand what's driving the numbers than simply saying, well, okay, I've got a range. I've got two different estimates and I'll just grab the one in the middle, and I would encourage you basically to try to push to get more clarity, more transparency, and then come down with the decision as opposed to simply averaging a couple of estimates that it's not really clear what's driving them.

MR. CROWLEY: With that, we conclude our opening remarks.

CHAIRMAN NOTTINGHAM: Thank you. We will now turn to questions. I'd like to give Vice Chairman Buttrey the first crack at this panel, if he would like.

VICE CHAIRMAN BUTTREY: Mr. Crowley, there seems to me that there are three things that government doesn't want to do. It doesn't want to condone torture, it doesn't want to throw the baby out with the baby water, and it doesn't want to split the baby in half. Those are three things government doesn't like to do.

You, Mr. Stangle, seem to be suggesting that we do one of those things in your approach to this in terms of your suggestion that we average this, and Mr. Crowley is suggesting that we use it as a check.

I guess somewhere between those two extremes is where we may come down. I'm not sure exactly where we come down, but Mr. Myers, I hope you're proud of your student today. I noticed that he was one of your students. That's a good thing.

Our difficult task here is to come up with something, it seems to me, that the courts are going to allow us to do and the courts sometimes take a different view than, being lawyers mainly, economists do and that's a difficult task that we have to engage ourselves in here.

I just am troubled by the divergence, I guess you'd say, of how we approach this, and I just wanted to say that it's not as easy as it sounds. It doesn't sound easy. In fact, it sounds pretty complicated, but it seems to me, Mr. Crowley, that Mr. Stangle's approach of averaging these two things from a regulatory standpoint and from the government's standpoint would seem to be a better approach in that we don't select one or select the other, that we actually average the two.

Is that -- what is your major

objection to handling it that way?

MR. CROWLEY: Well, I think what the Board has proposed in their CAPM methodology is a reasonable approach, and I think all the parties endorse that approach.

Having said that, I'm not sure you need to do anything further. You bring in other approaches, multistage or something else, as a check, as a way of looking at how well the CAPM is working, you've got a relatively simple, transparent formula to calculate your cost of capital and you have a mechanism in place to check it to see that it's working.

I don't think you need to average the two approaches, get into another hearing over how one would calculate a multistage DCF cost of equity and all the things that go with it.

It seems to me that would just be starting the process over again. You've got something here on the table that you're proposing that works. Let's run with it.

MR. STANGLE: Can I defend my position, Mr. Vice Chairman?

VICE CHAIRMAN BUTTREY: Certainly.

MR. STANGLE: These two methods are going to give different results from year to year. One year, you're going to get the CAPM yielding a higher number. Two years later, it's likely it will be lower than the DCF.

Over time, they're going to switch positions and so if the Board is concerned about having a stable process that you don't have to revisit year-in/year-out as to which one is yielding the right answer, I think that argues strongly in favor of at least initially giving an equal weight to both measures and seeing how do they track over time.

Mr. Hodder, Professor Hodder showed a graph of a year in which there was a big change from one year to the next. Well, you could go back and look at the stability of the two different measures, but I think you get a lot of information from comparing the two things and trying to strike a middle ground rather than just putting all your weight or all your eggs in one basket on one because, if you recall, I think 25 years ago, the shippers were very much opposed to the adoption of the CAPM.

Well, right now, conditions are perfect to favor that approach, but five years from now, that may not be the case and they'll be in here arguing to abandon it.

VICE CHAIRMAN BUTTREY: Thank you.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey, questions?

COMMISSIONER MULVEY: I'll follow up on that. Aren't the CAPM approach and the multistage DCF independent estimates of the same thing? And if they are, then it would strike me that since they should track each other closely and one is going to be higher one year, one the next, that what is wrong then with taking the average of these independent estimates if indeed they are independent estimates of the same phenomena?

Mr. Crowley or Mr. Hodder?

MR. HODDER: Well, it seems to me that if they're tracking, okay, so if you have a couple of estimates that are two-three-four/tenths of a percent apart and you want to average them, fine. You have something that's 3 percent apart, you want to average them, then I think there's a problem.

I think the issue is you need to go back and understand why they're 3 percent apart and then have a judgment as to what's changed and which one needs to be readjusted.

I mean, we've talked about -- in the CAPM, you know, the issue really boils down to the market risk rate. Okay? I mean, I think we're largely in agreement here on the risk-free rate. I don't think we're terribly far off in terms of the beta, but the big issue is what you really think is the appropriate market risk premium for the next 20 years or so, and if you had, you know, a technology there which all of a sudden is giving you a very different number than what is coming out of the dividend capitalization approach, then you'd say, now wait a minute, which of these is the right way to think about it?

The dividend capitalization approach is largely driven by the anticipated growth rate. So, you can focus in on which of the issues and then come down as a judgment as to which one you really believe is the correct one, and I guess what I'm encouraging is don't just accept a couple of numbers that are 3 percent apart and say, okay, well, I'll take the middle.

I think that, you know, if you can go back, re-examine them, get them close, and then average, you know, sure, fine.

COMMISSIONER MULVEY: We saw in the graph that was just recently put up that most years, they were within a percent but only by going back to '97, you did have 2-3 percent differences.

Would you like to comment on his response at all? This is a fairly important point.

MR. STANGLE: Sure. I think you should also worry about the end result. We talked all about inputs today, but that chart was showing 8-9 percent cost of equity. That's an extreme number. It's too low.

Professor Myers indicated 11 percent, 12 percent. That's where I come out. That's where Morningstar/Ibbotson come out. I don't know where they got that S&P number, but that's way out of bounds, too.

I mean, this industry -- you're going to hear from an industry rep -- someone -- an investor. They're not going to invest in the railroad industry if they can get 8 percent or 9 percent. So, you should worry about the end result as well as the inputs.

And in terms of the averaging, Commissioner Mulvey, that's why I was saying look at the history of how did you get to where you are today, look at the track, and sure, you could have an additional investigation if something is off track or providing an extreme result.

MR. HODDER: Just as a point of clarification, the S&P number is the cost of capital, not just the cost of equity. Okay? So, this is a weighted average with the cost of debt and so as a consequence there, the cost of equity is going to be a higher than that.

MR. STANGLE: That's apples and oranges.

MR. HODDER: Well, bu9t the point was that the two pieces of fruit here were of very different size and they were the same kind of fruit, as a matter of fact.

MR. STANGLE: When you average in debt that's, you know, 6 percent, no wonder it's different. That's a true mistake.

MR. HODDER: No, that's not a mistake. The comparison, if you look at the slide, the comparison is cost of capital with cost of capital and the point was that an 8.7 percent cost of capital is wildly different from a 12.3 percent, and if you see something where -- excuse me -- 13.8 percent from the railroads.

If you see something that's that far apart, you know, you go back and you ask questions, and if it's cost of capital that's that far apart or if it's cost of equity that's that far apart, you know, in either case, you want to go back and ask questions.

COMMISSIONER MULVEY: Mr. Myers?

MR. MYERS: Yes. First of all, I wasn't aware that the railroads were proposing 13.8, but I wanted to go back to this question of weighting because I didn't get to that in my comments or at least not much.

I would say that a multistage DCF is worthwhile at least as a check, but I don't have a DCF in front of me that I really understand and trust, and I personally am not going to say average until I understand and trust.

Now, when I say I don't have something in front of me that I understand and trust, I'm referring to the DCF that was in the Notice and the DCF that Mr. Crowley and Mr. Fapp came up with. Bruce Stangle has looked further into the Ibbotson number and I will let him talk about that.

My friend, Professor Hodder, said that if you were going to use a DCF, you want to keep it simple. You also weigh it against black boxes. Well, I may be blunt, but Crowley-Fapp DCF is a simple black box. I don't know what's going on inside of it, and in particular, I don't know where the growth is coming from.

Growth can come from two places. It can come from increased profitability or it can come from capital investment. If it's coming from increased profitability, it's not going to last forever, obviously. If it's coming from capital investment, it could last for a long time, and if it's coming from capital investment, the payout ratio is going to change, increase, when the capital investment slows down.

So, I'd like to see a DCF model that at least copes or addresses those issues. Then you'll have something that's less of a black box and something that's more fitted to the facts of this industry.

If we or someone can come up with the DCF model that fits the facts of this industry and makes sense in terms of capital investment payout and so on, I might very well get to the point where I'd average it or start applying the kinds of 3 percent rules that we've just been talking about or some equivalent, but I don't think we're there and that's why I would say, okay, let's keep it as a check at least and then see how things develop.

COMMISSIONER MULVEY: The transparency of what we do is important and one of the things that was criticized was that we used a data source from CRSP which provided New York Stock Exchange data which have a broader range of stocks in it than the S&P 500 but was not publicly available.

We have been trying to work with CRSP to see if we can make those data available with the appropriate protective orders and the like and confidentiality agreements, so that there could be a check on what we do.

Would that solve the problem that you have with us using the New York Stock Exchange 2700 stocks as opposed to the S&P

500 which was suggested that we use just in terms of our ability to make the data source available for you to check the results?

MR. MYERS: Could I respond quickly?

COMMISSIONER MULVEY: Go ahead.

MR. MYERS: It would solve the problem of the confidentiality if you could work it out.

I would ask whether it's worth trying to solve the problems because you could use S&P data or other sources for returns and for market index returns, get virtually the same results, follow standard practice and everybody could get at the data easily.

The use of the NYSE versus, let's say, the S&P is going to make very little difference on the key issue of what the market risk premium is. I do disagree with the weight that Mr. Hodder put on some of the studies that he mentioned, but we would disagree with the relevance or weight on particular studies.

We weren't arguing about whether the NYSE or the S&P was the better measure. So, it could bypass that problem entirely and just use publicly available data.

COMMISSIONER MULVEY: Mr. Hodder?

MR. HODDER: Yes, thank you. I'd like to say here that I agree with Professor Myers.

MR. CROWLEY: Can I third the motion?

COMMISSIONER MULVEY: That's what we are looking for here, is building consensus.

MR. STANGLE: Chairman Nottingham, you mentioned in your opening remarks in a cash flow or dividend discount model, should the numerator of this expression be cash flows or dividends, and the Crowley model and the Board model have used dividends, and the Morningstar/Ibbotson model uses cash flows. That's a fundamental difference between these two discounted cash flow approaches, and I think the Ibbotson approach is worthy of your consideration for that reasons.

CHAIRMAN NOTTINGHAM: Thanks. I was just going to ask about that. So, you read my mind. But let's get into that a little bit, if we could.

Help me. One of the aspects, key aspects of the modern three-stage DCF model, as I'm coming to understand it, is that it recognizes a cash flow yield.

Could you, Mr. Stangle, elaborate on that and also discuss how the so-called free cash flow would be calculated or could be reasonably calculated?

MR. STANGLE: Well, as I understand it, and perhaps, you know, if you're meeting with officials from CRSP and so forth, you might want to meet with the people from Ibbotson because it's their model, not mine, but they look at earnings forecasts and they try to look at free cash flow for the industry that they're examining, and they drive this off of current financial estimates and the analyst estimates for reasonable future forecasts of these financial variables, and then they discount this back to the present and equate it to the current market capitalization of the corporation and that's how they iteratively solve for a cost of equity capital to equate those two variables.

CHAIRMAN NOTTINGHAM: Just to follow up on that, is it fair to say that one of the underlying premises behind the argument to take into consideration a three-stage DCF with a look at the cash flow is that most reasonable investors would not only be interested just in stock prices but also in cash flows?

If they're talking about investing in a business, you might be just as interested in cash on hand, for example, as you might be in stock price?

MR. STANGLE: Well, I think that points to the deficiency in the Crowley-Fapp model. They just looked at dividends and investors also are seeking price appreciation, and over time, if, as Professor Myers explained earlier, if the dividend payout increases because capital expenditures are decreasing, as you get way out in time, then investors would get the positive effect of stock buybacks in the future, and what the Crowley-Fapp model does is keep the dividend payout at a very low level forever and that's a fundamental problem.

It comes out with cost of equity estimates that are extremely low for that reason, and conversely, the Ibbotson approach does just as you're suggesting, it looks at all of the flows that might be available for shareholders.

CHAIRMAN NOTTINGHAM: And could

you elaborate on the Morningstar/Ibbotson approach? What is the actual three-stage DCF formula that they use?

MR. STANGLE: Yes, it's actually identical to a formula that's in a footnote that the Board put out on evaluating these different models.

The first five years is based upon IBIS earnings estimates, earnings forecasts. The years 6 through 10 are an average, industry average or a median of the forecasts of growth. Then year 11, they revert to a long-term rate of growth of the economy, GNP growth rate.

CHAIRMAN NOTTINGHAM: Okay. Let me ask, Professor Hodder, what's the right beta number? I'll ask the same question of each four of you.

MR. HODDER: What is the right beta number?

CHAIRMAN NOTTINGHAM: Right. If we were to adjourn later today and huddle and quickly agree on what to do next, what's the number? I'll let each witness to suggest that to us.

MR. HODDER: Well, I guess I would look at -- I don't know if we've got it here. Let me see if I can do a visual average. Well, let's see.

CHAIRMAN NOTTINGHAM: And in the interest of time, if you want to do an average or range, I mean, that's --

MR. HODDER: Yes. It looks to me like you're probably between about .8 and .9 currently. Well, I'm eyeballing it here. We've got BNSF is -- looks like about .86. CSX, looks like it's something like -- looks about the same. Norfolk Southern's a little bit higher, and UP, looks like it's more around about .7, and weighted those up, the number was .81.

CHAIRMAN NOTTINGHAM: .81. Okay. Mr. Crowley, can I assume you agree with that or do you want to take a shot at it?

MR. CROWLEY: That would be the same. I would agree with that number. That's the beta for the industry, .81.

CHAIRMAN NOTTINGHAM: Professor Myers?

MR. MYERS: I would look at the week -- my Figure 1 from weekly returns because I think those are the most accurate ones. I look at the weekly returns, Figure 1, because I think those are the most accurate estimates and that plot shows a good deal of stability over time, but I believe a clear upward trend recently.

If you just ask me a number off the top of my head, I would say at least .8 for 2006 and creeping up towards 1 for what we know in 2007.

I'm not proposing, by the way, to use three-year weekly betas, but I do have a picture as a check. I don't know whether we can get that. The three-year? The weekly returns, if you do three years, are going up very fast.

Now, I'm not proposing that you just hang your hat on three years of weekly data, but that tells you that's something happened recently that seems to be indicating that -- seems to be pulling the beta up.

So, can I just say one more thing? The right way to do this, I believe, from the statistical point of view is to form a portfolio of the stocks of the four major railroads, calculate the rates of return in the portfolio and then estimate the beta and that's what I've done in these pictures.

The advantage of doing it that way is that first you're averaging across the four stocks and getting some of the noise because the portfolio's less volatile than any individual stock, and second, you know what the statistical standard error is because you estimate it right off of the portfolio returns. That would be my suggestion of doing the calculation.

If you were going to check this against outside sources, I can -- I have been asking around to colleagues that do cost of capital work and they almost always refer to Value Line. Value Line seems to be a very widely used source, if you wanted to check outside, and my experience, Value Line has been very big at smoothing over some of the anomalies that occasionally afflict betas.

CHAIRMAN NOTTINGHAM: Mr. Crowley, do you have any problem with going back to 1926, and what's your awareness or knowledge of what makes 1926 a significant year from a data integrity and recordkeeping perspective?

MR. CROWLEY: I think 1926 was chosen because that was the first year Ibbotson published the data. I don't think there's any more significance to it than that. I don't think it's necessary to go back that far.

I think that the 50 years the

Board has proposed is fine. It's an ample time period to make these calculations, and I would support that period.

CHAIRMAN NOTTINGHAM: Anything particularly unreasonable about 1926?

MR. CROWLEY: I really haven't looked at it from the standpoint of unreasonableness, but everybody knows that between '26 and the middle '30s, we had a fair amount of chaos in our economy and obviously over the last 50 years that chaos wouldn't be measured, but other than that, nothing comes to mind.

CHAIRMAN NOTTINGHAM: Mr. Myers?

MR. MYERS: The reason they started in 1926 is that's when the good data started. The first good data on stock market returns was constructed by the Center for Research and Security Prices at the University of Chicago. It was done not by Ibbotson but it's the same database that the Board used previously. That is the standard research database they started in 1926 because that was the first year they could get good data for.

Ibbotson actually earlier, Ibbotson and Sinquefield came along later and naturally they used those data, but the 1926 is when the good data started. That's why 1926 is always the starting point or often the starting point for many of these averages.

Later, Dimson, Marsh and Staunton at the London Business School constructed these data series that are pretty good that go back to 2000 for the U.S. and a dozen other countries.

CHAIRMAN NOTTINGHAM: Is anyone on the panel aware of any past problems with any of the, I'll call it, major highly-reputable gatherers of this data, like the Center, sometimes referred to as CRSP, at the University of Chicago?

In other words, have there been

instances of significant error or anything? My understanding is they just go back and do sort of the sophisticated recordkeeping and calculation as to what was trading at what for everything on the Exchange and it sort of is what it is and if we were to use that, frankly that has a lot more appeal to me to use something like that than to hire a team of eager STB employees to go out and comb libraries and do their best at finding the number and that just creates the challenge of what prevents reasonable stakeholders from taking a look at that data, whether -- I think it costs about $2,000 right now to access.

Is that -- anyway, is anyone aware of any problems on that?

MR. MYERS: I'm old enough to remember when it was created. In the early years, the people at CRSP, the University of Chicago, put an enormous effort of trying to get the errors out of the data and it's widely accepted that they've done an excellent job. So, it's an excellent database and it's universally used for research purposes.

For your purposes, what you really need is market returns and returns on bonds or Treasury bills, whatever, going back to however far you decide to go back. For that purpose, you can buy the Ibbotson books and the data is all there in tables. You spend a half hour typing it in, you're done, and it's entirely consistent with the CRSP data.

CHAIRMAN NOTTINGHAM: Does anyone else have any experience on that they'd like to offer up?

MR. HODDER: I would concur with what Professor Myers said. I mean, I think that, you know, this is a very reliable database. A lot of -- one of the problems you get into when you go to the markets is sometimes you get things that were mistyped and they spent a lot of effort cleaning that up.

I believe that, you know, Ibbotson was just running with the CRSP data essentially and, you know, it doesn't change, you know. I mean, you get additions to it, but once you've got it in your hard drive, it's -- you know, the 1958 number doesn't change and so you put it in once and you've got it.

I do think there's an issue, and I would heartily concur with what he suggested earlier, that, you know, you can just use the S&P, it's publicly available, and you don't have to worry about, you know, proprietary issues.

CHAIRMAN NOTTINGHAM: Thank you. Professor Hodder, on the beta, should we use levered or unlevered betas, and why?

MR. HODDER: Well, ultimately, you're going to wind up with levered betas, and, you know, if you want to average them directly, you know, I think that's perfectly fine.

I would actually also endorse what Stu suggested about estimating this with the portfolio of the four firms. I mean that way, you do get the standard errors exactly as he was suggesting and you ultimately don't have to wind up averaging.

Now, when you go out there and you measure that, you're going to get back a levered beta and that's going to be, you know, impounding, if you will, sort of the weighted average of the industry capital structure and I think, you know, that's a perfectly reasonable thing to do.

CHAIRMAN NOTTINGHAM: Would anyone else like to address that point?

MR. MYERS: Strictly speaking, it should be the average industry capital structure over the period you're estimating the beta for.

CHAIRMAN NOTTINGHAM: Vice

Chairman Buttrey, any further questions for this panel? Commissioner Mulvey?

COMMISSIONER MULVEY: I have a few, but in the interest of time, can we submit some of these for the record? Submit them to respond afterwards? Keep the record open? Well, then no more further questions at this point.

Thank you.

MR. STANGLE: Thanks very much.

CHAIRMAN NOTTINGHAM: Thank you. We'll now call up the next panel, a fairly large group of railroad executives. Please, welcome.

Welcome. Welcome to our next panel, Panel III, representing the Freight Railroad Industry. We're happy to have a distinguished group of panelists and we will start with Mr. James R. Young from the Union Pacific Railroad Company.

Welcome, Mr. Young. Good morning.

Panel III: Freight Railroads

MR. YOUNG: Chairman Nottingham, Vice Chairman Buttrey, Commissioner Mulvey, I'm Jim Young, Chairman of Union Pacific Corporation. Appreciate the opportunity to testify before the Board in this proceeding which is critically important to my company and to the nation's transportation system.

I recognize that you are facing difficult issues and that you are working hard to reach a result that is fair to all parties.

The issues you are facing are difficult because this proceeding is much more than a theoretical calculation. You have already heard from the technical experts and I'm not going to address those points.

I'm here to explain why all of this matters from a real-world perspective, to explain as CEO of Union Pacific how it will affect my company and our customers.

One of the most important things

I do as CEO is make critical decisions about long-term capital investment to address the service needs of our customers and the returns required by our investors.

Capital investment decisions are particularly challenging in the rail industry. As the only transportation mode that pays for its own infrastructure, the rail industry must generate sufficient returns on investment to build new capacity while maintaining and then replacing existing infrastructure as it approaches the end of its useful life.

Just maintaining and replacing existing infrastructure is a daunting challenge. Each year, railroads must pay today's prices to replace billions of dollars of track, equipment and structures that were constructed many decades ago.

As our earnings improve, we're close to the point where returns are sufficient to sustain our existing networks.

Our capital investment to sustain and expand our network this year will total $3.1 billion. It's the largest amount in the history of Union Pacific. Our board and shareholders have allowed us to pursue this course because they believe our returns will continue to improve to justify these high levels of investment.

However, your proposal, if adopted, would undermine the expectations that have fueled this investment. When shareholders talk to me, the message is loud and clear. They tell me that your estimated cost of equity does not adequately reflect the risk of investing in the rail industry. These risks include legislative and regulatory risk as well as the risk of catastrophic losses and the economic uncertainties inherent in our business.

I'll give you a couple examples. Two years ago, railroads were criticized for not having enough center beam flat cars to haul lumber for the construction business. Today, Union Pacific has nearly 4,000 center beam flat cars in storage. This represents a significant investment that is generating no revenue.

There's another example. Capital expansion is more costly and carries more risk today than it did yesterday. We need to build a new manifest yard in Red Rock, Arizona, to serve the growing Phoenix market. Local resistance to the project and the demands for mitigation are driving the costs up, delaying the benefits of work already done. Our experience in Red Rock is typical of many capacity expansion projects.

Our shareholders view our current returns as too low and the prospect of unrealistic limits on future returns would reduce the amount of investment they are willing to fund. Without the prospect of considering higher returns as we go forward today, they would choose to put their money where they can earn more at less risk.

The proposed railroad cost of equity of 8.4 percent is less than the returns available in lower-risk mutual funds. This will result in less investment which means the rail network would be less than what our customers want and our nation needs.

The capital investments we make have very long timelines, 25 to 30 years or longer, and in fact many bridges exceed 100 years. This requires us to base investment decisions that we're making today in an environment that we expect to face over the long-term future.

The Board must also take the long-term view. It must be wary of providing short-term gains for some at a cost of undermining the industry's ability to make investments that are needed to help create a better future for our industry.

Where policy judgments must be made, you should not take chances with the nation's transportation future. You should resolve doubts in favor of more rail infrastructure, not less. Your decision in this proceeding will directly affect how much investment is made and thus how extensive or how limited our rail system will be to address the challenges of the 21st Century.

In conclusion, if you believe, as we do, that the demand for transportation will continue to grow and that investment in the rail industry will serve the public interests by providing needed transportation capacity, helping our country reduce its dependence on foreign energy, improving air quality, and improving our global competitiveness, then you should be acting to increase the flow of capital to the railroad industry.

Thank you.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Young. I think we'll now go with Mr. Romig from the Norfolk Southern Railway.

MR. ROMIG: Thank you, Mr. Chairman. I'm Bill Romig, Vice President and Treasurer of Norfolk Southern Corporation, and we're glad that the Board has allowed us to present our views this morning.

Norfolk Southern uses both CAPM and DCF to estimate its internal cost of capital. We've done so for many years, and we use an average of the two, and we find that the results are relatively close together.

However, when we do that, it's useful sometimes to think about what we're trying to estimate. Both of those try to estimate the cost of equity, and what is the cost of equity? Well, it's what an investor expects when it invests in a stock that's similar in riskiness to your own stock, and sometimes the technical details of estimating the cost of equity obscure that fundamental fact, and I think we've seen that in the testimony here this morning.

What is it that the investor wants when it invests in a rail stock? Well, if you look at market returns over the last 100 years, Ibbotson has a series that shows that the average stock, that's the stock of average risk, has returned 11.3 percent, and the S&P 500 over the last 50 years has returned 10.6 percent to the average stock.

Now I ask the question. Would you invest your money in a stock which returned only 8.4 percent if the average stock returns substantially more than that? I think if you were an investor, if you were thinking about investing your own money or you were investing others' money as a fiduciary, the answer to that would be no, that 8.4 percent is not an adequate return on equity and that's our fundamental concern about what the Board has done to date, and we would suggest, as some of the other experts here, that a more market-based rate is appropriate.

Revenue adequacy should be a floor and not a ceiling, if you are interested in the long-term health and profitability of the rail industry.

Having said that, let me comment a little bit about replacement costs. When Norfolk Southern prices traffic, we price to the market. When we do that, we want to make sure that that price clears our cost hurdle rates, and the cost that we estimate in most cases includes replacement costs for freight equipment and replacement costs for locomotives, and we do that because we buy locomotives every year and we are replacing freight equipment.

However, if we have to defend that cost, sometimes we are allowed to use replacement costs in a stand-alone cost hearing, sometimes we're not allowed to use replacement costs as in an URCS cost basis, and so I think the Board needs to think carefully about whether replacement costs in certain settings is an appropriate way to look at railroad returns.

And with that, I would conclude my remarks and thank you for listening.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Borrows.

MR. BORROWS: Thank you, Chairman Nottingham, Vice Chairman Buttrey, and Commissioner Mulvey.

My name is Michael Borrows, and I am Senior Vice President and Chief Accounting Officer for the Kansas City Southern Railway. KCSR appreciates the opportunity to present today its views on the Board's proposal.

In keeping with KCSR's previous comments in the proceeding, the focus and purpose of my testimony will not be to rehash and discuss the relative merits of the various methodologies for calculating an industrywide average cost of capital. The Board's discussion with the previous panel seemed to vet that out pretty well.

Instead, KCSR's focus will be on how cost of capital is intended to be used by the STB in future proceedings involving KCSR and others.

Currently, it's our understanding that regardless of the methodology selected, the STB intends to calculate an average cost of capital based upon inputs from the four largest Class 1 railroads and then apply that average to KCSR's cost accounting.

KCSR strongly urges the Board not to adopt such an approach. The record has consistently reflected -- and no party has really credibly disputed that regardless of the methodology the Board may choose to employ and the inputs it increases, it includes in the methodology, the use of an industrywide average will understate KCSR's cost of capital.

One distinction is that the largest U.S. Class 1 railroads, whose economic data is used to compute this industry average, are all investment grade in the marketplace, where everyone competes for the same resources.

Like many rail carriers, other than the largest Class 1s, KCSR is not considered investment grade. KCSR's cost of capital quite naturally then is consistently higher than the industrywide average proposed by the agency.

The application of the industry average has always understated KCSR's cost of capital. Now it will have a detrimental impact to KCSR and other similarly-situated railroads. An example. In the rate reasonableness proceeding, application of the new industrywide average would result in a rate prescription that would understate KCSR's actual revenue requirements and restrict KCSR from the opportunity to achieve appropriate revenue adequacy.

We believe that to prevent these unintended harms from occurring, KCSR is urging the Board to permit KCSR and other similarly-situated railroads to substitute an individual cost of capital versus the calculated industry average.

Of course, it can't be determined at this juncture how the Board would calculate an individual cost of capital until we settle on the methodology for use in developing that average. Once that's determined, it's likely the Board would be able to use the same methodology, applying, for example, appropriate KCSR-specific inputs to calculate an individual cost of capital. If that later required KCSR to provide additional data or information reporting to the Board, KCSR would be happy to comply with whatever requests were necessary.

Alternatively, the Board at a later stage could also take comments on that issue.

In making this request, let me be clear. We're not asking or seeking to manufacture any kind of artificial distinction between KCSR and any other carriers. Rather, we seek Board recognition of the realities of the capital markets in which we all operate and believe that recognition is necessary to avoid an unintended regulatory bias against the KCSR and the Board's use of industrywide proxy.

As I understand, it is true that to some extent, KCSR has been exposed to this issue ever since the agency first began using industrywide average. However, the issue never manifested itself directly from STB Board actions.

Even if the issue had come up, the prior guidelines allowed carriers to make movement-specific adjustments to URCS, which essentially compensated for an understated cost of capital. Now with recent rulings eliminating the ability to make movement-specific adjustments to URCS and with the adoption of simplified rate guidelines, it's critical the Board consider the impacts of using an industrywide average in its final determinations.

As I begin to close, the Kansas City Southern Railway is clearly aligned with the Board's goal of moving to an appropriate cost of capital calculation. Once the appropriate methodology has been developed, KCSR and others should be given the opportunity to input key differences and not simply required to use an industry sample.

Finally, count on KCSR's commitment to work with the Board as needed to achieve that result.

In closing, again I'd like to thank each member of the Board for allowing me personally to represent KCSR and for allowing KCSR this opportunity to articulate its views.

Thank you very much.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Borrows. Now we'll turn to Mr. David A.

Boor from the CSX Transportation Company.

MR. BOOR: I have some slides. I'll just bring them up.

I would like to thank the Board for the chance to come and amplify the written comments that CSX already submitted.

In our written comments, we concluded with the recommendation that the Board should retain the existing DCF methodology or, in the alternative, if we were to make a change, we need to do so holistically, considering the issue of replacement costs.

I know there is a real desire and a need, compelling need to move ahead and to get through this. My goal today, really to the nine or 10 slides that I have, is to try to make clear why CSX's recommendation to do this holistically is both sensible and responsive to the Board's mandate.

The decisions that come out of the hearings today really can't be cut short.

They are tremendously significant to the industry. I know the Board is very well aware of the public policy benefits of a strong rail system. I think all parties also agree that investment in rail assets is ultimately going to be determined by the expectations, the long-term expectations of returns to investors.

The point was made earlier by Mr. Young, and I endorse it as well, that it's not just new investment that we're talking about and growth investment which is vitally important to the railroad industry, it's also replacement capital that's also affected by these decisions.

So, the primary impact of the matters that we're talking about today will be how they affect the ability of railroads and shippers to privately negotiate freight rail rates.

Any change to the cost of capital cannot be divorced and isolated from an examination of the underlying investment and I hope to make that clear with some of the later slides that follow.

For CSX, reinvestment in the business is very significant. It's a primary use of our cash flow. We invested $1.7 billion of our cash in 2007 back into transportation assets. We spent over 80 percent of our cash flow from 2004 to 2006 reinvesting in the business. We've got to earn sufficient returns to be able to continue that. $1.7 billion is in the range of that which will continue, as you see on the slides, ranging from 1.6 to 1.7 over 2010. Year after year, that type of investment requires a strong ability to get earnings to justify that return.

For a little bit of perspective on the nature of that investment, I've provided some pictures. In case you haven't had a chance to check the price of rail assets recently, here's a little bit of an update.

Coal cars are running about 65,000 apiece. That's a 30-year asset. Locomotives are nearly $2 million each. That's also about a 30-year asset. New track is running $1 to $4 million a mile, depending upon terrain, and in the lower right-hand corner, you see a picture of the bridge over the Bay St. Louis that we lost, substantially lost in Hurricane Katrina which cost over 75 million to build.

My point is really this. There's tremendous capital to stay in business. There's tremendous capital to expand capacity and all that capital is committed upfront for an uncertain future, subject to the economic cycles and uncertain demand.

Hurricane Katrina gives us a unique ability perhaps to illustrate some of the chances to see how replacement cost and inflation over time has dramatically affected the cost of book values that are carried for these assets.

The Bay St. Louis Bridge, which was placed in service in 1967 at an original cost of about $5 million, had about $2 million of book value and the cost rebuilt that was 79 million.

Little Rigolets Bridge that was in that same area was put in place in 1918, built for a $100,000, had no book value on the books, cost 18 million to rebuild.

That's really the dilemma. It's the nature of rail assets being long term that is the problem with the revenue adequacy formula. The long lives of our assets means that inflation has a significant effect and railroading is asset-intensive.

Replacement cost approach where inflation is reflected in the asset base can better match return with cost, and I know I'm about to run out of time, but let me take just another minute or two through the example, if I may. I think this will significantly illustrate the point.

If we take an investment of a $100 million and it's a 30-year asset life, consistent with some of the examples we've talked about, and it produces a 10 percent return over its life, so all the cash flows are generating ultimately a 10 percent return, and it has a constant return profile year after year but for inflation that we assume will go up 2.5 percent a year, and that type of an example produces the following cash flows.

So, you see on this slide some point estimates for after-tax operating returns. Beginning in year 10, at $5.7 million, they grow gradually up to 9.7. That's the affect of this 2.5 percent of inflation.

There's higher numbers in the earlier years because of some of the effects of the tax benefit of depreciation sheltering tax cash flows. The investment base on the second line also declines over time.

So, when we look at ROIC, the return on invested capital, using these historic numbers, we have a range that goes from 9 percent to 53 percent of the out years. Clearly the last half of the asset's life, it's generating returns in excess of its real economic return.

Finally, this slide is what brings it together and hopefully in a way that will be worth the significant vision and opportunity.

You see three items on this chart. The red line is the 10 percent economic return produced by that asset over its life. The blue line reflects the point estimates we saw before for what is presented when you miss ROIC. So, the 13 percent return we saw in year 15, the 53 percent return we saw in year 25. The yellow lines represent if we were to try to come up with some type of replacement cost methodology, updated for the cost of inflation, what that line would look like.

You see it's significantly smooth and reduces the volatility in that number.

Also, this is just one asset. We, of course, have many assets in place at the same time, some one year old, some 25 years old. So, the blend of all these produces the average on the far right. The lifetime average for that ROIC calculation is 33 percent. 33 percent on an asset that overall is generating by definition only a 10 percent return to the investor.

Replacement cost in this example produces a much lower estimate, still overstating it somewhat. So, at this juncture, we find ourselves presented with a dilemma of how to adjust cost of capital for affordables and difficulties associated with a simplified method, but yet we also have an underlying principle as to the way it's going to be applied that is perhaps even more egregious effective in the other direction. To consider one without the other would be shortsighted.

Finally, I'll leave you with the final slide that Mr. Rennicke produced for purposes of discussion with the House Transportation Infrastructure Committee that I think is worth a thousand words as well. It says and acknowledges, "The class railroads are among the most intensive industries in America and we compete with all other industries for sources of capital. On the far right, you see the return on equity generated by our industry relative to others. The essence of what this is presenting can't be lost with respect to how we continue to maintain investment in rail and the railroad infrastructure."

Thank you for your time.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Boor. I'll turn to Mr. Thomas N. HUND from the BNSF Railway Company.

Mr. Hund, please proceed.

MR. HUND: Thanks. Rick is bringing up my PowerPoint presentation.

Okay. First of all, Mr. Chairman and Commissioners, thank you for giving me the opportunity to speak today on behalf of BNSF.

I am Tom Hund. I have been with the company for 25 years, all in the financial capacity. I've been the CFO since 1999. So, I bring that up just because I've been involved in the investment decisions in my company for a long time.

What I'd like to do today is focus on a couple of areas, but let's just get to the point. Anything that reduces our returns or increases the risk, like the potential impacts of understating the cost of capital, will cause investment to decline, and it's returns that justify the investment and if those returns are there, we make the investment. If they're not, we don't, and when we think about -- okay. The slide is not showing some of the pieces. So, those boxes I'll just have to describe them.

There are four options you have when you have discretionary spending, and the first is acquisitions, and we haven't done a major acquisition at BNSF in a long time. So, we'll just move on from that.

The next, and I think it's just going to keep moving the box across without anything there, the next should actually show cash/debt, and the issue there is we can use our cash to repay debt. We don't need to do this. We have a good investment grade rating, but I have to say that some of the commenters in this proceeding have said in their written comments that we ought to be actually taking on significant additional leverage.

To that point, I say Standard and Poor's has 10 investment grades. We are rated in the ninth of 10, so towards the bottom, and those 10 are basically from AAA to BBB minus. We are a BBB. If we were to get downgraded two notches, which isn't all that far, we would be junk bond status. So, I don't think that argument holds as far as I'm concerned at BNSF.

The next area that we move to is return to shareholders and that includes share repurchases and dividends, and again some of the commenters have said that share repurchases indicate that railroads are earning adequate, if not excessive, returns when I'd argue that in fact the opposite is true.

Shareholders love good returning projects because it increases the value of their stock in B&I. However, if the returns aren't there, they want us to return that cash to them in the way of a share repurchase or a dividend.

The final area that we can invest in, the fourth, is expansion and this is putting more money into the lines, the terminals, the track, the locomotives we have at BNSF, and we prepare a business case for every expansion project we do, and we generally require a return that is benchmarked against what I'll call a hurdle rate of about 15 percent.

Now, based upon risk because all the spending is done upfront, the returns come in over 20-30 years, as many of the commenters here on my panel have spoken to, we do adjust this based upon the risk associated with that. So, we might take a project that earns less than 15 percent based upon a less risky project, more if it's greater than that, but that's the logic that we go through.

Okay. Some folks have also said in this proceeding that there's not a direct correlation between investment and returns, and I'd argue that this slide shows exactly the opposite.

This chart shows the amount of variance of a railroad not making an adequate return to one that earns a more appropriate return and that increased capital spending by 75 percent, and the next slide actually shows the capital spent for expansion which is that that is to replace -- not just replace but add to the amount that we have on the -- in the physical plant, and you can see that there's a direct correlation.

And one thing that I would like to point out, we did have a presentation from WCTL, we've said publicly that coal is our lowest-earning business and that's just an aside point.

We have seen significant growth at BNSF over the last 10 years and that volume's gone up by 50 percent over that time period, and we all know that we have the Cambridge Study and then we also have an AASHTO study that shows that there's significant investment coming, and I would say that Cliff Eby did a good job of explaining the fact that we do have significant expansion needed to keep up with simply the growth within the economics of the United States.

So let's get down to the punch line. As I've previously discussed, our investment decisions are all about risk and returns and understanding the industry cost of capital -- understating, rather, the industry cost of capital creates a significant risk that jeopardizes those returns, and if we can't earn adequate returns, we don't make the investment.

WCTL states that there is a relatively low risk in the railroading business as justification for a low beta, and I would argue that with recent changes we've seen in our business, like imports from China, higher fuel prices, economic legislation, ethanol, and also on the horizon, we have future carbon legislation, we have the opening and expansion of the Panama Canal, there is significant risk in our business, and in 2007, I'd say that's a good example.

We've got our coal business is flat year over year. Our agricultural business is the one business that is up. Our consumer business, which is intermodal, is down about 7 percent, so significantly year over year, and our industrial products is down. Those are all driven by different factors, but 85 percent of our business is flat or down in a year over year basis.

So again, the WCTL says we should take a common sense approach. Well, I'd argue that a beta of less than one with the risk in our business and a cost of equity of less than 10 does not pass that test.

So, finally to conclude, you know, let me address the appropriate cost of equity. In a written submission to the STB, Atticus, who's going to testify in a few moments here, uses a range of 12 to 15 percent. The Children's Investors Fund uses 12 to 14 percent, and the DOT said 10 to 12 percent.

As I mentioned before, at BNSF we use a hurdle rate of about 15 percent, but I have to tell you that our internal range of the cost of equity is generally in the 11 to 13 percent.

We agree with the thoughtful comments made by the DOT regarding the need to avoid shocks to the system because the Board should not implement any changes -- the Board should implement, rather, changes in a gradual and thoughtful way.

I urge the Board to use caution in making dramatic changes as many times when these approaches are implemented, unintended consequences take place that are not always anticipated beforehand. So, we need to be careful not to shock the system.

I also urge the Board to consider the overall methodology for revenue adequacy, including the asset base, and I also want to go on the record as saying replacement cost is something that needs to be seriously considered and BNSF is in favor of.

The STB is the long-term steward of the health of the rail industry and using future projections of capacity as the backdrop, you have the choice of implementing policies that encourage private companies to make the investments to address this increase in demand or you can implement policies that would help some shippers in the short term but in the long term create problems for the system and the nation.

Thank you.

CHAIRMAN NOTTINGHAM: Thank you, panelists. We'll now turn to questions. I'll start it off, if I could.

A couple of the witnesses did mention their own companies' cost of capital calculations in passing or I think it was Mr. Romig who mentioned that the NS uses both CAPM and DCF model, that's fair to say, and Mr. Hund talked about a 15 percent number, also, I guess, if I heard correctly, the number they use more internally between 11 and 13 percent.

Let me just ask each panelist, if they could, what you -- what cost of capital figure you use at your railroad and how you calculate it. I'll start with Mr. Romig.

MR. ROMIG: Thank you, Mr. Chairman. Norfolk Southern has not disclosed its cost of capital calculation and so it would not be appropriate for me to comment exactly what it is at this time, but it's in the range addressed and spoken to by the other rails in their testimony here today.

CHAIRMAN NOTTINGHAM: Mr. Borrows?

MR. BORROWS: Clearly, the Kansas City Southern is in the same boat as Norfolk

Southern in terms of its disclosure of its cost of capital, but ours would clearly be a little bit higher, more towards the high end of BNSF or, we would say, our hurdle rate would be higher.

Our cost of capital is greater because of, you know, the various inputs that we would focus on in terms of achieving shareholder returns.

CHAIRMAN NOTTINGHAM: Mr. Boor?

MR. BOOR: We use multiple analyses at the CSX and one of the aspects of the DCF method is forward-looking, and we absolutely, when we build our business plans, try to be aware of where shareholders see opportunities and expectations for CSX and take those into account in doing that.

When we make investment decisions, we use a discounted cash flow analysis to do investment decisions. We have hurdle rates, as has been mentioned, as exceeding cost of capital estimates because we think that's the appropriate way to deal with some of the risks inherent in the rail industry.

The comments regarding -- we haven't announced a specific cost of capital publicly, but the comments that are being made at the table are consistent generally with where CSX is looking at matters as well.

CHAIRMAN NOTTINGHAM: Mr. Hund?

MR. HUND: Okay. Well, obviously in my testimony, I said that we were looking at a cost of equity in the 11 to 13 percent in our analysis.

Internally, we use a variety of methods. We use DCF, we use CAPM, and we use a NOPAT type of methodology, and so we don't focus on just one in the way we do things.

Converting that over into a cost of capital using kind of the weightings that the Commission has used, that probably equates to a 10 to 12 percent type of range.

CHAIRMAN NOTTINGHAM: Mr. Young?

MR. YOUNG: We use several methodologies internally here. I haven't been the CFO for about three years, but I want to turn it around a different way here.

You know, it's around that. Cost of capital comes out in that low double-digit range. What's most important, though, is what happens in the board room and the decisions. We have a hurdle rate that's 15 to 20 percent. You do your own risk adjustment when you look at making investments, likelihood of the markets, et. cetera. You draw the line in terms of where you look at these returns, but ultimately it comes down to cash flow in the business.

This is a cash-intensive business when you look at it. I'd like to tell you there's a real sophisticated model that we check off in every capital investment. It starts with that, but the reality is -- and we're in the process of planning our capital to spend next year.

You look at what you generate from operations, what you pay in a reasonable dividend, what's left over to put back in investment or return to shareholders, and the margins are pretty tight when you look at the spread between cash-in and cash-out.

So, you have a process that establishes the priority, but in reality, it comes down to really your cash -- the strength of your cash flow.

CHAIRMAN NOTTINGHAM: As a follow up to that, I'll ask any and all panelists to respond to this, starting with Mr. Young, would that argue then that we should consider something along the lines of the modern three-stage DCF model that focuses on cash flow yield?

MR. YOUNG: You know, Mr. Chairman, I'm not going to get into the technical detail here. You can ask a couple of the guys next to me.

My concern is this. Very simply,

when you first came out and you cut UP's cost of equity from about 14 to 7, that concerns me because the implication and what we haven't articulated today is what does it mean when you're revenue adequate long term?

My gut says it doesn't give me more rate flexibility. If anything, I would assume that over time, we're going to have greater pressure on rates, and again you take that and put that into the context of cash flow for the business. It will -- no question in my mind if we get this wrong, the slope of growth investment will be decreased in the business.

CHAIRMAN NOTTINGHAM: Thank you, and if I could just follow up on that. I know we have some members of the press here and I want to make sure the facts are clear.

We have put out a Notice of Proposed Rule and we're getting comment. This is the second hearing. Of course, we haven't actually cut anybody's cost of equity or capital in any final sense. I just want to make sure that's understood, I think it is, but just to be safe.

Would anyone else like to speak to the question of the utility and the helpfulness of using a cash flow yield-based three-stage DCF?

MR. ROMIG: This is Bill Romig. I'd like to just say that it's not so important what method the Board chooses as it is whether the method they choose has a realistic result and the realistic result is a level of allowed return on capital which attracts capital to our industry and not drives it away.

MR. BORROWS: Yes, Chairman Nottingham. The Kansas Southern would go on the record to say that our conclusion has been that whatever methodology the Board would so desire to look to as the standard is fine with us.

It's the inputs that go into that

and recognizing the diversity of, you know, risks and cost structures in our industry and saying how would that be different for, say, a Kansas City Southern versus the other larger railroads.

MR. HUND: And from our point at BNSF, I mean, actually Commissioner Mulvey mentioned that trying to estimate the same thing using different methods and that's exactly how we view it and so really the panel before us talked a lot about examining the deviations, and I'd think we'd be -- I don't think that we'd be opposed to that.

We'd be very much focused on the inputs and whether you were getting significantly different answers by using one method versus another, but I'm back to using the common sense approach.

At the end of the day, if we come to a conclusion that the cost of equity is 8.5 percent or something like that, I mean, I'm back to the points that Bill Romig made.

That doesn't justify investment in this as a stock or in this as a business.

CHAIRMAN NOTTINGHAM: I certainly, as just one board member, will say I certainly respect any business's reluctance to offer up sensitive self-assessment or internal data about a business's strengths or weaknesses on the balance sheet, so to speak, or the cost of capital area, but I will say, and you must realize this, you know, we all expect that any business as sophisticated as the Class 1 railroads before us looks at these numbers constantly internally for your own reasons and to meet your shareholders' expectations and just the fact that you seem to be reluctant to offer up your actual own cost of capital determination could, you know, open up a line of critique that the line would be -- that if the number -- if that number were to help you in this proceeding, you would open it up.

So, I'll just give you one other

chance, if anybody wants to --

MR. ROMIG: I would like to comment on that, Mr. Chairman.

As you know, we're public companies and we're subject to the regulations of Fair Disclosure, and to the extent we have material information which we have not disclosed publicly to our shareholders in the manner in which the law requires, it would not be appropriate for us to do so here today, and it's not that we don't want to share that with you.

We've given you input, or at least I have and a couple of the other panelists have given you input, as to where their numbers lie in a range, but I think that to not disclose at this time is the prudent thing for us to do, if we have not already disclosed it publicly.

MR. YOUNG: Mr. Chairman, can I comment?

You know, I think at the end of

the day, it's our investors' assessment. There aren't many secrets in the railroad business in terms of what we do. What's most important is when I sit across the table from shareholders, how do they view the business? They have their calculations. They vary.

There's one comment I heard out of the experts, is whatever we pick probably isn't 100 percent right that's out here, and so I'm not quite certain at the end of the day what -- I've said publicly low double digits. I'll continue to say that when you look at our cost of capital, and I can find methodologies that can support a pretty wide range in numbers, but ultimately it's the investors sitting across the table from you that will make that determination.

As I said in my comments earlier, I think when you have that kind of spread, we should ask the question, what do we do to incent investment in the business going forward? Clearly investment will follow the returns.

MR. HUND: And maybe I used too many words around mine. I thought I answered it pretty directly. We don't use one method, a variety of methods. Cost of equity, 11 to 13 percent, using kind of the midpoint of that cost of equity. Cost of capital using the weighting that the Board uses, 10 to 12. Is that direct enough?

CHAIRMAN NOTTINGHAM: Thank you. That is very helpful. Thank you.

Just as a follow up -- I'm cognizant that my board colleagues deserve a chance to ask questions and they certainly will get that very soon. Let me just ask, though, in looking over this record and thinking about your statements today, it occurs to me that each of you probably spends a fair amount of time dealing with analysts, dealing with investors, dealing with customers, of course, looking at numbers, such as the ones we've been discussing today.

Do we -- I guess I'll ask two questions. The previous method the Board has used up until now for measuring cost of capital, was that, in your view, highly relied upon by analysts out there? Was that something -- because when one looks at the record here, we see different parties have submitted six, seven, eight, nine, 10 different private sector, analysts you know, Morningstar, Value Line, et. cetera, and one concern we have is, you know, we have our own reasons as a regulator to legally to develop this number, but it would be nice if, in doing so, we could actually get a number that's somewhat useful to analysts and to the marketplace.

Then the next question would be, hand in hand with that, do you think we'll ever get, despite our best efforts, a number that will ever be really widely used by the private sector in analyzing your costs of capital or will other firms' numbers, like

Value Line, et. cetera, really continue to be what's used out there?

I'll let Mr. Romig, you want to start with that?

MR. ROMIG: Yes. In fact, I was on the road last week talking to investors in three cities in the Midwest and what they were concerned about is the uncertainty that the proposed rulemaking made -- resulted in for investments in the rail industry, and I think that the prior rulemakings and prior cost of capital didn't present them with the more imminent prospect of the industry being declared revenue adequate.

So, I think as a practical matter, they weren't worried about it. They are now, and if there's one thing that markets hate, it's uncertainty.

CHAIRMAN NOTTINGHAM: Mr. Borrows?

MR. BORROWS: We're not dissimilar where our shareholders, I think right now, more have a focus on that.

Clearly you're all aware of that, you know, we're more of a growth company trying to expand our franchise between the U.S. and Mexico with a cross-border network, right, and the availability of capital, the fact that we're a higher investment risk than, you know, some of our peers that are Class 1s, and we're just not as large and so therefore what happens is, is that, we have less access to some of the capital markets.

Also, our shareholders expect more and our cost of capital needs to reflect that because there is greater risk with our size railroad than there is with some of the others.

CHAIRMAN NOTTINGHAM: Mr. Boor?

MR. BOOR: I think individual investors have their own view as to what cost of capital is. They don't look to the STB or to CSX to tell them what that is. I think an important context as well is to recognize the nature of the reason why the question needs to be asked.

Applied in a regulatory setting for purposes of placing a cap on revenues is an entirely different question from making an economic decision with respect to an investment for all the reasons of risk, for all the reasons associated with increasing hurdle rates that are in excess of the cost of capital.

All those are very germane to the economics of the rail business and so it's a much different question to say at what point do I freeze and cap the ability to get a return on cost and so that's the nature of what's so difficult about this question.

So, we come here today sort of looking at maybe a simplified method that was adopted 25 years ago that says I'm going to use one growth rate assumption instead of a more sophisticated multiple complex assumption, but we recognize that the whole area has its own set of difficulties, as I tried to bring out a little bit with the replacement cost issue.

So, to be short to your question, I think it's in the eye of the beholder, and you do get different answers from different parties.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Hund, would you like to take a shot at that?

MR. HUND: Certainly. You asked, I think, a couple of questions.

One, in the past, has the cost of capital and cost of equity of the Board been used by Wall Street, and I've been part of the face of our company for almost the last 10 years on Wall Street, and I would have to say no. I'd say generally it has not been used.

In the future, I think was your other question, it's possible, but I think that's -- you know, as David pointed out, the analysts, both on the buy and sell side, really do form their own opinions and use other inputs as a data point, if you will, to either verify or question where they are.

I also want to reiterate a little bit of what David said, though, is, you know, as we do change and if there is a cap and perhaps an artificial cap placed upon rates, what that is going to do is actually increase the riskiness of the business, increase the beta, if we go back to the previous testimonies, and therefore, you know, has the risk of having the unintended consequence of actually raising the cost of capital here.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Young?

MR. YOUNG: Mr. Chairman, there is some range when you look at an individual investor doing a cost of capital calculation. Again, it depends on their investment timeline, but good long-term shareholders in this business, they have a cost of capital calculation, but 90 percent of the discussion is spent on cash flow. They are very concerned about what is left over for shareholders after we cover our costs, invest in the business. That's the starting point of the discussion, and the issue is one that jumps out every time when you look at this industry. Tom or one of you had a slide.

Union Pacific this year will invest about two-two and a half times its book depreciation back into the business. That's pure cash when you look at the implications here and that is where we spend most of our time with our shareholders.

They're interested in what are the issues we're facing long time, what are the replacement costs of assets, and how do we see our cash flow moving?

CHAIRMAN NOTTINGHAM: Thank you. Let me, if I could, Mr. Romig, did you want to jump in real quick? Because I want to turn --

MR. ROMIG: Yes, I'd like to add --

CHAIRMAN NOTTINGHAM: -- to Commissioner Mulvey next.

MR. ROMIG: -- one point here. If we go back, you can find instances where the investors and the analysts on Wall Street were very concerned about the levels of railroad investment, and the reason was the railroads had very low returns on that investment.

Over the last three or four years, those returns have increased and now we actually see railroad analysts saying, well, keep the money, don't send it back to us, invest in the business and grow so you can earn more profits in the future, and that's what we would like to see.

If our rates are capped or if there is an unrealistic cost of equity imposed upon us, we're likely to see the old days again.

CHAIRMAN NOTTINGHAM: Thank you. Let me yield for questions from Commissioner Mulvey at this point.

COMMISSIONER MULVEY: Thank you. A couple of things that came up at the hearing.

Mr. Hund, you said that coal is the lowest-earning business, one of your lowest-earning businesses, but, of course, coal is shipped by utility. Shipping coal is mostly captive traffic, and when we look at the revenue-to-variable-cost ratios for coal traffic, they are always fairly high.

How do you justify saying that coal is a low-earning business? You simply mean return per mile?

MR. HUND: No, it is actually based upon our own internal return on invested capital. So, when we look at our entire network and split the denominator, if you will, all the investment to all the various pieces of the business and that's basically four ways, coal, agriculture, intermodal or consumer, and industrial products, and then look at the returns we get over those, coal is mathematically at the lower end -- actually, it's the lowest of the four and we've said that since 2006.

COMMISSIONER MULVEY: CSX, you have in your presentation, I believe it was on Page 3, your transportation capital investment in millions of dollars between 2006 and 2010.

Is that in real or nominal terms?

MR. BOOR: Those numbers are in real terms.

COMMISSIONER MULVEY: Those are in real terms?

MR. BOOR: They're estimates, but Yes, they're in real terms.

COMMISSIONER MULVEY: Okay. Thank you.

MR. BOOR: I'm sorry. They're in fixed dollar terms.

COMMISSIONER MULVEY: Yes.

MR. BOOR: They're in dollar amounts.

COMMISSIONER MULVEY: Real dollars. Constant dollars.

Have the railroads, any of the railroads issued equity, issued new equity in the last few years? We talked about the return on equity and whether or not the railroads can attract capital, but have there been any new equity issues by any of the railroads in the last few years?

MR. YOUNG: In 1998, when the UPSP had its challenge with putting the companies together and again to give you some perspective on the risk profile, we were bleeding cash and we went to the market for kind of a hybrid called a convertible preferred offering, some place in between debt and equity, borrowed $2 billion, and we worked pretty hard to get the financing.

COMMISSIONER MULVEY: Anybody

else have issues in the last 10 years, 20 years?

MR. BOOR: We've had a -- I don't think this is completely responsive to your point. We have had a minor amount of equity issued associated with a security that was a convertible bond that had an option to convert to equity and that has converted to equity in large part.

COMMISSIONER MULVEY: KCS, you argue that the cost of equity is higher for you because your stock is below investment grade, but how do we differentiate between that being the inherent result of the kinds of markets you serve versus being less of a line haul railroad than the other Class 1s?

MR. BORROWS: Well, I mean, I think that there's going to be, as we talked about, many variables that go into looking at why or why not an industry average cost of capital would be appropriate for our business versus others, and I think, you know, you made the point, Commissioner Mulvey, really well early where you said, you know, when looking at the East and West Coast railroads, if one of those was not revenue adequate based on its cost of capital, you know, that would create a disparity in the competition between the two.

Well, imagine if you're in the middle of the East and West Coast railroads and your cost of capital is not going to be backed. Well, I mean, basically the decision of the Board could have the unintended, you know, bias or consequence of significantly damaging our shareholders over time because where I think the analysts -- and I agree with Tom Hund -- don't necessarily focus on the Surface Transportation Board's cost of capital calculation.

What they do focus on is and there has been a lot of attention paid to what's taking place here because how is that going to impact our ability to be revenue adequate going forward and what kind of rate cases would we attract as we move forward?

We haven't had a rate case since, I think, like 1986, but changing this methodology could, you know, draw or magnetize some of that, you know, towards us which then again would just increase our costs unnecessarily.

COMMISSIONER MULVEY: The Railroad Accounting Principles Board, which we found we're not legally required to follow entirely, but they suggested that the cost of capital ought to be industrywide. This makes sense if you look at an industrywide figure as a way to induce greater managerial efficiency, and after all, if a Class 1 railroad was poorly managed and as a result had a higher cost of debt and equity, why should shippers be required to pay for these inefficiencies through a higher carrier-specific cost of capital?

Do you care to comment on that?

MR. BORROWS: Well, I mean, I think that it would just be, you know, a condition of the marketplace. I mean what's your alternative?

COMMISSIONER MULVEY: Anybody else?

MR. YOUNG: Commissioner Mulvey,I think you -- I have heard that discussion, whether you're talking KCS or Union Pacific, particularly when you look at our current operating ratio in the industry.

Many times, though, you have to be careful what's causing some of that inefficiency. If you look at the Southern Pacific Railroad that we acquired back in 1996, it was woefully short of adequate capacity and inherent in that, when you have a network that is lacking in capacity, you will have inefficiencies.

So, part of it is where you have to make investment, it can drive efficiencies going forward.

MR. HUND: And we would say this is clearly not a precise science. We've had a lot of discussion here about averaging different methods, things like that, and so, you know, I think just in general, what I would answer is the more data points you get and you can center around those, typically the better you are, and then the more that you take sort of the mean of the median of those, I think you typically end up with a better answer which leans towards the industry.

COMMISSIONER MULVEY: Mr. Boor, do you care to --

MR. BOOR: Yes, we would -- I think as an academic point, it's correct that you would have a cost of capital that would be unique to each firm. It's based upon just individual risks.

However, there is a significant merit to a simplified approach. There's significant merit to a portfolio approach.

Those have been addressed earlier, and I think those are the trade-offs that you start to make.

COMMISSIONER MULVEY: Thank you. Mr. Romig, want to chime in?

MR. ROMIG: I think to echo Mr. Young's comments is that, to some extent, railroads are captives of the past investment, but we have to look to the future and justify the returns based on expected growth.

COMMISSIONER MULVEY: There has been a lot of discussion about replacement cost as opposed to historic cost of capital and using that in calculating the true return on investment which would, regardless of what we do here with the cost of capital, would have even more draconian impact on looking at the revenue adequacy of railroads.

I've heard some estimates as low as the return on replacement capital being 1 or 2 percent, but going about that would be very, very difficult in valuing the railroads. I know the railroads were valued once before, at least, back in 1920, I believe, when the Valuation Act required that the railroads be valued before they returned back to the private sector.

If we were to go to replacement capital, would the railroads be expected or would you be the ones who would go out and try and give us your best estimate as to the replacement costs of your usable and necessary capital stock or would somebody else be charged with doing that, do you think?

MR. BOOR: The earlier comments that it would be very difficult to do, I think, need to be tested. I think it's important to find a way that's workable, and I think the industry would agree. We've got to find a way that's workable.

I think we cannot ignore it. The problem is too large to not ignore it, but I think the challenge and, I think, quite frankly, the difficult is we're not quite yet there with the solution, but there ought to be a fast-track request to say we've got to figure this out and come up with a way that makes sense, but I think that can be done.

MR. HUND: And addressing the issue of difficulty, and I guess I'm showing my age and date myself a little bit here, but 25 or 30 years ago, generally accepted accounting principles had a requirement that you have an unaudited footnote on replacement costs.

Now, it wasn't, I think after a number of years, considered to be all that usable, but, I mean, there are examples of it out there, and I think internationally, you'll even find examples where it's used today. So, I think there are ways to get there.

As to your question about so who would be -- whose shoulders it should fit on as far as bringing something to the Board, I think we're clearly open, at least BNSF and I believe as an industry, but I don't want to speak for everybody, that we'd be very willing to entertain the idea of bringing forth some alternative approaches of either indexing or costing in some alternative methodology because it is a very significant issue and is really what our investors expect of us.

COMMISSIONER MULVEY: Part of the problem is when there's excess capacity. Mr. Young talked about the 4,000 centerbeam cars he's sitting on right now and not using them. Well, of course, if, indeed, the market ever recovers for housing, which, of course, it will eventually, those cars eventually will be used and you'll be considered to be brilliant having bought those 4,000 cars at some point, but there is a problem with some of the capacity out there that is not -- the replacement estimate, you wouldn't replace it the way it was. You wouldn't build it quite as large or you could do it for much, much less.

It is going to be tricky, I think, in order to get an acceptable way of valuing the railroads because I can see arguments saying, well, they're exaggerating their replacement costs because they don't have to do this and they don't have to bring it up to this level, et. cetera, et. cetera.

So, I'm just wondering to what extent we're opening up Pandora's Box.

MR. HUND: I'd answer that. Those are very valid points and I think very good points to bring up, but I don't think any of them are compelling enough to then say ignore it because they're so difficult to address that, I'll say, the cost of addressing them overweighs the benefit that's provided by the actual analysis.

COMMISSIONER MULVEY: Anybody else?

MR. ROMIG: I agree with the other comments of the panelists, and I think it's incumbent upon the industry to come forth with a reasonable proposal for replacement cost calculation.

COMMISSIONER MULVEY: Thank you.

CHAIRMAN NOTTINGHAM: Commissioner Buttrey, any questions?

(No response.)

CHAIRMAN NOTTINGHAM: If I could just follow up on a couple of points. Appreciate the discussion of the replacement costs and book value.

Mr. Romig, your statement just a minute ago, I think, is very well stated, that from my perspective, the industry needs to finetune its thinking and position on this. It's a little hard for us in reading some of the submissions. There were a lot of suggestions and I think, Mr. Boor, your testimony delved into this in most detail, but yes, of course, replacement costs are --

represent an important issue, but it's pretty hard for the Board right now to get our arms around that in the midst of this proceeding when the industry doesn't seem to even have close to kind of a consensus or a plan or detailed proposal.

So, we'd be happy to look at one if you can get us one, but it doesn't sound like it's going to come to us on this record in this proceeding, if I hear you straight.

Just following up on that, one of the many complexities I see there in moving towards a replacement cost-type approach would be to actually look at all of your infrastructure and identify what you would really go to your shareholders and your board and say, yes, we're going to actually replace every last bridge out there that might have been put in in the 1800s that we haven't abandoned but we haven't really -- in other words, realistically, you're going to have decisions to make.

You're going to need to build and improve enormously in some corridors and it's the new corridors perhaps, but you're probably not going to actually go and rebuild every last asset you currently have, I would think.

So that's a challenge. Do you get credit for the rebuild replacement costs of assets that you might never actually intend to spend that kind of money to actually replace?

Mr. Young, you look like you want to jump in?

MR. YOUNG: Well, Mr. Chairman, I'd like to just -- I don't think any methodology would propose that we replace the whole railroad. We actually use depreciated new value when we do some of our projects within the business because you're going to have an extreme then the other ways you would have articulated here.

I think the question still

becomes one on the range here. Neither methodology is going to represent the right answer and the perfect answer here, but it could give some perspective if we believe that we need to incent more investment in the railroad industry over the years.

Replacement costs kind of methodology could be viewed as that fits in that range. I mean, the question becomes what do you do with it? We ultimately say we're revenue adequacy under either the proposed or replacement.

I still believe the question we are all going to struggle with is the pressure on capital costs going forward and there's no question, they are going up in every aspect of our business.

We have -- I mentioned in my comments earlier about the requirements to expand capacity at current facilities today is carrying new community environmental regulations that are driving the costs up substantially. None of that is reflected in the methodologies that we have on the table at the STB today.

CHAIRMAN NOTTINGHAM: That reminds me of many hearings and discussions as a highway commissioner where I had to explain why it costs us X hundreds of millions to build something today when just 20 years before, they could build it for 5 percent of that, and we got into these long discussions of new rules and requirements and pressures and costs and inputs that weren't even a reality 20 years ago.

Mr. Hund, did you want to jump in on this?

MR. HUND: Yes, just a quick comment.

We've actually sold, abandoned or short-lined, either leased or sold, thousands of miles in our 12 years since we merged the Burlington Northern and the Santa Fe. So, we're going through that analysis about what we wouldn't invest in on a continual basis as the call for simply replacement capital comes up on all those different lines and that's a large driver of why those thousands of miles are no longer within the BNSF portfolio.

So, I think we're purging that on a regular real-time basis.

CHAIRMAN NOTTINGHAM: Now, Mr. Boor, you pointed out the very good examples of some of the recent replacements in the wake of the Katrina disaster. I spent a lot of time on the parallel highway structures that took so much longer to get off the ground and rebuild them and at such greater expense than the parallel rail structures down there in a past life.

Now, once you do -- so we all on a basic level understand this. Once you do go to the trouble and expense of replacing a Bay St. Louis Bridge, you then get the benefit of the new book value, correct? So, you're --

MR. BOOR: Well, you know,

that's, I think, some of the difficulty with this concept. You know, there's the idea that says until you've made the investment, why should you get a return on it?

There's the other concept that says mathematically, it doesn't work, and my slides were designed to sort of bring out a little bit the mathematical part.

You've got dollars in today's dollars measured against a base in yesterday's dollars. Investors have waited 30 years to get that last year's return. Those dollars are not equivalent.

So, irrespective of questions about how would you replace it, what would you replace, just the math of time value of money that doesn't work by using -- by not acknowledging inflation as part of that issue, especially where you have long-lived assets and especially where you have such an asset-intensive industry.

So, I think that estimate was

very real. There's got to be a way to deal with that, and I think it's fair to challenge the industry to come up with it and recognize that the more subjective it is, the more problematic it is, but we have to address that.

CHAIRMAN NOTTINGHAM: Mr. Hund?

MR. HUND: Yes, Mr. Chairman. You actually bring up a very interesting point, which is that almost the new purchase price of something, and one of the shortfalls of GAAP accounting is the use of historical costs, and one of the anomalies is if someone were to come in and buy all the stock of BNI at today's market value, you'd write all those assets up to what they paid for it. Those assets are no different than we have today and so, I mean, you could argue that that's the value and that is nothing more than an accounting phenomenon that occurs called purchase accounting.

CHAIRMAN NOTTINGHAM: Right. We

may have an opportunity to explore that with our next panel because I know that was a point brought up in their statement.

But while I have you before me, Mr. Hund, I saw quickly passing over the screen when you were giving your presentation a 2007 BNSF CAPX number, some 700 million and something, I believe it was.

MR. HUND: I believe that's the expansion number.

CHAIRMAN NOTTINGHAM: Expansion number. Okay.

MR. HUND: Right.

CHAIRMAN NOTTINGHAM: And that looked like a lower number than the last year, is that correct?

MR. HUND: That's correct.

CHAIRMAN NOTTINGHAM: Is that a full 2007 plan expenses?

MR. HUND: Full 2007 plan. We've actually reduced our plan by a couple hundred million this year throughout the year as, to be quite frank, some of the traffic that we had anticipated as the year started has not materialized, and I talk about -- I talked earlier about the different businesses with specifically consumer products being down and industrial products being down. It's all about the risk in the business and the ability to adjust the capital.

CHAIRMAN NOTTINGHAM: That concludes my questioning.

Commissioner Mulvey, did you have any follow-ups?

COMMISSIONER MULVEY: No more at this time. Thank you.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey?

Thank you, panel. You're dismissed, but we very much appreciate your testimony today, and with that, we'll call up the next panel, Panel IV, Mr. Heath Watkin of Atticus Capital LLP.

Mr. Watkin, welcome. We're ready

when you are. Please proceed.

Panel IV: Other Interests

MR. WATKIN: Thank you very much, and thank you very much for the opportunity to present here today.

I'm here to represent the viewpoint of a major investor in the freight railroads. We've heard a lot of discussion about investors, what cost of capital assumptions and cost of equity assumptions they have.

I represent Atticus Capital LLP, I think a representative investor, again, but we speak for ourselves and as a large investor in the railroads, one of the things that's interesting to us is we infrequently talk about DCF or CAPM.

So, as much as the academic literature has spoken about it and I think many investors have learned it through their academic training, in practice what we debate is the final number, this cost of equity, and it's essentially our view, forward-looking, of what the expected returns should be on these businesses or any business we may choose to invest in.

So, it's from that context that I want to address my comments.

Essentially, we've three points to make, some of which have already been discussed here, but I just wanted to make sure they were well addressed.

First, substantial capital needs to be made in the railroad infrastructure. Specifically on the cost of equity, we think the cost of equity below 12 percent not only will disincent investment, Jim Young spoke about the declining curve, we actually think it will create a withdrawal of investment.

So, you might see not only not new projects being made but current investment in the infrastructure will get withdrawn, and I can elaborate on that a little bit in terms of how we think about that.

And then finally, again this has been brought up with replacement capital, the way we think about things and I think the way most investors think about things is measuring it first as the market value.

So, we talk about replacement costs. I think replacement cost is a goalpost, but it's by no means an answer, and I'll talk a little bit more about why we think that's so important.

So, first, I just wanted to address something because a lot of discussion has been made about the excessive or very large earnings of the U.S. railroads and we're investors in the railroads, so we obviously have at least, depending on how this hearing goes, a positive view of the opportunities in the rails, but I think it's important to put things in perspective and this is the way we look at investments. It's free cash flow, and it's the way that has been discussed here.

Essentially, this represents the money that's left over from a business. So, we take into account how monies are spent for investment and we take into account the profits that are generated and so you essentially end up with a fairly balanced view, and as you can see in this slide, just looking over the last 15 years, the rails have only just, literally in the last few years, started to earn returns, positive returns for their equity investors.

Furthermore, when you benchmark this versus the market as a whole, they're not even close to the market as a whole, and again we can debate the relative risks of that, but it just doesn't make sense to us to make any kind of broadbased statement that the railroads are earning excessive returns when they're significantly below the rest of the market, I think.

I think, given the very technical

nature of today's discussion, CAPM, beta, market-risk premia, I think it's helpful, and again from our perspective, we try to put things in context because we have dollars, dollars can flow to any different investment.

We have a lot of flexibility in how to invest, and I tried to indicate in this chart, which I believe you all have, at least a range of options that an investor has, and, you know, on one extreme, you have cash which yields a certain amount and on the other hand, you could argue, but maybe a venture capital, and what strikes us as -- what doesn't make sense to us is that the cost of equity for a railroad investment would be less than the cost of -- less than the return that an investor would expect on a bond.

Again, you have a substantially different risk profile and you have essentially a lower return. Again, so you essentially are investing more money at a lower return at a higher risk. It's not something they typically teach you in finance.

Finally, while we understand the Board's intent to focus on the cost of capital, we feel very strongly, as I said, that return investment needs to be considered in context, and in this regard, there was just a discussion with the railroad executives about the difficulties in doing this, but I think it's really important to understand, and Warren Buffett's a fan of stating, that it's really much better to be approximately right than specifically wrong, particularly when the stakes are so high and particularly when the deviations on each side are so large.

So, I'm just going to go through this example and this is the end of my prepared remarks.

I just show by purpose of illustration a hotel my hypothetical example, my great-grandfather would have given to our family, built in 1920, has certain depreciated value, and in the town over, there's another hotel built by Marriott in 1990, and this just, I think, illustrates why using historical cost can lead to the wrong conclusions.

Using substantially the same service offering, a hotel room for rent, substantially the same location, maybe one is the only hotel in the town and the other has some competition, but again individual consumers have some choice, but simply by using what the accountants tell you is historical cost to base your returns, you would get a room rate that's one-fourth. Doesn't make sense to us, and I think the railroads are in a very similar situation.

Some people -- we estimate at least a fourth or four times the value of what it would cost on a market base to value these assets and there's others that have estimated as high as seven, but when the orders of magnitude are so large, we think it's important, very important to consider this.

So, just in summary, we think substantial capital does need to be made. Cost of equity below 12 percent will not incent us and will actually drive us away from providing that capital to the railroads, and return investment must be made measured to the market value of the asset.

So, I thank you very much for the opportunity and be happy to take any questions you may have.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Watkin.

Your last point got me thinking about whether or not the railroads should get back into the pullman car or sleeper car business. It's been awhile.

Let me defer to the Vice Chairman. Would you like to lead off with any questions for this witness?

VICE CHAIRMAN BUTTREY: There's been a lot of discussion about the time period that should be used to make some of these determinations, economic determinations, and the year of 1926 seems to be the popular one.

We didn't choose that year or propose to choose that year, but there's a lot of things that's happened since 1926. You know, we had a Great Depression. We had World War II. We had a Korean War. We had a Vietnam War. We had oil embargo, and then the railroads were deregulated in 1980, almost totally deregulated.

So, there's been a lot of water over the dam since 1926, and it concerns me that we would use data and use an evaluation period that is that long and does not really reflect the real world that we live in today.

The world has changed in many, many ways. We here who live in Washington, D.C., certainly realize that. I'm not sure that's true in a lot of other places, but in any case, if you had to pick the valuation period for cost of capital, what period do you think would make a lot more sense from an investor standpoint?

MR. WATKIN: Well, I'll say all of those numbers state the obvious or historical, and as investors, we don't look at history much at all, except to give us some insight for potential events that may have happened.

But unless you believe that history is prologue, I don't think most investors weight history the way that CAPM model or potentially some of these other models do and so when we make our judgments, and I think the difficulty of being an investor is that in part you're a fortune-teller and in part you're looking forward, trying to figure out what the appropriate returns, given all these panoply of risks, and while history to the confusion about time frame is important, in reality, we use those as some beta points, but it's always forward-looking.

So, if we're standing here today, we have to figure out where things are going to be in five, 10 or 15 years as long-term investors and that maybe has some relevance to past history, but very likely, as you point out, the rules have changed, the games have changed, the players are different, the economy is different, you know.

China was not a force throughout most of that dataset, right? So, one major force is completely out of the dataset. You look at the structure of the railroads. Completely different today than they were before. You look at regulation. Completely different -- well, except for the last 25 years, prior to 1980, completely different today than it was.

So, you have so many major

deviations to base our decision, looking forward, based on those numbers. Again, we use it as a reference point, but by no means do we actually run calculations to look forward. Makes your job a little bit more difficult, but I'm trying to stand here to say that I think at the end of the day, most people are going to use this number as an expectation of what we would place dollars to invest.

So, Jim Young or any of his peers comes to us and wants to invest more rail infrastructure and that's what I'm hoping to convey.

VICE CHAIRMAN BUTTREY: So, I don't want to oversimplify it, but we either have a choice of looking backward or we have a choice of looking forward.

MR. WATKIN: Correct. And as an investor, --

VICE CHAIRMAN BUTTREY: The investors are looking forward.

MR. WATKIN: That's all we look at.

VICE CHAIRMAN BUTTREY: Okay. Thank you very much.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey?

COMMISSIONER MULVEY: When you look forward, you don't look forward as if you were born yesterday, however. I mean, basically, when you're looking forward, you're looking forward from the perspective of the knowledge developed in the past. So, you do have that as something to base your judgments on.

Would you say the railroads are a more risky or less risky industry than they were 25 years ago today? I'm sorry. Risky investment than they were 25 years ago?

MR. WATKIN: Well, at the precipice of 25 years ago, probably it would be more difficult to say. There's some very -- you know, you pick two endpoints, but if I were to weight it, say, five or eight years ago, I would say they're much more risky today, particularly I can list a few things and some other respondents have listed a number, but from our perspective, regulatory and legislative risk is much higher today than it ever was.

I think most people would agree and that can change the rules of the game. So, --

COMMISSIONER MULVEY: A lot of industries, of course, face regulatory risk in the sense of the environmental regulations and others which will affect their business. The automobile industry, for example.

Do you think that the railroads face significantly more regulatory risk or legislative risk than other industries?

MR. WATKIN: Not categorically across all but definitely across most.

COMMISSIONER MULVEY: Okay.

MR. WATKIN: And we look at major

industrial industries for sure. I believe that's the case.

COMMISSIONER MULVEY: Well, some of these risks are temporal in the sense that, you see more legislation finally comes out of this and the next Congress and you see how the Board finishes its rulemaking procedures and you have a new set of rules. Those risks at that point then go away. Would that be true?

MR. WATKIN: Again, it depends on now we come to the investors' time frame. So, as long-term investors, if we're looking five, 10 or 15 years out, ideally the longer we can invest, the more -- the happier we are. It's significantly easier to invest for a long period of time than it is for a short period of time.

COMMISSIONER MULVEY: And I thought you were a hedge fund basically, but you do feel you take a longer-term view than as ascribed to most hedge funds, is that correct?

MR. WATKIN: Correct. It's unfortunate that the term "hedge fund" has drawn certain connotations. We're an investment partnership and as fiduciaries, our investors expect that we'll invest the way we told them we would, which is we long-term fundamental investors.

We happen to be labeled a hedge fund and again people can interpret that how they wish, but our time frame and the level of effort and energy and hopefully cooperation with the companies we invest with is such that we believe the best outcome will come over that longer period of time.

COMMISSIONER MULVEY: Another hedge fund that's invested heavily in the railroads, especially certain railroads recently, is the Children's Investment Fund, and they have advocated or they have said that the railroads are, especially certain railroads, are underpricing their service and they should raise their prices substantially.

Is that the view of Atticus as well?

MR. WATKIN: The way I'd answer it is I think the railroads provide substantial value and it's very difficult to generalize because I'm sure there's some customers and clearly there's some here today that feel that the rates don't meet the value that they're being delivered.

COMMISSIONER MULVEY: They're not paying enough?

MR. WATKIN: There's people on the other end, and I think this industry, based on its history and based on the complexities of running so many different businesses to literally the back bone of the U.S. industrial sector and actual commercial sector, you end up with a huge range. So, I want to be careful not to give a blanket answer.

That said, I think there's

significant opportunity for the railroads to increase their levels of service and in that framework raise prices if the price meets the new level of service. Like all businesses, deliver more value, customers will reward you for it, and I think that's the opportunity we see and that's what we're concerned might not occur if this cost of capital calculation and real replacement cost discussion goes a way that might harm that investment.

COMMISSIONER MULVEY: Thank you very much.

CHAIRMAN NOTTINGHAM: Mr. Watkin, I've got a couple questions. You were here for the previous panel, I assume. I think I saw you in the audience.

You heard the discussion amongst the railroad executives that they basically did not come forward today with an industry proposal on replacement costs.

Can I assume as a large investor, you'll be chatting with them about that, and since it seems it's in your testimony, that's an important concept and we're, I think, open to looking at it in due course of hearing anybody's ideas, but we just haven't heard a lot of details.

MR. WATKIN: It's very difficult to do. So, we're the first to admit that. Again, we come from the standpoint that it's so divergent, that it needs to be taken into account or we're going to create the wrong incentives.

Again, if we believe that this industry doesn't need any more capital, this discussion is somewhat moot, but if we believe that the industry needs more capital and we want to attract the capital, to be using the wrong denominator in the return on investment will lead to the wrong end result and so we've looked at a lot of different ways that this has been solved and we've put some in our written testimony.

I think one of the better

examples of something we might propose, again we'll have to look at the relative strengths, but is the Australian Regulatory Transmission Authority that has done essentially a market value-based costing for those regulated assets, and so you don't take replacement costs which clearly, as the Commissioners have pointed out, is not a realistic assumption.

No railroad tomorrow and no investor expects the railroad tomorrow to replace 100 percent of their assets, but we do expect that every day they look at a given mile of track, a given locomotive or a given freight car, say how much is that car worth to somebody else, and when they're going to deploy it, we would like them to make the decision based on that market value, not the value that the accountants tell them because again they always have a choice.

They can get rid of a freight car or they add a freight car, but they always should be thinking about today's market value. It doesn't make sense to use what the accountant said.

CHAIRMAN NOTTINGHAM: Your testimony was interesting in that it did point out the ways that accounting standards and treatment can sort of possibly either be manipulated or have maybe distorting effects. You talked about the possibility of a merger, for example, or --

MR. WATKIN: I think I talked about the purchase account.

CHAIRMAN NOTTINGHAM: Yes. Can you elaborate on that?

MR. WATKIN: Sure. So again, I'm not an accounting expert. I would leave that to better experts to explain. But I am aware that in the purchase accounting of a set of assets that accountants write up the book value of the assets to the price paid. I'm being simplistic, but that's basically how the math works, and so I don't know if I would use but I could use, say, if Warren Buffett was allowed to and purchased 100 percent of Burlington Northern, the day after he purchased it, all the assets would be written up on Mr. Hund's books to the price -- the effective equity price paid and again from that day forward, the STB would then be looking at that number.

Nothing's changed. The exact same management, the exact same customers, the same rates, but yet you're now measuring it on a different denominator.

Again, I'm just using it to highlight the fact that accounting has a number of strengths, but I think most accountants will agree that there are many shortcomings and as investors, one of the things we in practice do is identify those shortcomings and make adjustments for them.

CHAIRMAN NOTTINGHAM: Let me call your attention to the handout that came with your testimony. You talk on Page 4, there's a table that's headed Market Spectrum of Risk Versus Return, and you show here that or you present here that railroads under Major Categories of Risk fall in your view as high-risk for liquidity -- oh, moderate to high for loss of capital, high in area of liquidity, high in area of legislative risk, low on inflation, moderate on interest rates and very high on catastrophic risk liability.

Looking at that, it calls my attention to the beta risk factor we need to be looking at in this proceeding.

What would you -- do you have any suggestions on the right beta number or range there? As I look at this, I would possibly come to the conclusion this should, you know, be higher than the sort of industry average of one, but we've heard some consensus in earlier panels that it's somewhere in the 8.5-ish range and so I just want to tease that out a little bit.

MR. WATKIN: And I think, I mean,

I can let the other panelists articulate this, but from what I heard, they were talking about a historically-derived beta and beta is -- again, I want to be clear that we don't use it in our analysis.

So, the output is what we use in our analysis or what would be the output of this. So, we think about how much we would invest and what return we would expect on that. So, I just want to put it in that context.

CHAIRMAN NOTTINGHAM: In other words, you do risk assessment all the time, but --

MR. WATKIN: Correct.

CHAIRMAN NOTTINGHAM: -- you don't go through the --

MR. WATKIN: We don't think about beta, but yes, if you want to draw an analogy, beta would be the best analogy in the CAPM model to what we use to evaluate risk. So, as a proxy for risk, yes, without question, they would be higher.

It doesn't make sense to us that I can invest in some major Fortune 10 companies, you know, let's say with a beta of 1 at a higher rate than 8.5 percent on one extreme and if anything, I would expect a greater return than those companies.

Again, I'm trying to put some goalposts there because all this discussion ends up coming with ranges, but as investors, we always have a single commodity, dollars, that we're trying to put somewhere at the best risk versus return and this is a simplified version of how we would look at the world and what's clear to us is that the goalposts are such that where the current CAPM model as proposed would line with the rails doesn't make sense.

You essentially can invest the same money at a higher return for lower risk. Case in point, Warren Buffett yesterday bought $2 billion of TXU bonds at an effective return of 12 percent. That was yesterday. If you go to him and ask him for $2 billion at a promised return of 8.4 percent for the railroads owning an equity investment where he may lose a substantial portion of his capital because he's an equity investor, it doesn't reconcile. So.

CHAIRMAN NOTTINGHAM: Thank you. Any other questions from the board members? No. Thank you, Mr. Watkin. You're dismissed. We appreciate your being here today and your testimony.

MR. WATKIN: Thank you very much.

CHAIRMAN NOTTINGHAM: We'll now call up our final panel, Panel V, Mr. G. Paul Moates from the Association of American Railroads, Mr. Nicholas J. DiMichael from the National Industrial Transportation League, and Mr. Robert D. Rosenberg, also from the Western Coal Traffic League.

Welcome, panel. I think we'll start with Mr. Moates. Mr. Moates, the floor is yours.

Panel V: Associations

MR. MOATES: Thank you, Mr. Chairman, Vice Chairman Buttrey, Commissioner Mulvey. It's always a pleasure to be in front of you and I'm sure it's more of a pleasure for you when I'm on the last panel. So, glad to get it going.

A couple of things real quick. I think this became clear as Mr. Romig and others addressed your questions about the specific railroad cost of capital numbers, but I do want to make sure the record is clear on behalf of all of us panelists. Some were giving you estimates of ranges.

Some of those companies may apparently in other contexts have disclosed their cost of equity and cost of capital numbers, but I think what they were trying to say in a nice way is they are under restrictions because of Securities and Exchange Commission rules about disclosing that kind of a number here or anywhere else if it hasn't been disclosed to investors before.

So, please understand that and don't think that those witnesses were trying to hide the ball from you.

A couple of points, if I may, just to start where you started this morning, Mr. Chairman. We have a lot of agreement here today, but I think, unfortunately, we may have some more disagreements perhaps, you said in your opening remarks, and let me see if I can flesh that thought out.

First on the CAPM methodology which you've proposed, that's why we're here, we now all know and I think generally agree there were some significant flaws in the original proposal. We don't say that to make anybody feel bad. That's the nature of a rulemaking and it's an opportunity for the interested parties to examine and comment on proposals and we have.

So, I think now we all realize in the risk-free rate and the experts agree that a 10-to-20-year T bond is an appropriate input.

On the beta, I think you're getting pretty close here in terms of some general agreements. I do think it's important to bear in mind what Professor Myers' slide showed or Dr. Stangle's, that beta in the last couple years for the railroad industry has been increasing significantly.

On the marketwide risk premium, which is the one that there is the most concern about, and Vice Chairman, you just expressed uneasiness, I think, about using a long period going back to 1926 or even 1900, as some of the experts suggest, that that perhaps isn't relevant to the experience of the rail industry, the economy in more recent periods.

My response would be that the MRP

isn't one of the components of this model. It's not something that in the abstract we are recommending and suggesting. You have selected the model. That is a key component of the model, and I respectfully submit that the experts that have been here in front of you today and other experts Professor Myers and Dr. Stangle have referred you to argue for a longer, much longer period of time than the 50 years you use, and I quickly would refer you, for example, to Professor Myers' statement in the AAR's opening comments on September 27, 2007, where he addresses this point at Pages 9 and 10 and says it's very clear that given what all the experts who addressed this in the field say that the 5.2 you originally proposed is too low.

So, I would urge you to take another look at that.

Mr. Chairman, what I meant when I said there isn't as much agreement as perhaps you suggested, I think I heard you say in your opening remarks that there's general agreement among all the parties to abandon the discounted cash flow model.

There is not, sir. There is not. We have not as ardently defended the single-stage DCF that the Board has historically used as we did perhaps at the outset of the proceeding. We do know how to read the election returns to some degree. We're reading the evidence that's come in.

What I think you heard here today, and I certainly hope you've gotten from our comments and you'll get from me now, is AAR's strong belief that a multistage DCF properly conceived and properly implemented is a key and must be a key component of what the Board ultimately decides to adopt as its standard when determining the proper cost of equity, cost of capital.

Unfortunately, I submit, and I think Professor Hodder said this twice in his remarks, this record does not contain sufficently fleshed-out and examined such a model. There have been discussions.

We have put in evidence explaining why we again submit that the two-stage DCF was used in your original Notice and the DCF that Mr. Crowley and Mr. Fapp submitted are significantly erroneous and generate values that are far from where they ought to be in a properly-implemented DCF, and that little slide that's up there now, just to get to something Dr. Stangle said I'd get to, simply depicts what the corrections, those two corrections that he talked about to your DCF and to -- well, to your DCF would do.

Those are the corrections to eliminate the double discount in years beyond the 21st year and to reflect the price appreciation from stock buybacks, not just stock dividends.

Your 7.2 becomes 11.8 and the source for that, by the way, you can correlate this, is to the Ibbotson book that Dr. Stangle had here, The Cost of Capital Yearbook, I love that, which is publicly available, and that is the number they have for the current period, and I also put up there, since it was on the same page, the CAPM number they have for this current period which is 11.1.

As an aside, Dr. Hodder said you shouldn't pay any attention to Ibbotson because it's not just the four railroads. He said it's eight. I'm not an expert, he is, but I read the book and I think it's seven and they weight them and the other three are the Kansas City Southern, the Genesee and Wyoming and the Providence and Worcester, and I don't think the Genesee and Wyoming and the Providence and Worcester are going to have a big impact on the averages.
So, I hope you all do take a look at that.

Transition. Again, there's been some discussion about transition here today.

We think if you're going to go to the CAPM or, as we would advocate, a combination of a CAPM and a properly-conceived and implemented multistage DCF, that you don't go there in one year.

You've heard from a number of witnesses about the shock to them and the shock to investors if you have actually gone from what has been since 1982 a value above 12 percent every year.

That is, this agency, the ICC and the STB, have never found the cost of capital number below 12.8 percent since 1982, and in your Proposed Notice which I understand, Mr. Chairman, is a proposal, it isn't a change, a final change, nonetheless, when that proposal came out initially and said 7.5 and then got corrected to 8.4, you could understand the basis for lots and lots of concern, not just at the railroads themselves but among the investment community.

We think those values, which are

getting nearly half of what the DCF, the single-stage DCF would have generated for that year, it's just too big a jump, and if you're going to go to anything that brings the number down, which seems to be where this is heading, we certainly hope not as far down as 8.4.

We think you need to give strong consideration to a transition mechanism, and as I think Professor Myers said in his written comments for this hearing, the key is as you transition to a proper outcome at the end of the day, maybe less what the actual mechanism is, it's where you're going to get to when you're done transitioning.

Mr. Chairman, you invoked this morning -- I'm sorry. It was Commissioner Mulvey invoked this morning a couple elements of the National Transportation Policy to kind of guide us here. I think he mentioned having accurate costs, for example, and fair, honest, and efficient management and those are important templates and touchstones.

I would like to remind the Board, and I'm sure the Board is mindful of it, that the NTP also charges you to permit rail carriers to earn adequate revenues and to foster sound economic conditions in transportation.

We submit this supports choosing cost of equity and cost of capital values toward the upper range of an M. Try that again. The upper end of a range of CAPM values and DCF outcomes, and I think Professor Myers endorsed that point as well and it may be one to save us in the short form.

I heard him say this yesterday when we were chatting about some of the things. The old adage of physicians, he said, sometimes applies to economists who are in the position to impact important outcomes like here and that is, first of all do no harm, and we really would hope that at the end of the day, no harm will be done, but that there will be an outcome that's appropriate for the rail industry and all of its stakeholders, including customers, including, importantly, customers of the associations like WCTL, which brings me to WCTL.

Why are they here, and why are they so exercised about this, and why are they spending so much effort?

I'd like to believe it's because they're interested in, you know, truth, justice, and the American way, and it's very important to get things right, and on some levels, I'm sure that's true.

The WCTL's members, as you well know, are large coal-burning electric utilities that pay rates to railroads to transport their coal. They bring rate cases. Those rate cases are significantly impacted by costs. Among those costs, importantly, are the costs of capital that we're here talking about today.

If they convince you to adopt a methodology that results in lower costs, lower costs of capital, lower costs overall, they're going to, they think, do better in rate cases and, frankly, depending on how far you go in that regard, you could actually be through this process expanding your jurisdiction by making more rates that today may not be subject to the 180 RBC threshold subject to it. I would hope that factor is given some consideration.

I won't go into any detail on the replacement cost methodology. Message received. Railroad industry clearly understands it. It is incumbent upon it to come forward with a proposal for your consideration and the consideration of other stakeholders.

All I can tell you is that is being looked at very seriously at the present time and I think the industry will move as promptly as it's in a position to present you something that we think is useful and helpful and not start the dance prematurely.

A couple of times today, Mr. Chairman, I think you made the point, well, if we go to the replacement cost methodology, you would never replace all of your assets. I mean, who would ever do that? A lot of this stuff is old. It may not be used as much.

Fair point. But I would say that at this point in time, as much as any point in the last 50 or more years in this country's history, more of the rail network is being utilized. More of the rail network, as you well know, is under great duress to be able to handle more and more traffic.

So, at this point in time, that problem might be a lot less than it would have been 10 years ago and certainly well before Staggers, given the great plant rationalizations that have taken place by all the major railroads over that period of time.

So, I don't think we are just going to throw up our hands and say we can't try it. It's going to be a hard nut to crack, but I think we have to make the effort.

Finally, nobody's talked about, and we're the lawyers, so I guess we're supposed to say a word about your last question about burden of proof, i.e., if whatever you pick here, if it's CAPM alone or, as we would hope and advocate, CAPM with a properly-conceived and executed multistage DCF, if in a given year, one of the models generates an outcome or a value that appears for whatever reason to some stakeholders to be out of line with not only the other model but with what they believe is the real cost of capital to the market that year, what should be the standard for coming back here and asking you to take a look at that?

Maybe that's off the table if you

go to what Commissioner Mulvey was suggesting this morning. It might be a five-year look-back, but even if you have a five-year -- maybe look-back isn't right, but a five-year look, even in those circumstances, I would urge the Board to consider including some kind of a provision for any parties, not just the railroads, to come in on a showing of reasonable evidence, substantial evidence or conceivably material error, although material error implies to me that you did something wrong with the model, and I'm not sure that would be the source of the -- of a very different value.

It might be something else going on. So, substantial evidence showing that you could decide whether it is substantial and whether you're concerned and perhaps if that happens, to give the parties an opportunity to file evidence to try to convince you why you want to do something different at that point in time.

But I think you are focused on, and I think your constituents, railroads, shippers and others, would appreciate a certain methodology as we can get, as long as we always have the chance to raise our hand and say we have a concern about what happened this year, can we talk about it?

Thank you.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Moates. We'll now turn to Mr. DiMichael. Welcome.

MR. DiMICHAEL: Thank you, Mr. Chairman.

The National Industrial Transportation League, whom I represent, is pleased to comment on the methodology to be employed in determining the railroad industry's cost of capital.

Getting right to the bottom line, the League supports the Board's proposal. We believe that the Board has made a careful and thorough review of both the techniques used by other federal agencies as well as in the academic literature in coming to its conclusion that a single-stage DCF model should be abandoned and that the CAPM procedure should be adopted.

We think reliance on the analyses performed by the Federal Reserve Board is particularly very sound. We think that the Board's CAPM proposal appears to much more closely mirror the judgment of the nation's financial community with respect to the financial health of the nation's rail carriers than the prior single-stage DCF model.

We agree with you, Mr. Chairman, that the comments in this proceeding indicate that there is wide agreement on the need for change and even agreement, we think, on many of the elements of the Board's CAPM proposal.

Norfolk Southern, as they've repeated here, notes that CAPM in its comments, Norfolk Southern notes CAPM is not an unreasonable choice and looks at its own cost of capital from a CAPM perspective.

AAR Witness Hubbard states that, in his comments, he understands the STB's reluctance to continue its use of a single-stage DCF model, and Witness Myers, in his comments, noted that CAPM is a "very useful methodology, widely used in practice by corporations that estimate or update their cost of capital."

In their comments, the AAR argues that the Board should consider a range of estimates on the cost of equity and adopt a point estimate for each year, and I think within the upper -- within the middle to upper portion of that range.

I think that such an approach would enmesh the Board in a continuing dispute as to where within the range the Board should prescribe the cost of equity. We think there's really, when you get right down to it, no principled way of determining just where in the range this cost of equity should be set.

We think the Board should not shade its cost of capital determinations to achieve any particular result. Whether these fears are rate cases in the future or investment for this or that, we think, frankly, the Board should simply call balls and strikes here, try to get the number right, take a look at a well-supported methodology, take a careful look at the inputs that go into it and come out with a rationally-supported decision.

Finally, we believe that the Court's key technical choices regarding CAPM are sound and supported by many of the comments. I'm not going to get into a lot of the technicalities. I think the experts have made many good comments on that, but just a couple of things.

I agree with Mr. Moates that the major disagreement here appears to be in the calculation of the market risk premium. The Board has used a market risk premium of 5.2 percent for 2005, based upon data over a 50-year period.

The AAR argues this period is too short, which allegedly biases the value downward, but if you look at the data provided by the AAR's own experts, it indicates that equity risk premiums have been dropping consistently for the past 25 years and extension of the period back to 1926 would encompass very different financial conditions, Vice Chairman Buttrey, that you've noted here, such as the Great Depression, World War II. You're looking back a long, long period of time.

Significant that KCS's witness from the investment banking group at Morgan Stanley calculated the current cost of capital for KCS using a prospective market risk premium of only 4 percent, well below the Board's market risk premium of 5.2.

Finally, just a brief comment on the replacement cost. There is, as various people have noted here, a large number of disputes that would enmesh the Board in a large number of very difficult judgments, including how to determine what existing investment would actually be replaced, and I think our view here is very similar to DOT's, that the Board, using the current -- that the existing -- that the use of the existing investment base is sound. Combine that with the replacement cost in stand-alone cost cases is a good balance.

We appreciate this opportunity to comment.

CHAIRMAN NOTTINGHAM: Thank you, Mr. DiMichael. We'll now turn to Mr. Rosenberg, who I know is glad to have the last word.

MR. ROSENBERG: Absolutely. Thank you, other members of the Board, for this opportunity to appear before you to address the railroad industry cost of capital.

I don't think I can speak as quickly and cover as much ground as the AAR's counsel, but there are some points I want to try and respond to, if I may.

First of all, you know, I have thought that it had been clear that there was no support for single-stage DCF model that the Board and the predecessor commission have used in the past.

Hearing the most recent comments, I'm not quite so sure. I would point out that for 2006, the AAR proposed, I believe it was, a 13.8 percent overall cost of capital. That's not the cost of equity. That's the overall cost of capital.

That is even beyond the range of the cost of equity that the railroad witnesses/representatives were able to specify and they also were not terribly clear exactly where it comes from, how it's defined, to what extent tax benefits may or may not be factored into that.

I think it should be clear that the 13.8 percent and that methodology is not worthy of further consideration.

What the railroads seem to be having now as their fallback is the Ibbotson three-stage DCF model, but that produces a higher figure but essentially what it does is it takes the five-year growth and assumes that it will continue for 10 years. I believe that the figure that's currently being used is 15.19 percent. That's even higher than what the AAR's 13.8 percent used for its five-year growth rate.

I think Mr. Moates also referred to whether or not there were eight or seven railroads. There were eight railroads as of, I think, June of this year. Pioneer dropped out. Pioneer is now trading in the pink sheets. So that should give you some indication of the lack of transparency in the issues associated with the Ibbotson approach.

Also, we would agree that the 5.2 percent equity risk premium that the Board had calculated is reasonable. In fact, it's viewed on a prospective basis which is what makes sense. If we're valuing things for an investor today, it's probably on the high side.

One thing that was in Mr. Moates's written testimony, and I don't think he had time to get to it, but he had talked about the various rates, return on equity calculated for electric utilities, including Western Coal Traffic League members, and if you look at that, it shows that for 2005, for electric utilities, that I think the -- excuse me -- the figures I recall was about 10.75 percent.

However, it's important to keep in mind that that reflects an equity cap ratio of 56.73 percent and I'll spare you the details, unless, of course, you want to get into them later, but if you take that and if you unlever the beta and then lever it back to reflect the railroad's capital structure, the cost of equity that you'll come up with is 8.47 percent, which is virtually spot on with what the Board calculated in its Notice of Proposed Rulemaking.

So, from our perspective, we would submit that the Board's calculation is not only in the ballpark, it's pretty much at homeplate.

Also, he referred to the National Transportation Policy, and I believe it says that the railroad's returns ought to be adequate and that's adequate and not more than adequate. Anything more than adequate amounts to a subsidy and it will come at the expense of the customers whose rates are subject to regulation or at least potentially subject to regulation.

In that regard, it's worth highlighting that most of the railroad's traffic is not subject to regulation and while lowering the cost of equity would presumably lower the jurisdictional threshold somewhat, it still leaves the bulk of the traffic not subject to regulation and thus these concerns that, you know, finding some of the railroads, perhaps all of the four major railroads soon to be revenue adequate would not suddenly impose a cap on their overall earnings.

Also, some of the speakers, particularly for the railroads, have spoken of the need to avoid an abrupt change in the cost of equity and the cost of capital. They were pretty silent when the cost of capital went up from 10.1 to 12.2 percent in 2005 and they had no problems at all with the cost of capital going up from 12.2 percent to a proposed 13.8 percent for 2006. So, this concern with abrupt change seems to be a door that swings only one way.

Give me one moment and maybe I

can end a little bit early for you.

I also note that the railroads have been rather belated. I guess I also wanted to comment that the AAR counsel says here that Dr. Hodder had supposedly criticized the Crowley-Fapp DCF methodology. I think that was more concurring with the technical errors in the Board's two-stage DCF as opposed to what Mr. Crowley and Mr. Fapp have prepared and, indeed, Dr. Hodder back in December of 2005, in his written testimony, put forth various examples of a somewhat similar multistage DCF analysis.

So that's something that has been on the table for quite some time, and it seems in various specs that the railroad's approach and tactics has been to protract this proceeding and to rebuild their position slowly and indicate that there's additional study that's needed.

We submit that this matter has gone on for too long and something constructive needs to be done shortly and a party should not be rewarded for tactics of delay, and then in terms of speaking of delay, that seems like a good point for me to conclude and thank you for all for the opportunity to appear before you.

CHAIRMAN NOTTINGHAM: Thank you, Mr. Rosenberg.

I will defer to Commissioner Mulvey to start off with questions, if he'd like.

COMMISSIONER MULVEY: Thank you, Chairman Nottingham.

Mr. Rosenberg, in your comments in developing the CAPM model as an alternative to the DCF approach, you originally endorsed Ibbotson's most current estimate of the long-term equity risk premium at 7.1 percent. Now you say that the 5.2 percent rate calculated by the Board appears reasonable.

Why the change, and can you

reconcile this change in view?

MR. ROSENBERG: Well, there are several factors. I'd first say that, at least from my preference, I prefer that the comment had been directed to our experts, but part of it is that the original submission was put in in a compressed time frame and we wanted to come up with something that was standard and realistic and we believe we did that and we believe it showed that something was seriously amiss in what the AAR proposed and what the Board adopted.

Since that time, there's obviously been the opportunity to devote more time and more resources to the matter, and we thought about things further and that's what I think people should do.

COMMISSIONER MULVEY: Mr. Moates, some testimony has suggested that we develop a range of estimates and that we choose an estimate of the cost of equity at the high end of the range, but doesn't that cause a problem for us in the sense that we do have to pass muster with the courts, as Mr. Buttrey pointed out earlier, and if you choose the middle of the range, at least that's intellectually safe, even if it's not perhaps the best number.

Once you go above the median or the mean into some place in the high end, that causes us to be declared arbitrary and capricious and that gets back to the courts saying you can't do that.

Could you comment on that?

MR. MOATES: Yes, that would be a concern and we'd share it if you were at the very upper end of the range. I hope I didn't suggest that you should be and I know that Professor Myers and Dr. Stangle didn't. Professor Myers said he would recommend something at least at the middle of the range and a little beyond that would be safer for all the reasons you've heard here today, that this is imprecise. It isn't a science.

We keep talking about estimates, you know. The gentleman before from Atticus said the investors have their own way of deciding what that number is, but we're talking about it for a very specific known purpose that this agency employs, and in those circumstances, I think we would err a little bit above the middle, but I am not suggesting, I don't think the AAR is suggesting, that you go to the very upper end of the range.

I would like to make one comment, if I could be permitted, about Mr. Rosenberg's response to your question because I was going to make this point myself.

Twice today, maybe more, at least twice, I heard Mr. Crowley refer to his market risk premium suggestion now of 5.2 as reasonable. He also referred to a 10-year beta as reasonable.

Well, I know people do additional work, Mr. Rosenberg, and I'm not, you know, denigrating that effort, that they may have changed their views, but we have to recognize that in September when they put in their opening statement, he described 7.1 market risk premium, I'm going to quote here, "is widely considered the best estimate available." Not a reasonable estimate, the best estimate.

Our experts think it is, too, and we think Mr. Crowley was right the first time.

MR. ROSENBERG: If I could be permitted to respond, when he talks about our opening evidence, what I think he's really referring to is the Western Coal Traffic League's reply comments on the 2006 cost of capital and what we were trying to do there, I think, was quite explicit, is that we were trying to be consistent with what we had done concerning the 2005 cost of capital, and if we want to go further and be interested in being consistent, I'd point out that the AAR attacked Mr. Crowley's original analysis of the 2005 cost of capital using CAPM as being completely unrealistic and fundamentally flawed and now they seem to find some endorsement of their position.

COMMISSIONER MULVEY: The Board used the CAPM model as proposed in the NPRM came up with the cost of capital of 8.5 percent which is much lower than what Western Coal Traffic League used in the past, certainly much lower than what the AAR believes should be used, and also the representative from Atticus before said that the investors want at least 12 percent if they're going to invest in the railroads.

Now, many of your companies in the Western Coal Traffic League, the utilities, et. cetera, many of them are regulated industries, if they fall under 8.5 percent of our cost of capital to be inadequate to attract investors?

MR. ROSENBERG: Thank you for

that question. If you'd give me a moment, Mr. Fapp will pull up a slide and this is what I alluded to briefly in the testimony and I don't know if it's fully legible, but Mr. Moates, in his written testimony, had shown that the average ROE for the electric utilities in 2005 was 10.75 percent. That's the average of values prescribed by the state public utility commissions and what I believe the retail rate cases for electric utilities.

That reflects an equity cap ratio of 56.73 percent, meaning that equity is a little less than 50 percent of the total capital structure.

In contrast, the railroads have an equity of 69.6 percent, and if you read Dr. Myers' statements where he criticized the Western Coal Traffic League's comments on the capital structure, he said that it's a wash because, as you increase the leverages, as you increase the debt, the cost of equity goes up and that's exactly what the calculation with a levered beta does.

So, what we did on this sheet and we'll submit it later and submit it to the Board to be posted is we took that 10.75 percent, we used the STB's inputs on the risk-free rate and the equity risk premium and then we unlevered the beta and then we levered it back to reflect the railroad's capital structure and the cost of equity we came up with was 8.47 percent, again the figure that the Board calculated.

So, doing the same calculations and just adjusting the equity goes from this supposed higher figure for the electric utilities to the figure that the Board calculated for the railroads.

Now, if anyone's curious, I also did the calculation using a 7.1 percent equity risk premium. Of course, you get lower betas to come out at the 10.75 percent, but the figure I came up with was about 8.61 percent. So, it's not terribly sensitive to that at all.

So, the answer is if you give the electric utilities the same capital structure, it becomes the same figure.

COMMISSIONER MULVEY: Okay. Are the railroads more or less risky than the electric utilities which have a guaranteed rate of return?

MR. ROSENBERG: I don't think that the electric utilities would claim to have a guaranteed rate of return, particularly --

COMMISSIONER MULVEY: A target rate of return at which their rates are adjusted to try to meet any rates.

MR. ROSENBERG: Right. Well, I point out that they also have demanding prudency reviews. They also have a meaningful use and useful test. They also have a duty to provide reliability that far surpasses what the railroad industry supplies, at least to its coal customers.

So, you know, I would think if you want to look at the beta, which is, I think, the relevant measure of risk when you're dealing with CAPM, then I think they come in fairly close. I think we put in data earlier that indicated that the railroad was a little bit less, but then you have to start looking at levered versus unlevered betas.

I'd also mention, if I may, that, you know, the Atticus Capital presentation of risk was interesting, but it certainly did not correspond to the distinction between systematic and unsystematic risk and diversifiable and non-diversifiable risk that's captured in CAPM.

COMMISSIONER MULVEY: Thank you.

MR. MOATES: I would make one comment on your question. Utilities don't have to transport chlorine.

COMMISSIONER MULVEY: That's true. Although utilities do have some chlorine and other hazmats at the plant in order for the scrubber to work.

MR. ROSENBERG: Right. What you have is scrubbers. If you start looking in the transformers, you get polyvinyl chloride spills and they have their own hazmat hazards as well. So, you know, there are those sorts of risks everywhere, and I should also mention that some of those utilities have nuclear power plants, if we want to start talking about risks, too.

COMMISSIONER MULVEY: Both points are well taken.

Thank you.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey, questions?

VICE CHAIRMAN BUTTREY: No questions.

CHAIRMAN NOTTINGHAM: I've just got a couple.

Mr. Rosenberg, I recognize that your association is comprised of a pretty diverse group of companies around the country and they don't always probably check in with you in advance of when they submit various filings and there are different matters before their state regulators and other regulators, but the record seems to indicate some inconsistencies in that vein. I'm sure you came today prepared to address what is in the record.

Can you do so for us as to why several of your members would argue basically contrary to what you're arguing today in other regulatory venues and just how can we kind of reconcile that?

MR. ROSENBERG: Well, I haven't reviewed all of the filings. I suspect parties that are regulated argue all sorts of things in the regulatory proceedings as the AAR has done here.

You know, what I would point out again is let's look at where those decisions have actually come out and again that's the 10.75 percent with about a 50/50 capital structure. Let's take those numbers that the regulators came up, let's adjust it to reflect the railroad's capital structure, and again you come out at the same figure that the Board derived on its own acting independently.

CHAIRMAN NOTTINGHAM: Now, Mr. Moates, I had a little trouble -- well, I don't know if I had trouble, but I found your testimony interesting.

If I could summarize it, and I realize this isn't exactly what you said, but you seem to say you weren't -- there isn't as much agreement in the record as others, including me, I think or surmise, that you're not sure that you have any problem with the pre-existing cost of capital calculation methodology, that that might be okay or not, given the record before. So, I think there was some vagueness there. You weren't really ready to necessarily commit to moving beyond that.

You did suggest, if I followed you correctly, that supplementing a CAPM approach with a multistage DCF, if we were to try a new approach, would probably be preferable to not doing so, but then you were quick to say that there's not enough information on the record to even get close to doing that right now.

That, combined with something I heard one of your expert witnesses say about the record not being adequate, I started having visions of us being together every Christmastime for years to come.

Is that what you're after here? You just enjoy this so much, you want to relive it?

We had a hearing last January. The record is voluminous, and I would expect a little more, I guess, if you do feel that a certain type of cash flow-oriented three-stage DCF model is useful. I would have expected you to come to here today to talk about it in detail, not to say, well, the record's just not -- it would be nice, but the record's not sufficient, so we just really need to drift along as we have.

Do you have anything to say to that?

MR. MOATES: I do. I would love to see you every Christmas but not here. Perhaps my opening remarks were so broad-ranging and so fast, I wasn't as precise as I should have been.

We recognize, I thought I said this, we, the AAR, recognize that the single-stage DCF, you know, may have outlived its usefulness in this environment. I reference now again Professor Myers and Dr. Stangle's reminding us where we were 20 or 25 years ago and the wheel turns.

In that regard, we feel very strongly that the CAPM alone, even with the inputs corrected and made appropriate, as we have discussed here today and in our testimony, it would be inappropriate to adopt that as the sole standard. We think that the other standards should include a DCF, not the one you're using today. Some sort of properly-implemented multistage DCF.

With all due respect, I did not come here today prepared to address in detail multistage DCFs, in part, because I'm a lawyer, not an economist, and the questions about the multistage DCF showed up in your Notice for this hearing a week ago. They weren't in the Notice of Proposed Rulemaking.

I wrote down two comments today that Professor Hodder made because I agreed with him and, Professor Hodder, if I get a word or two wrong here, I apologize, but I think I'll get the spirit of what you said.

At one point, he said we didn't view the Board's mandate to be to explore the best multistage DCF model and later on in his testimony, he said if the DCF is used as more than a check, it needs to be looked at more carefully.

We agree with that. We agree with that and no, we're not trying to delay the proceeding unduly, but I would point out that the Notice just came out in August. Yes, we had a hearing last February to start talking about the issue because of WCTL's submissions in Ex Parte 558.

You had a witness in February from the Federal Reserve who told you about the amount of time that institution took to analyze CAPM and all the implications for its purpose which, at least in my view, while important, were not as profoundly important as the purpose here.

My recollection is they were using it to price certain services that the Fed provided to its member banks and they kind of wanted to have, you know, a fairly accurate number, but it's not the same as a number that's going to have the impact on rates and revenue adequacy that your determination here would have, which is my way of saying if we need to take a little more time, we can do this quickly.

I'm not talking about another year, but if we need to take a little more time, and I think we do, for the parties, all the parties, to submit directed testimony towards the properly-conceived and implemented multistage DCF to be used for the CAPM, we ought to do it and to be very precise in response to the question about going to court and things being arbitrary and capricious, my view would be that if you don't do it, there's some real risks with just going to the CAPM alone. I'm not in a position to say here today we wouldn't contest that.

CHAIRMAN NOTTINGHAM: Mr. DiMichael or Mr. Rosenberg, would you care to speak to that issue of whether or not the record's ready to move forward after today or do we need to go through some type of additional process?

MR. DiMICHAEL: It seems to me if the Board is going to adopt a CAPM and if they use a multistage DCF as a check, the record is clearly sufficient.

It seems to me what the AAR has done here is try to defend the single-stage DCF for a long period of time. Having been forced to move, they then have not put in evidence that the Board needs if they're going to do a multistage DCF as part of the actual standard, and I think that to say the Board should wait further in that circumstance is just really not correct.

It seems pretty clear that the single-stage DCF the Board has right now is not accurate and the Board needs to make the change.

CHAIRMAN NOTTINGHAM: Mr. Rosenberg?

MR. ROSENBERG: Several points. Right now, the Board is using -- its most recent cost of capital is 12.2 percent. The railroad representatives say they use 10 to 12 percent. The figure is too high. It ought to be addressed. It shouldn't be left lingering.

The proposal put forward in the Notice of Proposed Rulemaking was to use the CAPM. I think we said, and the record indicates, that it's a reasonable calculation and it would be responsible to use it.

We, like others, think that using the multistage DCF provides a reasonable check and, indeed, the analysis we put forward confirms the reasonableness of the CAPM approach.

So, we think it's ready and again, you know, to the extent the AAR has something more to bring to the table, they should have brought it forward in their written comments. They should have brought it back to the Board last December so we could have considered it for the February hearing.

You know, it's in their interests to drag this out, but they shouldn't be indulged beyond the point they have been, frankly.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Mulvey?

COMMISSIONER MULVEY: I have a couple more questions.

Mr. Moates, can you give us some examples of agencies or organizations that calculate the cost of capital using the DCF model and multistage model that you're recommending here, that is, using the free cash flow instead of dividends with a growth rate that tapers down to the long-term growth rate of the economy?

MR. MOATES: I can't do that sitting here, but I would welcome the opportunity to try to submit that to you.

I know the FERC uses, as you do, a DCF model. I don't know about all the components, as you just addressed, but I think you said earlier we've got a few additional questions for some of the experts.

COMMISSIONER MULVEY: I did.

MR. MOATES: Maybe we can include that in the list of questions because I feel unprepared and not qualified to try to respond to that.

COMMISSIONER MULVEY: Okay. We also used a 10-year period to try and forecast the risk-free rate of return and even though it's typical to use a shorter-term rate, but the WCTL and the AAR both suggested we use a 20-year Treasury bond rate to calculate the risk-free premium.

It's my understanding that we don't have Treasury issues of 20 years that go all the way back.

How would you fill in the gap for all those periods when there weren't 20-year Treasuries out there to use for calculating the risk-free premium?

MR. ROSENBERG: My understanding, and again it's probably better directed to the economists, is that you can look at, for those periods of time, -- that period of time, I think it was less than 10 years, I believe you can look at the yield-to-maturity on the 30-year bonds that were still outstanding and come up with a decent figure.

There was some question as to whether or not, you know, the Board had done the calculation correctly in its workpapers and trying to figure that out was compromised by or impeded a bit by the use of the CRSP data.

I think the view of our experts was that it was done properly. I think the AAR disagreed, but there is a calculation that you can do and you come up with a reasonable surrogate for what the figure is.

COMMISSIONER MULVEY: Thank you. Do you have anything more? Yes?

MR. MOATES: We think the 20-year

T bond data is generally available back to the '20s, and Professor Myers just advised me of that, but again let's include that response.

COMMISSIONER MULVEY: Okay. We had thought there was some gaps in the data. There were some time periods for which there weren't 20-year bonds available. So, we'll check that out.

MR. MOATES: They're nodding yes, that may be true.

COMMISSIONER MULVEY: Okay. Thank you. Thank you very much.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey, any questions?

VICE CHAIRMAN BUTTREY: No.

CHAIRMAN NOTTINGHAM: We will get ready to wrap up momentarily. I do have a couple of items I wanted to mention.

We will follow up, so stay tuned, with an appropriate Order on what, if any, follow-up evidence we might need here and also when the record will close. At this point, the record will remain open for Commissioner Mulvey and others to submit questions, and we'll follow up with an appropriate Order.

We do have a special occasion to note today. It's bittersweet to the Board. One of our longest-serving leaders from the career ranks, who's a very high-profile and valued person at these hearings, Vernon Williams, our secretary, and he doesn't know I'm going to say this, so he's probably not happy, but he's actually announced his retirement on January 3rd, and unless any of you in the room or others shock us with something, an emergency, this will be our last hearing between now and January 3rd, and so it will be the last time we have this venue to recognize Vernon.

He joined the ICC back in 1972 when he worked in the Office of Proceedings until 1984. He did a short stint in the private sector, returned in 1993 as an associate secretary and was appointed secretary of the ICC in 1994.

Vernon has the distinction of being the last secretary of the ICC and the first secretary of the Surface Transportation Board. He also was appointed to the position of the Equal Employment Opportunity Director in 2002.

He has served the ICC and the STB for 26 years and we appreciate his service and wish him well in retirement and just wanted to acknowledge that and thank you, Vernon, here while we are here together at a hearing, and I'm sure my board members, colleagues, join me in wishing you all the best in retirement.

MR. WILLIAMS: Thank you very much, sir. I enjoyed serving under you. Thank you.

(Applause.)

CHAIRMAN NOTTINGHAM: And with

that, this hearing is adjourned.

Thank you.

(Whereupon, the foregoing matter was concluded at 2:03 p.m.)