UNITED STATES OF AMERICA

+ + + + +

SURFACE TRANSPORTATION BOARD

+ + + + +

PUBLIC HEARING

+ + + + +

METHODOLOGY TO BE EMPLOYED IN DETERMINING THE

RAILROAD INDUSTRY'S COST OF CAPITAL

EX PARTE 664

+ + + + +

THURSDAY

FEBRUARY 15, 2007

+ + + + +

The Public Hearing convened in Hearing Suite 760, 1925 K Street, N.W., Washington, D.C. 20423-0001, pursuant to notice at 11:00 a.m., Chairman Charles Nottingham, presiding.

SURFACE TRANSPORTATION MEMBERS PRESENT:

| | |
|---|---|
| CHARLES NOTTINGHAM | Chairman |
| DOUGLAS BUTTREY | Vice Chairman |
| FRANCIS MULVEY | Commissioner |

PANEL I: GOVERNMENT

GREGORY L. EVANS — Board of Governors of the Federal Reserve System

PANEL II: Interested Parties

G. PAUL MOATES — Association of American Railroads

BRUCE E. STANGLE — Association of American Railroads

ROBERT D. ROSENBERG — Western Coal Traffic League

JAMES E. HODDER — Western Coal Traffic League

CHARLES W. KING — Snavely King Majoros O'Connor & Lee, Inc.

JOHN FICKER National Industrial Transportation League

I-N-D-E-X

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

11:02 a.m.

CHAIRMAN NOTTINGHAM: Good morning. We'll begin the hearing. I appreciate everyone's flexibility this morning between the weather and school closings and travel problems. We thought it was the better course of caution to delay the hearing by 90 minutes. And so we are beginning it now at 11 o'clock. We appreciate the witnesses and others' patience as we work through this very important topic.

Welcome also, to what should be, we very much believe will be, the final hearing, to be held here in this building. As many of you may have heard, and as was mentioned at our last hearing, the STB is approaching a long planned relocation. And that should happen at the end of this month. And this building will be vacated and so we look forward to welcoming you in the future at our new location at 395 E Street SW.

Today's hearing focuses on the methodology that the STB uses to calculate the

Railroad Industry's cost of capital. The subject of an Advanced Notice of Proposed Rule Making issued by the Board in September 2006. Some parties believe that our current method overstates the Freight Rail Industry's cost of capital.

I've come to learn just how important the cost of capital calculation is, both to the work of the Board and to the Rail Industry and its customers. It is relied upon in many regulatory proceedings including those proscribing maximum reasonable rate levels, setting compensation for disputed trackage rights fees in the proposed abandonment of rail lines, and in our rail costing methodology.

Perhaps most significantly, it is relied upon in the Board's Annual Revenue Adequacy Determination. A finding that has received even more attention in recent years.

I am pleased to see here today representatives from the Federal Reserve to discuss its method of calculating cost of capital. I'm looking forward to hearing why the Federal Reserve chose the method it now relies upon.

I'm sorry to report that the witnesses from the Canadian Transportation Agency, the CTA, will not be able to be here today to testify as planned. I understand that their flight was cancelled, and they were not able to get another flight in time to attend the hearing today. Nevertheless, the CTA's comments will be considered as part of the record, in this matter.

I'm also looking forward to our second panel where we have experts with different views on the methodology that should be relied upon by the Board.

I hope that by having the opportunity to probe this issue with you together on one panel, we'll have a productive dialogue.

As I mentioned in my, at the beginning of my remarks, we will be relocating to 395 E Street SW, within a few weeks. Right now it looks like we'll be officially closed for normal business operations at this location as of 5 p.m., Wednesday, February 28th. And reopening at the new location on Monday morning, March 5th. We have put out a press release detailing the impacts of the move on our operations. And we will issue another release, prior to the move, letting you know how to reach us, should an emergency come up while our normal business operations are suspended. We'll keep our website updated with the current information as well.

Now before we begin, let me just take a few minutes to review a few procedural points about today's hearing. We will hear from panels, with breaks, as appropriate. Although it's my hope that we can get right through without anything in the way of a long break. We will hear from all the speakers on the panel, one at a time.

Speakers are, speakers our timing and light system that you may be accustomed to, is not operating today. So don't worry about that.

You will not be seeing the red and green light you might be accustomed from prior hearings. We will do our best though to keep time the old fashion way, in the time that you've been allotted. And I will try to keep an eye on the clock as well and let you know if it's time for you to wrap up.

After hearing from the entire panel, we will rotate with questions from each Board Member until we've exhausted the questions. Consistent with Board practice, we will allow all the witnesses on each panel to make full presentations before the members ask questions.

Finally, just a reminder to please turn off any cell phones. I certainly look forward to a very interesting day of testimony.

And with that, I will recognize Vice Chairman Buttrey for any opening statement he may have.

MR. BUTTREY: Good morning Mr. Chairman. Good morning to the people here today for the hearing. Looking forward to the testimony. And I have no formal opening.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey.

MR. MULVEY: Thank you Chairman Nottingham. And good morning and welcome to our panelist from the Federal Reserve Board, shipping and railroad organizations, analysts and guests.

I'm pleased today that we have convened this hearing on the cost of capital. The Board's purpose in calculating the cost of capital is primarily for use as a benchmark for determining whether the railroads are revenue adequate or not. In examining our methods today, we are fulfilling several Board mandates and policy objectives.

One is to periodically review our cost accounting rules, and make changes in those rules as required. Another is to ensure the availability of accurate cost information in regulatory proceedings. And yet another is to encourage honest and efficient management in railroads. It is important to note that the approach we take in calculating the cost of capital not only determines railroad revenue adequacy, but also has implications for our rate cases, abandonments, and for the Uniform Rail Costing System or URCS.

The ICC adopted the Discounted Cash Flow Approach approximately 25 years ago. And as such, perhaps the more appropriate nquiry today is not whether or not it was the best approach at that time, but rather, is it the best approach today? There have been numerous advances in finance theory over the last few decades, especially on our ability to understand and to empirically estimate and measure risk. And those advances need to be taken in to account in the way the Board approaches measuring the cost of capital for the railroad Industry.

Today's hearing will explore the arguments made by some, that our current method, the Discounted Cash Flow Approach, is seriously flawed. And that we should consider alternatives.

One approach to addressing the critiques, would be to change how we conduct the DCF Analysis. Another approach would be to replace our DCF Analysis entirely with the control asset pricing model (CAPM) Methodology. And yet another approach would be for us to combine certain elements of both or to average the results of the DCF and CAPM analyses.

I personally am not wedded to any specific approach. Rather, I simply want to ensure that we are using the most accurate and acceptable method today. In that vein, I am eager to hear today's testimony, and to engage in a dialogue with the witnesses.

On a personal note, today marks several changes. As Chairman Nottingham mentioned, this will be our last hearing in this room. We've had ten good years of hearings in this room, but we're looking forward to our new quarters.

And it's not only our last hearing

here, but it's also the last hearing for one of my staff members, my counsel, and long time colleague, Amy Scarton who will be leaving us to go work again for the United States Congress. I'm sure, we all wish her well and look forward to seeing her career progress over the next few years. So thank you Amy for all you've done for for myself and for the for STB over the past few years.

CHAIRMAN NOTTINGHAM: Thank you Commissioner Mulvey. And I know that Vice Chairman Buttrey and I certainly want to associate ourselves with your remarks about Amy Scarton. She will be very much missed her and has provided outstanding service to the Board. We wish you well Amy.

We're very delighted today to have a colleague from the Federal Reserve with us, Mr. Gregory L. Evans, the Assistant Director of the Division of Reserve Bank Operations and Payment Systems. And it's, without further ado, the floor is yours, Mr. Evans. Welcome.

MR. EVANS: Thank you. I'd like to say thank you for inviting me to discuss the Federal Reserve's experience in using various models to calculate return on equity.

Over the past 25 years, sounds like similar to you, we've considered this topic in depth. And I hope that some of the lessons that we've learned and conclusions that we've reached, will be of some assistant to you, as you consider your approach.

My written testimony, of course, contains a much more complete summary of our experiences and the frame work in which we use this information. But in the interest of time, I will limit most of my comments this morning to our recent adoption of a CAPM only approach to calculating a target return on equity for the Federal Reserve's price services.

First it might be helpful for me to explain briefly why the subject of calculating return on equity is so important to the Federal Reserve. The Monetary Control Act of 1980 requires us to establish fees for our price services, in such a way that fosters competition from private sector service providers while at the same time ensuring an adequate level of such services nationwide. Over the long run, we must establish fees for price services on the basis of all direct and indirect costs actually incurred in providing them services, as well as, I imputed costs.

Imputed costs include financing costs, return on equity, taxes, and other expenses that would be incurred if it were a private business firm providing these services, rather then the Central Bank. These imputed costs, including the imputed return on equity, are collectively referred to as the Private Sector Adjustment Factor or PSAF, which we estimate annually. And I will use PSAF, and please forgive me for the acronym in order to shorten this.

Calculating the PSAF, is a forward looking practice that involves estimating the book value of Federal Reserve assets and liabilities to be used in providing price services during the coming year. And imputing those other financial statement components, such as equity, that would exist if these services were provided by a private sector firm and the banking industry. We then calculate a cost of equity for the price services as a whole, by applying an estimated private sector return on equity, to the dollar amount of that equity.

Determining an appropriate target return on equity for our price services and in particular identifying suitable private sector peer group has been one of the most challenging aspects of calculating the PSAF. For the first twenty years the Federal Reserve calculated a target return on equity from consolidated audited financial data for the nation's largest bank holding companies, on an equally weighted average of the ratios of each bank holding companies net income to it's average book value of equity.

While we recognize the limitations of

using bank holding companies as a peer group, they were considered to be the most reasonable proxy at the time because their operations most closely resemble those of our price services. They often competed with us in providing payment services. And they had audited financial data that was publically available in a forward and appropriate sample size.

Eventually however, other finance theories began to gain broader industry acceptances. And changes in the bank holding company activities weakened the comparability of this peer group, to our price services. Leading us to consider changing our approach. In particular, we sought to eliminate or at least diminish a number of inherent weaknesses in the accounting based approach.

So beginning with the 2002 pricing process, which happens in Fall of 2001, we adopted an equally weighted Three Model approach, using a combination of the existing Accounting Base Model and adding two additional Economic

Models. The Capital Asset Pricing Model, CAPM. And the Discounted Cash Flow or DCF Model.

We chose to combine the results of these models in order to estimate a target return on equity because they each use different assumptions, analytical approaches, and data sources. And were all widely used in industry, regulatory, and academic situations.

The Discounted Cash Flow Model incorporated projections of future returns that were not reflected in the Accounting Base Model. And unlike the Accounting Base Model, unlike the Accounting Base Model however, it required knowing the individual stock prices, as well as, forecast the future dividends and long term dividend growth rates for each bank holding company in the peer group.

The Capital Asset Pricing Model uses market return data to provide a theoretically sound basis for estimating a prospective return on equity. It's basic principle, that the required rate of return in a firm's equity is equal to the return on a risk free asset plus a risk premium that can be estimated, is relatively intuitive. And that the higher the risk of the entity, the higher the expected return must be to attract investors. Pretty straight forward.

Because academic studies had demonstrated that using multiple models will improve estimation techniques when each model provide the new information, we chose to combine all three models. We included the Accounting Base Model despite its short comings because its results complemented the market driven results of the other two models when combined.

When we first adopted the Three Model approach in 2001 for 2002 prices, there was evidence that multiple models were being used by academics and professionals to estimate return on equity. Subsequently however, as academic, market, and financial service industry practices continue to evolve, the weaknesses of the Accounting and DCF Models became more widely recognized. And reliance on these models for targeting a firms return on equity began to decline.

Although the DCF Model is a powerful evaluation tool in theory, its results depend on analyst's ability to project cash flow and dividend growth rates accurately. And research findings suggested that analyst dividends projections could be upwardly or downwardly biased. Financial market history also demonstrates the inherent difficulty faced by analysts in developing accurate financial projections, given the rapid shifts in business activities and environmental factors. Although some public utilities still use the DCF Model together with the CAPM for developing return on equity targets, the DCF Method was not used by many larger financial institutions.

With this information suggesting that two of the three models in our Three Model approach might not be in line with current practice and because the CAPM was widely accepted and used more in practice then the other methods, we evaluated the possibility of discontinuing the Three Model approach in favor of a more appropriate method such as a CAP only approach.

During this review, begun in 2004, we worked with an external consulting firm that specialized in capital allocation and risk management. And with four finance professors from U.S. academic institutions, in order to obtain information about current private sector practices. In addition, we requested public comment on a variety of topics related to the three models we were using.

Overall, the public comments we received were mixed, regarding the theory, use, and components of our Three Model approach, and our proposed return on equity methodologies. Generally, commentors supported using the CAPM only method because it was simple and theoretically the best model. None of the commentors supported the DCF Model as a stand alone option. One commentor opposed using the CAPM because it would create volatility in

Federal Reserve pricing.

Overall, we found the CAPM Methodology to be a well know, widely used and theoretically sound, model that was simple and transparent compared to other approaches. Because we strive to use a PSAF that is consistent with private sector practice and that the public can easily replicate, we elected to use the CAPM only approach with some modifications, beginning with the 2006 price setting process which was done in the fall of 2005.

Now before delving into some of the more technical issues we addressed when adopting the CAPM only approach, it might be useful to spend just a moment reviewing the CAPM Formula. The CAPM's basic principal is that the required rate of return in a firms equity is equal to the return on a risk free asset plus a risk premium. The risk free asset is an investment with no or low risk, typically measured using a treasury rate. The risk premium is a combined measurement of the additional return investors require to forego the safety of investing in low risk or risk free assets and the market risk of a particular company also relative to the risk of the overall market.

The CAPM's results are highly sensitive to these inputs which are critical to the model's usefulness. For that reason, we requested public comment on all these inputs before we moved to the CAPM only approach. Excuse me, I've lost a page. Here it is.

For example, we requested public comment on whether a risk free rate should be based on a short term rate or a longer term rate. The comments received, varied significantly. Ultimately, we did not believe that one approach produced conceptually superior results over the other. And over time, they should produce the same result after adjusting for term premiums. So we concluded therefore that a three month Treasury Bill Rate was appropriate for use as a risk free rate in our return on equity calculation. Partly because it was also consistent with a rate that's used in a separate imputed income calculation that we use in our price setting formula.

Although we did not specifically request public comment on the estimated market risk premium, some commentors suggested to us that our prior methodology of using historical monthly average excess returns of the market over the one month T-Bill Rates since 1927, did not properly reflect more recent equity and bond market conditions. And we ultimately elected to adopt a roll in 40 year time horizon to estimate the market risk premium. We concluded that a roll-in average would better capture evolving attitudes and changes and expectations because less relevant historical data results would be replaced with more relevant and recent data. We also believe that 40 years was sufficiently long enough to smooth cyclical fluctuations in realized returns. But short enough to reflect the trends in required returns.

Then of course was how to compute the data. As you know, a key assumption of CAPM is the data which measures the sensitivity of a firm's returns to the overall market returns. Beta's created in one indicate greater sensitivity in market changes. Beta's below one indicate less sensitivity.

In order to calculate a beta representative of the Federal Reserve's price services, we need historical information from comparable peer group. In addition, technical decisions need to be made regarding how much historical information to use. And in what manner.

In our request for comment we specifically requested comment on alternatives for choosing a suitable peer group. The comments we received however were highly diverse and offered no real consensus. We also requested public comment on the beta estimation period and on whether the weight bank holding company returns equally or by value, given that value weighting the bank holding companies based on market capitalization was becoming less useful as bank holding companies were becoming more and more involved in non-payments related businesses. Here again, the comments received very widely without a clear consensus.

Given the varied perspectives on how to estimate an appropriate beta from historical data and the recognition of historical betas in general may not be good predictors of the future risk of a firm, that might be facing different risks in the future then it did in the past, we considered the idea of simply assuming a beta of one. Assigning a beta of one to a firm assumes that investing the firms equity caries the same risk as the market with the same expectations for return. Finance literature suggests that betas as an empirical rule moved towards one over time. And experience shows this to be the case for correspondent banks and other firms that provide payments processing services.

In our request for public comment we

noted that the long standing difficulties associated with selecting a peer group and estimating the appropriate peer group beta, could be eliminated by simply assuming a beta of one for our price services. This would also eliminate the need to make a judgement on the beta estimation period and peer group weighting. Of the five commentors that addressed the beta equal to one assumption, three expressed a preference for developing a beta base on a peer group. These commentors however also recognized the difficulty facing the Federal Reserve in finding a comparable peer group and recommended different peer groups.

One commentor supported the idea saying, "The beta equal to one indicated that was a reasonable simplifying assumption in view of the uniqueness of the Federal Reserve's payments business." Another indicated a preference for a static beta as opposed to one determined using a peer group but made no suggestions to us for how to derive that beta.

From the comments we received and in recognition of the many theoretical and practical challenges we have faced over the years in applying the peer group approach we elected to forego the long standing practice of identifying a peer group to calculate a target return on equity for our price services. Instead, we adopted a static beta of one for our price services because it's simple to understand, administer and monitor while providing reasonable results.

In conclusion, our decision to replace the Three Model approach with a CAPM only method reflected our desire to alleviate the ongoing dilemma of identifying appropriate peer group for our price services and to adopt a simpler more straight forward and transparent approach that is widely accepted within academic and industry circles. Our targeted return on equity is now estimated by adding the three month T-Bill Rate to the rolling 40 year average of excess market returns over the short term T-Bill

Rate.

We've used this CAPM only model for setting our 2006 and our 2007 prices. The targeted after tax return on equity for those years was targeted at 8.91 percent and 10.82 percent respectively.

Thank you again for inviting me to provide this information. We appreciate this opportunity to share our experiences in estimating return on equity with you. And we'd welcome future dialog especially at the staff level.

I would now be happy to respond to questions.

CHAIRMAN NOTTINGHAM: Thank you Mr. Evans for your very thoughtful comments. And I do have some questions. First, just to help us understand a little bit of your world, it's not everyday we have the Federal Reserve with us.

MR. EVANS: Right.

CHAIRMAN NOTTINGHAM: Tell me a little bit about the price services that is behind your whole reason you guys do this.

MR. EVANS: The price service is basically to provide services to depository institutions, you know, large commercial banks, small banks, they are like check clearing services, or a transfer services, ACH automated, you know, direct deposit type services. I probably left one out here. Book Entry securities are a portion of that practice. They're basically provided to depository institutions and we do have competitors in each of those products. Even though we may have a market share of 45 to 60 some percent in some of those services, there are private sector competitors to every one of them.

CHAIRMAN NOTTINGHAM: Generally speaking, is there any, in your experience, any meaningful correlation if we have, if we're looking at an industry that, as we are, that has in recent years, experienced pretty significant increases in earnings and increases in stock valuation, would, in that environment, would we generally expect to see cost of capital go down, stay flat, go up?

MR. EVANS: I want to -- I'm trying to think how to apply that to our world. Because in our world, clearly we got a couple of things going on. We've got a very changing dynamic with, you know, the electronification of price services. And so, some of these discussions about what to expect and whether the cost of capital should be higher or lower in that environment, are highly debated even within our own organization.

There are those who would suggest that in a fast changing risky business, you should expect higher returns. There are others who believe that we have a more stable basis then we would have lower returns. What we've, what we found with CAPM practically is that it's really the short term industry rate that drives its results, the most.

The other thing that I will take a stab at delving in to, to help you understand how our world's a little bit different is when you talk about changes in required return on equity, we're clearly taking a market based estimation methodology to come up with a target return on equity. Our dilemma is that we don't have a true market capitalization number. The number you apply it to. Our equity number is based on a book value. We try to maintain our pricing methodology so that you can assume that this, you know, mythical entity or imputed entity would maintain stable stock prices but we don't have a market place where we can go out and validate because we don't have a stock that goes up or down. The price service Fed does not sell shares. And so that's -- it's really the equity component that I think is probably where you're at that gives us the most struggle over the years. Is the -- we can come up with a great market based rates but then what equity level do we apply it to?

I'm not sure that quite answered your question but it will give a flavor of why that's

--

CHAIRMAN NOTTINGHAM: It's just a different twist for us, is no market cap. In your, in your business at the -- and services you provide, do you face, when you get comments on this issue, is it fair to say, you get comments at least from two perspectives, one being the recipients of your services who would have an interest in seeing your cost kept low?

MR. EVANS: Typically, the comments over the 20 years, I've seen a variety of, in some public comment periods are very robust comments. Some are very light. Yes, there's usually, you can see that the people who want our prices to be lower because they are relying on us to provide an alternative to the other private sector providers. There's also those who would like to see our prices higher because they are our direct competitors.

But it's been interesting over the years that, generally speaking, my characterization, would be that despite those different perspectives, we do get thoughtful comment along theoretical grounds because I think we built a reputation that it's not the number of comments, as much as, the reasoning behind the comments that we value the most. And fortunately in this arena, you can get an awful lot of very sensible comments that are opposed to each other. That's putting it bluntly.

CHAIRMAN NOTTINGHAM: Thank you. We're a, our charge, of course, as you know, is to look at the Freight Rail Industry. And to implement the laws and regulations that have developed around that industry. The risk factor and the importance of risk factor is something that I'm hoping to explore more today and spend some more quality time thinking through. As you can imagine the Freight Rail Industry is unlike the back office of a financial institution where the, you know, fairly, you know, somewhat controlled environment. You've got heavy machinery and personnel deployed out in field across the country. The issue of risk and you have to add the common carrier obligation that we impose on the freight railroads, they don't have the luxury of saying, declining or turning away commodities or goods that they're asked to carry. Raises issues like hazardous materials liability and what not. And you add to that the overarching policy challenge of the tort liability system we have in our country. And you have the risk premium raise its head in a myriad of ways, just to put it lightly, in the freight rail sector. Not to mention the, I'll say the political risks of of trying to look ahead and discern where Congress or this agency or other agencies that may have an impact on the freight rail sector might go policy wise. Do you have any experience or anything in your work that would help us think through that in a rational way? Any similarities in some of the work you do? Or are we just a, out there on our own and dealing with a completely unique situation?

MR. EVANS: I'm not sure if you are out there on your own. I'm also not sure if I'm the best person. Let me give you a kind of initial gut reaction to what you are saying. Part of that is a peer group dilemma. I mean if you have a peer play peer group people facing similar risks and you can look at their market experience, obviously it can help you with something like CAPM.

We've debated internally on, for example, what equity level to establish for our price services Fed. And you know, using what banking regulators would look at, you could look at a Bosal (phonetic) 2 type approach where you look at the operations risks and the financial risks and the credit risks and trying to figure out what the right level of equity is. We have not yet explored applying that in-depth to this process.

I will tell you a few of us have bantered those ideas around. Right now the systems aren't in place to do it quite that way. What instead we have done, you know, it's arguably the best we can do with this approach, is we still pretend as though our price service Fed is a bank and we apply the same risk type measures that the regulators would apply to a commercial bank. And that kind of forces us to get at a particular equity level. But I will tell you, even in delving into some of these models we recognize that our price services equity was generally less as a proportion of total asset then other bank holding companies but we thought that made sense. Because the suite of services and activities that we were involved in were very different than that of commercial banks. But it raised issues of, do you leverage? Or do we need to leverage some of these rates because of our, you know, debt to equity levels were so very different.

So that's a long round about way of saying, I understand your issue. We don't have an easy answer on, independent of finding a peer play peer group of establishing a right risk measure, without it being arbitrary or looking like it was a official policy of the Board.

And that's another one of our challenges is, that to come through in this is that we spend a lot of effort to make sure that nothing we do in setting our price services, in picking these rates and assuming these assumptions, give any predictive nature to future policies of the Federal Reserve Board. That's why we realize so heavily on re-creatable publically identified very transparent information, because you can imagine the dilemma we would be in otherwise.

CHAIRMAN NOTTINGHAM: Thank you. I'd like to turn to Vice Chairman Buttrey for any questions.

MR. BUTTREY: Thank you Mr. Chairman.

I think any deliberative body as we are in taking testimony from time to time on issues have to be concerned about the probative value of that testimony. I was particularly interested in focusing on your methodology for picking a peer group.

I want to just get some information

on the record here, if I could. Banks are not big users of fuel I don't suppose. That’s a huge cost in our world, which is a very volatile, very volatile price issue these days. And I would assume, and you correct me if I'm wrong, that your business is more technology sensitive than it is labor sensitive. Is that correct?

MR. EVANS: You're going to want some statistics that I didn't come in hand with. I think I appreciate your instincts. But there is, there are a couple of nuances and we are in a changing world right now. You can imagine transporting paper checks across the country. There is a lot of transportation costs which can be fuel sensitive involved and the --

MR. BUTTREY: But that doesn't happen much anymore. Does it?

MR. EVANS: Actually --

MR BUTTREY: -- that's mostly wire transfers and electronic transfers.

MR. EVANS: Right.

MR. BUTTREY: -- You're going to tell

me that because as a bank customer I would like to know that's happening.

MR. EVANS: I -- we understand it as happening and we see it happening. And I want to --

MR. BUTTREY: I use to work at a little company that carried a lot of bank checks at one time. I recall that business pretty well.

MR. EVANS: Yes. Let me give you some personnel numbers that might help. Our commercial check area of the 3,319 people involved, you know, system-wide in these payment services, you know, almost 3,200 of them are still in the check clearing business. And so there still are an awful lot of paper checks still being cleared. Some of which we are moving toward the Check 21 converting some onto electronic images and then printing them out at the other side. But there still is a fair amount of transportation involved. But you're right. We all hope to see that go down.

MR. BUTTREY: Can you give me any

numbers on how many of those employees are unionized?

MR. EVANS: Zero.

MR. BUTTREY: Pardon me.

MR. EVANS: Zero.

MR. BUTTREY: Zero. That's what I thought you said. Also none of your prices are regulated in any way. Is that correct? Neither your peer group prices or your prices.

MR. EVANS: This approach is the closest thing to regulation. The Board of Governors needs to approve the prices the Reserve Banks charge and is this process I'm talking about is the closest thing to regulation. Our responsibility to comply with the Monetary Control Act, but short of that, no.

MR. BUTTREY: Do you have any idea or feel for what the average amortization period would be for your heavy equipment like hardware, computer hardware and that sort of thing?

MR. EVANS: Typically five years unless it was a special case where it was going to, you know, certain production equipment would go up to twenty years.

MR. BUTTREY: And you can expense those items up to what level, up to what individual unit level?

MR. EVANS: Our current --

MR. BUTTREY: You can expense some of those items.

MR. EVANS: Yes, our currently, our capitalization threshold is $5,000.

MR. BUTTREY: $5,000.

MR. EVANS: Right..

MR. BUTTREY: You don't have any, problems in the debt equity ratio area, I don't suppose.

MR. EVANS: No, I tried to spare you some of that discussion, but there -- one of the things that we have on our banking balance sheet, is our customer's hold compensating balances with us.

MR. BUTTREY: Yes.

MR. EVANS: That they use to clear

transactions.

MR. BUTTREY: Yes.

MR. EVANS: And in this, those balances are more in, more than exceed what we would possibly need to fund the fixed assets of the price services business. In fact, it's so much so, that we have to pretend as though they were invested in a basket of goods, and we go through an awful lot of gyrations to make sure it's a fair investment type pool. And that, I spoke earlier about our imputing investment income to ourselves and that uses a three month T- Bill Rate is part of that equation. That's what I was referring to.

MR. BUTTREY: Yes.

MR. EVANS: So for our price services Fed we don't compute a debt equity ratio per se because we already have on this balance sheet, you know, well in excess of enough debt in the form of core clearing balances to fund the transactions. If that catches your point.

MR. BUTTREY: And your activities as

the Federal Reserve, the twelve districts of the Federal Reserve and the operations activities of your peer group, I presume, are all conducted inside with no heavy lifting.

MR. EVANS: I would -- I'm sure someone's going to point out to me that I'm wrong, but generally, no, other than --

MR. BUTTREY: In a climate controlled environment so to speak.

MR. EVANS: Right.

MR. BUTTREY: Okay.

MR. EVANS: Generally speaking.

MR. BUTTREY: Thank you very much.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey, questions.

MR. MULVEY: You put together a peer group because you don't yourself have equity. This is an important factor in what you did and how you worked out the decision to move from one group to the next but, we have the railroads. We don't really need to construct a peer group for our analysis. Right? Wouldn't we be using the railroads data? The peer group issues how you would go about choosing it,are not really particularly important for our consideration here because we would use the railroads as their own group?

MR. EVANS: Right. Right.

MR. MULVEY: Okay. Thank you. Wanted to clarify that. Would you say that, you talked to a lot of academic professionals and other consultants, et cetera and did you find that there was a consensus developing away from the DCF approach and towards the CAPM approach in academia and amongst other financial experts?

MR. EVANS: That was the impression we got from our consultant and working with academics. Clearly there are those who like to continue to compute a DCF approach just as kind of like a reality check on the results of the other models. But we found there are preferences for the CAPM Method, and what it portrayed, and how it was computed.

MR. MULVEY: There's always this

debate between whether or not truth is absolute or relative, and I guess the debate could also be applied to methodologies. Is it likely that a DCF kind of methodology or some other methodology might be more appropriate in one economic environment or one period of time, and then at another period of time, the CAPM approach would be more the more correct, if you like, approach? That could change back and forth again over time. Or do you think there's some sort of progression here from a flawed methodology to a more accurate one? That's a philosophical question.

MR. EVANS: A philosophical question that I'm not sure the Board has taken a position on, but I will give you my impressions. My impression is, the answer is probably right, the problem you have is then, how do you maintain credibility that you're not juts picking and choosing the approach that gives you the answer you want. And that's the underlining problem.

But I will tell you that as we went through the last decade, we did recognize that we were on a journey. And that journey was probably going to leave my favorite accounting model off to the side. And we were going to move to something else being an accountant by trade. And so I think we saw the Three Model as perhaps a stopping point. I think, at that point, we thought we were going to wind up with a blend of DCF and CAPM. What really took us all the way to the CAPM beta of one, was this continuing struggle we had, with seeing that our peer group was getting so very difficult to get at. The really relevant data, we saw there was false sense of precision. We found to simplify a process and be much more transparent about what we were doing. And that probably is the reason DCF isn't, didn't come along with us in to that next model. In all frankness. My opinion.

MR. MULVEY: We're lucky, in the sense, that we don't have to do the peer group. I think that's a benefit that we have here. One of the testifiers today is going to say that one of the advantages of the DCF approach is that it's forward looking, in the sense that it relies upon analyst projections of future dividends and earnings. Whereas the CAPM approach is backward looking, in the sense that, it looks at the past history. Would you comment on that characterization of the two approaches?

MR. EVANS: Sure, I'd love to. Recognize that we came from an accounting base model which was the ultimate backward looking model. So that even CAPM seems forward looking to us, because it uses, at least, a current risk free rate --

MR. MULVEY: Right.

MR. EVANS: -- which is more forward looking than what we had used in the past. So that's gives you a sense or our environment where we were coming from something that was looking at five years back, 250 samples, in a much different.

The problem you have with DCF, in my opinion, is your still trusting analyst projections. And there's a variety, we noticed there was an awful lot of research that was starting to become more and more prevalent about whether or not there was a bias. Now you could say, it was always upward, you can say, it was always downward, but I think that always made us a little intuitively uneasy about, you know, you get to where you only have a few analysts in a particular area, a covering area just how reliable that was. And CAPM gave us, you know, a different model to get out of that problem. I hope that kind of gets at your point.

MR. MULVEY: That does. Now the, one of the problems, of course, is that this very variability amongst the analysts' forecasts What we've seen in some of the testimonies is, is that there was quite a bit of variation between what the various analyst forecast for future dividend growth.

On this question of the appropriate interest rate on a risk free asset versus long term versus short term. As Chairman Buttrey I think was suggesting maybe hinting at, was that railroad assets are very, very long lived. And where as banking assets, as you say, five years is the life of a fixed asset. Would you say that would suggest that for the railroads we ought to look more to the long term interest rate as opposed to a short term rate? Would that bias the result one way or the other?

MR. EVANS: Suffice it to say we have spent hours on the risk free rate and long term, short term. Because we've -- our mandate under the Monetary Control Act is to recover prices in the long term.

MR. MULVEY: Right.

MR. EVANS: And undefined long term, but a long term nonetheless. And that was one of our concerns in there was some that advocated using, like a ten year treasury rate. But then we recognized there's a term premium built in there. And we spent a lot of effort on ways to try to estimate and carve out that term premium. And here again, trying to make sure it was fair and replicable and not self-serving. But at the end of the day, we felt that it was important to have the risk free rate used in the beginning of the equation as close as possible to the risk free rate you use in estimating your estimated market, you know, risk premium. And that those two, those rates be as close as possible.

And we conclude a short term rate was acceptable, that over time, they would essentially become the same, and then ultimately because we used a three month T- bill rate and another part of our imputed methodology, it made sense for them to be consistent so that our imputed enterprise wasn't schizophrenic about, you know, how some of it's things worked. Is that getting what your after there?

MR. MULVEY: Yes. I was wondering what the sensitivity was between using the short term and the long term rate in terms of your cost of equity.

MR. EVANS: Our theoretical debates about whether you were biasing your rates too high by using the long term rate because essentially CAPM is saying the short term risk free rate.

MR. MULVEY: Right.

MR. EVANS: You want to take out other risk. And the longer your term goes, the more you have additional risks factored in to it. But I would say we spent a lot, we even had a creative way of starting with a ten year rate and taking out an average risk, average term premium in order to get a rate that some people thought was still more longer term. Getting at the point of trying to match the longer term with the cycle. And it's probably one of those that we could pull together a few of our economists with yours and share some of that robust dialogue. But in the end, we couldn't conclude any one being, you know, more superior to the other. But the numbers do come out different.

MR. MULVEY: We would appreciate greatly that cooperation and that help.

One last question on the railroad beta, on what the railroad beta might be. You chose a beta of one, and from what I read of your testimony, it seems for good reason. But the railroads are a fairly stable industry, and one could think that the railroad beta would be less then one. Would you suspect? Or do you have any --

MR. EVANS: I'm not sure I'm an expert in that.

MR. MULVEY: Yes.

MR. EVANS: From what I understand in preparation for this, most estimates are less then one.

MR. MULVEY: Yes. But we're seeing estimates on railroad betas as high as 1.4, which struck me as a particularly high for a railroad beta. And I just wondered if you could?

MR. EVANS: I really wouldn't --

MR. MULVEY: Yes. Okay.

MR. EVANS: Thank you.

MR. MULVEY: Well thank you very much. That's all from my end.

CHAIRMAN NOTTINGHAM: Mr. Evans, if I

could? In your experience, does the methodology, whichever one is used CAPM, let's assume it's whatever one is generally viewed as the most useful and most accurate, would that, does it matter what purpose the user has for that for that model? In other words, your using it, just to look at banking industry cost and of course we would be using for a very different purposes. Should the model basically stand up regardless of really what the ultimate use is of it?

MR. EVANS: If I'm understanding your question correctly, I think the model should stand up for what it portrays to do. But you need to be careful you don't assume that it does more than it's designed to do. And so I think we have, feel we have a responsibility to approach our entire pricing formula, if you will, to make sure that it's robust and leads to efficient pricing. And so that's why we periodically review it. If using the CAPM Model, in the way in which we do, would somehow violate that greater objective, well then we would be back to another fundamental review. Another examination of what's broken. Does it need to be fixed? So I think if you're asking, I think you always have to keep in mind the end product and the end goal and make sure you're achieving those. And not adhere rigidly to a model, if it's broken, for your application. It's a highly subjective indicated issue sometimes about whether it is broken. But I think we're constantly looking for the perfect solution. And that's one of the reasons I'm excited to be here. I'm going to see if I hear one later.

CHAIRMAN NOTTINGHAM: How, how important is it, in your opinion, to look at market practices, for example, if your competitors, folks in the private sector will provide similar services, if they were, generally speaking, all using CAPM for their, is that a meaningful fact or is that just possibly a random, some random decision?

MR. EVANS: I think it's meaningful for us because, here again, our goal is to impute a private sector like approach. In fact we want to behave just as we think we would behave if we were a private sector entity. So if all of our competitors typically use one model, gee, the best way of estimating that would be, to see how they're doing it. Now granted, if someone came up with a superior method, but at the end of the day, comparable entities compete for the same capital in the market place. And so if most are using one method and it's working, it would seem logical to conclude that maybe that's what you would use, in our case, trying to impute something. Our problem was that comparable peer group for our particular suite of services was just so difficult. Okay.

CHAIRMAN NOTTINGHAM: Can you shed any light for us on common practices around the Federal Government? Other agencies that look at this issue. Is there such a thing as a best practice that's established out there that we should be mindful of or?

MR. EVANS: To be frank with you, I

don't think that we are that familiar with the other practices. As we did our search we did find a regulatory commission and a state that used the Three Model approach. That's what turned us on to that idea originally. I was interested to see that you were debating the same thing. So I think we're looking to, you know, we're always looking for a better method, a better way and understanding and building on what other people are doing. But I'm not sure I'm familiar with any other practices other than, there's a variety of rates available out there and a variety of websites.

CHAIRMAN NOTTINGHAM: And just to, at the risk of oversimplifying, you, I think touched on it. When we're looking at and talking about forecasting and methodologies, pretty much by their nature, they are not designed to be 100 percent accurate. I mean they're the, hopefully the most accurate we can get through mindful, I used to do a lot of traffic forecasting type work in past work. And people would, you know, in the heat of discussions about public infrastructure projects, they'd say, "Well that estimate is it, it's not accurate." I say, "Well, no traffic forecast is a 100 percent accurate. But you try to find the best one that's based on the most reasonable data." Is that really the same thing here or are we or is this really a quest to just to nail it with a 100 percent precision?

MR. EVANS: The problem is, we don't know if we missed it or not, frankly. Because it's an estimation of what our target would be if we were a company looking forward. And we can look to see what we hit, but if you aren't sure about your peer group, it's hard to say whether you really were comparable or not. Now we can look, obviously, to the effect our prices are having on the market place. And that can give you a little sense. But by and large, you know, these are estimates. You do the best you can. But we're in a unique situation where, we can't even necessarily take perspectives on what we think the future will be. We've got to make sure we ground these estimates in things that are historically available outside just because of who we are. Federal Reserve to make predictions about the future gets a lot of people's attention.

CHAIRMAN NOTTINGHAM: Sure.

MR. EVANS: And so, to that extent I'm not sure if you have a little more reign on that, but that's one of our dilemmas in any type of prediction. And there are lots of predictions, you know, in accounting, benefit accounting, actuarial sciences. So I mean, we're pretty committed to backward looking, easily replicatable, you know, non-subjective assumptions in those, in accounting and these type of circumstances. Doesn't make sense.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey, any further questions?

MR. BUTTREY: Nothing further.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey?

MR. MULVEY: One question on

measuring equity-- whether to use book value or market value in calculating equity. Do you have any views on that, which is the most relevant?

MR. EVANS: Clearly, the way we look at it is, the mechanism used to compute these returns of equity use the market capitalization. That's a market based measure of equity.

Our problem is that, we don't have one of those. And we have some debates internally, we have to use some measure of book value. I will, as an aside, more than you probably want to know, note that in this year's pricing setting process we were faced with a new accounting standard that required us to make an entry straight to equity. And we had wrestle with, what would that really mean to our market capitalization? Does this mean that this new information represents a drop in market cap or not? And so we are just starting to wrestle through these challenges that are going to come with more and more accounting standards like that.

In this case, the most logical frame work was to assume that, that information on pensions, did represent either an increase or a decrease in market equity. And it would be, and that our price service and provider would adjust their equity levels appropriately, based on what the regulators required but that our new market cap would reflect that economic reality, that we are assuming happened in the market place. But that's the first time we've had to be that explicit. Up unto this point, we have just assumed book equal market cap and it's worked pretty well, but it's debatable.

MR. MULVEY: Thank you very much.

CHAIRMAN NOTTINGHAM: Just one last question. Do you look at other international models that you look at, do you look at what the English are doing or the Swiss or anything that's similar or countries may possibly have the similar system?

MR. EVANS: Not formally, I've got some informal contacts so we discuss these in various seminars but they are usually more interested in what we are doing. Frankly. They are usually quizzing me on that so.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey?

MR. BUTTREY: Nothing.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey?

MR. MULVEY: Nothing.

CHAIRMAN NOTTINGHAM: Well thank you Mr. Evans. We very much appreciate your time today and look forward to studying your comments and your statements. And thank you. Good luck to you.

We will call the next panel up.

CHAIRMAN NOTTINGHAM: Before we begin the second panel, we want just take care of just one housekeeping matter. We do have the formal statement of the Canadian Transportation Agency in this matter and it will be put into the record.

Now turning to our second panel, we

are delighted to have a distinguished group today, representing the Association of American Railroads, Mr. G. Paul Moates and Mr. Bruce E. Stangle. Welcome.

We have from the Western Coal Traffic League, Mr. Robert D. Rosenberg and Mr. James E. Hodder.

And we also have Mr. Charles W. King, from the firm Snavely King Majoros O'Connor and Lee.

And we also are delighted to have Mr. John Ficker from the National Industrial Transportation League.

Welcome. And unless you've worked out an alternative order, we can start with Mr. Moates.

MR. MOATES: Thank you Chairman Nottingham, Vice Chairman Buttrey, Commissioner Mulvey, staff. Good morning. I appreciate the opportunity to be here, it's a, this is a unique opportunity for me.

I've the chance to address the Board

many times, but I have never been surrounded by the railroads friends like I am today. So this is very comforting because I know that all of the railroads friends have in mind, the health and success of the Railroad Industry just as much as the Association of American Railroads whom I represent to. So I'm sure that we will all be singing off of the same page of the hymn book.

As you note Mr. Chairman, with me this morning is Dr. Bruce Stangle of Analysis Group Incorporated. Dr. Stangle is a colleague of Dean Glen Hubbard of the Colombia Business School, the former Chairman of the President's Council of Economic Advisories. As you know, Dean Hubbard submitted a statement which is in this record in December, unfortunately his schedule did not allow him to be here on this hearing date. But as you'll hear from Dr. Stangle, they work very closely together, both on the December statement and on this current statement that's being offered. And fortunately Dr. Stangle's schedule did permit him to be here today.

So I'll take a few minutes if I may and lay out basically the AAR's fundamental position. Then I'd quickly like to make just a comment or two, if I could, on the prior speaker from the Fed. And then ask Dr. Stangle to make some particular observations and he has a few exhibits that may help focus our attention on his observations on the DCF versus CAPM methodologies. I hope those exhibits have been handed out. I did provide them to the secretary beforehand and I think we have some extras for the staff, if anyone else needs one, let us know and we can bring them forward.

Our position is fundamentally as follows, there is nothing in the record of this proceeding that justifies, let alone requires, the Board to discontinue it's 20 to 25 year use of, yes you are right Commissioner Mulvey, the forward looking DCF methodology for determining the railroad industry's cost of equity capital. The CAPM alternative advocated by WCTL and others, is based upon backwards looking data. There is really no controversy about that. The prior speaker confirmed that. And we believe therefore lags developments, important developments in the industry. The mere fact that there is an increase in the cost of equity in a single year or two, as there was as WCTL points out, between 2004 and 2005, we don't believe constitutes a proper basis for the Board to discard the DCF methodology, which your predecessor the ICC adopted only after very careful evaluation of extensive evidence and argument, including and importantly, opposition by shippers for the CAPM methodology.

As you have noted, several times that this proceeding, and most recently in this week in your decision in Ex Parte 558, denying the petition for reconsideration of WCTL to your 2005 cost of capital findings, there is a norm of regulatory certainty that is a fundamental underpinning of sound policy. And efforts to alter that norm in order to perceive short term benefits for particular parties should be very strongly resisted.

Again we believe, there is no basis of this record to replace the DCF methodology as the most appropriate vehicle for determining the railroad industry's cost to capital. However, I have to be a lawyer here for a minute, if the Board decides there exists a sufficient basis to examine some of the criticisms raised of the DCF methodology, then we respectfully submit, you must issue a notice, a formal notice of Proposed Rule Making indicating what proposals you are considering adopting and why. And then afford all interested parties a full and fair opportunity to comment on these proposals.

In saying that, I don't understand the Board to have a different view, as I said in your decision on Monday of this week in Ex Parte 558, you said a couple of things that I think are worth repeating here today. First, with respect to WCTL's contention that it had demonstrated, on the record there, that the DCF methodology is fatally flawed, you said quote, "We properly determined not to depart from long established methodology on this proceeding unless the party presented compelling evidence that it is flawed. WCTL has not made that showing. Rather it attacks the methodology based on its results." And again in page 5 on that decision, you said, "The record does not support a departure at this point from our precedent without further comment and study."

I respectfully submit that the record of this proceeding Ex Parte 664, as was the case with the record in Ex Parte 558, does not contain evidence that the DCF methodology is flawed, let alone fatally flawed and that it should be replaced or modified. Frankly, not to make light of this, but I'm thinking about the position of the WCTL and some of the other shippers have taken, it reminds me a little bit of the, you know, the measuring stick you see in amusement parks in Disney World and places, when you go up to the ride and there is a stick, and you have to be so high to ride the ride. And everyone says, "That's the right point on the stick. You know, we've studied the safety and whatever, you know, concerns they have about this ride, so you've got to be that tall." But over time, you know, we are not getting to ride the ride so the answer is, let's get a new stick. Well I would submit that it's not the perfect analogy but I would submit that isn't what we do, just because and maybe somebody actually did grow high enough to, you know, get up to that mark on the stick, that doesn't mean that there is something wrong. That doesn't mean that we have to throw out the measuring stick.

Now you've asked in your Notice, very pointedly, have there been important changes in the fundamental economic structure of the Railroad Industry that should cause us to have to look at changing and perhaps discarding the DCF methodology? Well obviously there have been important changes in the industry. Changes that have resulted in, as you well know, in notably improved financial performance by all of the Class 1 Railroads. Not all of the same level obviously but there has been a rising tide.

And the markets, in turn, have taken a note to that fact. And there has been, as a result, improved performance in rail stocks and bonds. And that is a good thing and we are very happy about it. But those changes in what your Notice termed, "Underlying railroad economic conditions," consisting of such things as stronger demand for transportation services especially from such sources as increasing Asian imports and the accompanying growth in intermodal traffic, increased demands for western coal from the Powder River Basin, demand for housing and construction materials and the like, do not in and of themselves, demonstrate or suggest any weakness or deficiency in the DCF methodology.

Does one of us have a Blackberry or a microphone here? That shouldn't be.

PARTICIPANT: I wouldn't think that was --

MR. MOATES: And as you are all well aware, and I think Chairman Nottingham as you indicated in your opening remarks this morning, this isn't simply a matter of academic interest. And I'm not suggesting it's an academic interest for the Federal Reserve but I think that you just heard that, certainly the context in which they were considering this issue of whether to apply, what methodology to apply for calculating the cost of equity there, was as the speaker said, for purposes of determining the equity of what he called, a mythic entity. Kind of made me think, well, you know, we have mythic entities here sometimes, there are called stand alone railroads. We see them in rate cases. And, you know, we have enough problems with stand alone rate cases but think about, if you had to determine the cost of equity of a mythic entity of the stand alone railroad but you don't have to do that, as Vice Chairman Buttrey pointed out very clearly, you know, the members of this Association are real, we are here, we are ongoing entities, our stocks are all publicly traded. There are analysts who follow the stocks very closely and, no, they are not all of one mind, which I would suggest that means that there really isn't bias, for one guy turned out to be biased, that one individual's projection would be particularly the way that you use the IBES Index, would be kind of overwhelmed by the broader market indexes, for the Rail Industry.

The cost of capital not only plays a role in investor expectations about the returns the railroads should be permitted to earn, so long as our rates to market dominant customers remain subject to regulatory scrutiny and they of course do. But it has, as you noted earlier Chairman Nottingham, significance to the context of rate cases and abandonment cases and trackage rights fees and the other things that you mentioned.

But also importantly it has a very important role in the determination of URCS's costs. In fact, we believe it is entirely plausible, and I don't mean this to be accusatory, I mean, I think these gentlemen are thinking, that WCTL's efforts to convince the Board to jettison the DCF methodology could be motivated, at least in part, by its desire to have the Board embrace a methodology that might well, at least at this point in time, result in a lower cost of capital for inclusion and URCS cost. And such a result would, of course, potentially benefit shippers of rate cases where URCS costs play an important role in your determination of jurisdictional costs both for market dominance determinations and for purposes of establishing a floor and rate prescriptions. But especially in light of your proposed simplified procedures and Ex Parte 646 that we were all here about two weeks ago, in which URCS costs are playing an even more prominent role. As you know, the cost of capital is the primary factor for determining the return on investment component of those URCS unit costs associated with the railroads net investment base. So obviously, very important role played in the Annual Determination of Revenue Adequacy but a very important factor in determining unit cost and URCS.

It would be, we submit, unsound public policy to abandon a proven long used methodology for calculating the cost of capital in response to perceived advances of the railroads may be making towards that elusive goal of long term revenue adequacy. In fact, that kind of an approach would run afoul of the same concerns that the ICC identified in 1993, in Ex Parte, excuse me, in 1986, in Ex Parte 393, which I participated in, of denying railroads pricing flexibility that they need in order achieve that goal of revenue adequacy simply because they're make progress towards achieving it.

As I know you very well understand, the demands for enhanced capacity, improved service and other infrastructure improvements facing the rail industry today require very significant capital commitments. The statistics

I know are familiar to you. We've noted in our comments the DOT has predicted demand for rail transportation increasing by 55 percent by 2020, AASHTO projects freight tonnage up by about 57 percent over that period. This industry and all of the entities and constituencies that are related to it and depended upon it, have a joint interest in seeing that there is sufficient capital available to the members of the industry to address those very significant capacity concerns.

We have been meeting those capital commitments for the past several years. And we are doing so now. I noticed that the Traffic World magazine in its February `05 Edition indicated that five Class 1 Railroads, Union Pacific, Burlington Northern Santa Fe, Norfolk Southern, CSX, and Canadian National, those five together announced capital expenditure plans for 2007 of just under 10 billion dollars. In the face of those kinds of commitments and needs, any changes in the methodology used to calculate the cost of capital with its resulting impacts on the ability of the industry to achieve sustained levels of revenues needed to meet those kinds of challenges, must be approached with great care.

Now I want to get to Dr. Stangle, but if I may, just one or two observations, again, about the prior speaker from the Fed. And I think you all certainly queried him a couple of these points but, you know, we think obviously a very, very significant difference is, the purpose for which the Federal Reserve is using that CAPM methodology for the determination of these user services that get charged for this mythic entity. I'm in no position and I have no -- I'm not intending to comment upon whether that decision was prudent for the Fed, it's not my area of expertise, obviously they've concluded that it was. I would suggest that, but in no way shape or means do we believe, nor did I understand the prior speaker to be suggesting to you that because of the purposes for which they adopted it, and the reasons that they gave for using it, should be a reason, for you, to embrace it.

There are other agencies, your 558 Decision, this week, mentioned that you would be interested, as you would think more about this, in looking at what other federal and state agencies and other entities do. You were getting this testimony from the Canadian Transport Agency which we understand uses CAPM for certain purposes up there. Nobody has mentioned the Federal Energy Regulatory Commission and I think that we certainly ought to put them in the mix here. There as a sister agency, that absolutely does have a charge to regulate rates and to, you know, determine investment costs, investment basis for pipelines, regulated pipelines, and my understanding is they do use a Discounted Cash Flow methodology at that agency.

Again, I'm not testifying on behalf of the FERC or about the FERC. But if you were going to go forward with this proceeding, in a more formal Notice of Proposed Rule Making, I would hope that you would reach out to the FERC.

And that participants in the proceeding would come forward and give you evidence about why FERC has used that methodology and how well it has served them.

The Canadians, as you noted, are not here, I'm sorry they couldn't get out of Ottawa but we at least know something about them. Two of the AAR's members obviously are the two large Canadian Railroads, Canadian National and Canadian Pacific. They were kind enough to point me to the CTA website and I read some of the materials that that agency has promulgated about why it has adopted a CAPM and what it uses it for. I would say that the CN and CP do not agree with the CTA's approaches. They have repeatedly petitioned the CTA to modify that approach. And I would also observe that, again, I'm not here to take brook with the Canadian Transport Agency, but you would at least please take note of the purposes for which that agency goes through this process of trying to calculate the cost of equity.

They have, as you would probably know, a very unique system for pricing grain rates in Canada. It is what I would term a socio-political decision that the Government of Canada has made to protect Western Canadian grain farmers. A legitimate governmental decision for the Government of Canada but basically the rates that CP and CN can charge those grain farmers are capped every year. They are capped almost by definition below what a free operating market would allow. I don't believe that as a model that has anything to teach us here. You had a grain hearing here last fall, you know how robust the factors are that effect those markets and we don't attempt to cap prices on those markets. And we don't attempt to cap the rates that the railroads here can charge.

I'll be pleased to address some of the other issues that you had with the prior speaker but I want Dr. Stangle to have some fair opportunity to address some of the points that he has for you and particularly the exhibits that I hope you have in front of you now. There should be a cover sheet that says exhibits in support for Dr. Stangle's testimony. It looks like this.

CHAIRMAN NOTTINGHAM: Dr. Stangle.

DR. STANGLE: I appreciate the opportunity to appear before you today. Thank you. I send greetings from Dean Hubbard who regrets he couldn't be here due to some prior commitments he had at Columbia University.

As Dean Hubbard made clear in his verified statement, submitted in December, the cost of capital is important indeed vital determination that this Board must make. And I agree with him in that, as I will try to explain to you today. I worked with Dean Hubbard on his December testimony and he has reviewed the remarks that I previously submitted to the Board on February 12th.

The DCF methodology, Discounted Cash Flow, is an appropriate and straight forward approach to estimating railroads cost of equity. And it has served this Board and the Railroad

Industry well for over two decades. In short, the DCF is not, as some as suggested, a flawed technique. The regulatory cost of capital allowed the railroads, increased from 13.2 percent to 15.2 percent from 2004 to 2005. This increase apparently cased the WCTL to complain that somehow the DCF Model must be flawed. They didn't like that result. What the League and its witnesses overlooked however, was that there was a real economic rationale for this increase, in the cost of capital produced by the DCF Model. As Mr. Moates just explained, economic conditions facing the industry have undergone changes in recent years. There's considerably increased demand and they are capacity constraints.

These factors underscore the value of the DCF methodology which I consider, and Dean Hubbard pointed out in his statement, is a forward looking measure.

Compare this to the way the Capital Asset Pricing Model is implemented. In theory at least, the CAPM is not backward looking, it's a single period model. But the way it gets implemented it has to rely on historical data and because of this it needs to look back in time. And it depends on how you think the past, how accurate the past would be as an indicator of future market conditions. As I hope to show you in a moment the CAPM has only recently begun to reflect some of the changes in the industry that the DCF approach was picking up.

The WCTL has also claimed that the railroads cost of equity should be similar to the cost of equity granted to regulated electric and gas utilities. This argument however is contradicted by the sources on which the WCTL and its experts rely.

I'd now like to direct you to Exhibit 1 in this hand out. If you could take a look at that, under Tab 1. And what I did here was, I quoted from the WCTL's December 8th submission. And they have some information they are purporting to prove that the railroads cost of equity should be more or less the same as electric and gas utilities. And as support for that proposition, they directed the reader to a website maintained by a professor at NYU.

I went and looked on this website. In fact, the sources there do not support this proposition at all. And I have reported some of the numbers in the top panel here, the top two panels on this page. In fact, I direct you to the 2004 numbers and there the first line, those are the estimates that the WCTL quoted or referred to.

But they didn't refer to, which is also there on the same website, is that a three year regression beta shows something quite different. It shows the railroad betas are, by in large, considerably greater than the regulated utilities. And the other thing that the WCTL neglected to point out was, that the more recent data for beta would indicate that the railroad beta and consequently the railroad cost of equity, has increased considerably over the last two or three years. And for example, if you look at the three year regression beta, for the year 2007, the railroad beta is now on this NYU website, three to four times greater than the betas for the regulated utilities.

So I think that, that sort of information should refute this notion or myth that the rails are similar to regulated utilities.

Another point I'd like to draw your attention to is the, about the CAPM is that one of our panelists here Professor Hodder, in his submitted testimony, suggested that the CAPM quote, "Is not difficult to implement." I respectfully disagree with this position. In fact, the CAPM is subject substantial well known academic criticism about implementation issues which require a great deal of subjective and consequential judgments.

If this Board were to adopt the CAPM, it would need to make at least the following judgements. Which beta vendor would you rely on? Presumably, you're not going to just do what the

Fed did, and say, "Beta for the Railroad Industry is 1.0." That would clearly be wrong. I'd like to direct you Exhibit 3, to show you some of the problems you would face. This is a table of betas drawn from four recognized vendors of beta, the risk measure. And as you'll see Bloomberg, Ibbotson, Thompson, and Valueline all report vastly different numbers for the four major railroads. Take a look at Norfolk Southern. Ibbotson has a .91 value. Thompson has a 1.8 value for Norfolk Southern, approximately twice. Similarly, Union Pacific, Ibbotson has a .74 value of beta. Thompson 1.57. You'd be faced with, how do you choose, which one's right?

Some of the other factors you have to decide about is, what time period over which beta would be estimated? These vendors vary from two to five years. You would have to choose what data frequency, weekly-monthly data. Which market proxy would you use. The market professionals, who are vendors of this sort of information, disagree on how to make these decisions. But you'd have to make a choice.

I'd also direct you back to Professor or Dean Hubbard's statement, which he submitted in December, where he also presented an illustration of how fundamental beta is with respect of Black and Decker.

And now I would like to ask you to look at Exhibit 4, to illustrate how fundamental beta is to the cost of equity. What I have done here in Exhibit 4 is, show you for reasonable input values for time period, data frequency and market index you get vastly different beta values and consequential cost of equity values. For example, Norfolk Southern which shows the widest spread, depending on which time period you use, frequency or market index, you could get a beta of .7 to 2.5. And then if you look on the right scale, that would you translate in to a cost of equity between 9 percent and 22 percent. So these, there's are a great deal of variation that beta can cause.

Thus I would submit that the CAPM is

not easy to implement at all and would require the Board to make substantial judgements to implement it properly.

Let me underscore that the determination of beta and cost of equity has extremely significant real economic consequences for the rail industry, including its ability to attract capital and make substantial capital expenditures, the ones that Mr. Moates referred to. And these expenditures will be required over the coming years to increase capacity and maintain service levels.

One last exhibit I would like to direct your attention to is Exhibit 2. And this should be in color and again, the rail industry is not a static industry. It would be a mistake to impose a fixed beta or a fixed cost of capital on the industry. It varies over time and this is a considerable sweep of time from 1990-2007. But over that time period beta, from Bloomberg, has varied considerably. And recently it's been increasing from 2004 on to today, beta has increased from approximately a range of .6 to .8 to currently estimates are that beta is 1.2 to 1.5 or 1.6. This is a substantial increase.

The dotted line that you see there, the vertical dotted line, is the point at which Mr. Crowley's analysis stopped. That was a period when beta was falling. And perhaps it may be that there was a significant difference at that point between what the Capital Asset Pricing Model results were showing and what the DCF Model might have been showing. My guess is, is that those two models are now coming together. That the two models will be perhaps converging. But it does show that these, these estimates can vary considerably over time. And I think it would be a caution to you, to not pick and choose or permit the parties to pick and choose which model gives them the best results, at any given point in time.

So in closing, I just wanted to mention that in addition, in addition to the merits that the DCF has in its own right, it also has the benefit of maintaining consistency in the methods that have been employed by this Board over the past two decades.

Thank you for your attention.

I'd be happy to answer any questions.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Moates does that conclude your team's statement?

MR. MOATES: It does. We look forward to answering questions but I think that's our time.

CHAIRMAN NOTTINGHAM: Very good.

Now we'll move on to the Western Coal Traffic League. Represented by Mr. Robert D. Rosenberg and Mr. James E. Hodder.

Welcome and please proceed.

MR. ROSENBERG: Before I begin, I got copies of exhibits for Dr. Hodder's, Professor Hodder's Power Point. I've also given them to Mr. Moates as well.

Chairman Nottingham, Vice Chairman Buttrey and Commissioner Mulvey, good afternoon. I am Robert Rosenberg, the Slover and Loftus, hearing on behalf of Western Coal Traffic League. With me is Professor Jim Hodder, the Wisconsin Distinguished Professor of Business. And the Charles and Laura Albright Professor of Finance at the School of Business at the University of Wisconsin- Madison.

On behalf of the League, we want to thank you for holding this hearing on the important issue of how to determine the Railroad Industry cost of capital. The division between us is that, I will try to briefly address general matters and Dr. Hodder will address more technical details. Especially the intricacies of the DCF and the CAPM Models. Some stuff may fall in between, I hope that Dr. Hodder will make sure that what we say is is correct and keep me out of, keep me out of trouble on those things.

The League's position is, is that there is no single right way to calculate the Railroad Industry's cost of equity. Unfortunately the Board's present single stage DCF approach is not one of them. When first, it utilizes an earnings forecast that is double the rate of growth in the general economy. And when second, it yields 20 percent increase from one year to the next, unrelated to any significant change in inflation or the fundamental risk of railroading.

The Board's approach takes an average growth rate of, for the next five years, and assumes that earnings will continue to grow at that rate in perpetuity. That approach may be sound where earnings are stable and the growth is, is sustainable because it tracks general economy. It is not appropriate when the projected growth is double that of the general economy as FERC, for example, has recognized. Such earnings growth into perpetuity is not plausible or sustainable.

It is also especially inappropriate where the increased growth stems from railroads exploitation of their market power. Indeed it is quite anomalous that the railroad should be allowed to charge more simply because they are earning more because they are charging more. That's circular and it's poor regulatory policy.

There are two primary ways to address the problem. The first, is to use a multi-stage DCF Model which seems to be the AAR's preferred approach, to the uncertain extent, acknowledges that there is a problem. Essentially the analyst projections are combined with a sustainable long term growth rate such as GDP. Dr. Hodder's earlier verified statement gives examples of ways this might be done. And then the effects are substantial. The alternative is to use CAPM or some variant.

Now, there's room for discussion as to which is better and when. Such questions are probably better directed to Dr. Hodder but I'll add my two cents anyway. First, you can and should consider both. As they should come out pretty close as Dr. Hodder demonstrated. Indeed they came out fairly close 25 years ago. If and when they don't come out then there's reason to reconsider and re-analyze, especially if there are big changes from year to year as there was in 2005.

Second, relying on the analyst's projections becomes a circular exercise because the analysts are, to a significant extent, forecasting the Board's actions and policies. More importantly, the analyst's projections are not very compelling. In various cases in the 2005 data the truncated average amounts to a few or even the single forecast. There are major spreads between the high and low forecast for the individual railroads in single months and there are also large swings in the truncated averages for individual railroads between months.

Under the circumstances, CAPM deserves a pretty good look as the Fed and the Canadian Transportation Agency have recognized.

The League's comments also address the capital structure issue. This issue has less of an impact then the cost of equity. But is still significant. And is driven by the same underlying factor and that would be the rise in railroad earnings and stock prices. The 60 percent equity share seems excessive and attributes to the high cost of capital for 2005. The problem can be addressed, in part, by capitalizing operating leases as is done by Wall Street, BNSF and UP, and, and and there presentations. And by using a multi-year average for capital structure to avoid excessive fluctuation due to what may be temporary variations.

Beyond that, the cost of capital should be calculated using a more appropriate or optimal capital structure. As part of its additional submission, the AAR should be required to defend its view as to what constitutes economical and efficient management under the Statute and other parties should have an opportunity to respond.

I'd also note that the AAR has, has talked about what the Board should do with the cost of capital. They said nothing about what the railroads themselves do and their internal calculations. What methods they use. What numbers they came up with. And our, in our written submission, we have had some reports from Wall Street indicating that, that they calculate cost of capital, cost of capital figures, weight average cost of capital, that are below ten percent. And that's consistent with what we've been advocating in the proceeding for, for 2005.

And with that I'll turn it over to Dr. Hodder.

DR. HODDER: Thank you. First of all I'm pleased to actually be here. It was a little bit of a challenge, but not too bad. I hope that my comments will be helpful for you.

I'm going to focus on the cost of equity estimation issue because my perception is that, that is far and away the biggest issue that you have on the table. In thinking about this presentation, I'm trying to put myself in your shoes and ask what sort of information I would want, if I had to make the decisions that you're required to make. And what I'm going to suggest is, is a framework for information and proceeding rather then a punch line of saying, "Well the number is X percent."

By way of a brief overview ,I'm basically going to recommend three things. First, you have a problem with the current methodology because it assumes a constant growth rate forever. And when the growth rate of a firm or industry deviates substantially from the growth rate of the economy, that single phased DCF model generates results which are not economically plausible. And this is a very, very basic thing taught in an early finance course that this model can create serious problems if you stick with a single growth rate forever.

To fix that, I would suggest you mandate a multi-phase DCF model, where if the current growth is estimated to be very high or very low for the next few years, you subsequently allow a transition to a growth rate that would match an estimate for the economy as a whole. That is going to generate for you estimates which are considerably more stable, more robust, and more reliable.

Secondly I would suggest that you mandate a second estimation methodology based on some asset pricing model. The CAPM is by far the most widely utilized, but in both my verified statement and in the comments from Dean Hubbard there was suggestion of the Fama French Model. That is an alternative. There's arbitrage pricing theory which represents a third alternative.

The basic idea here is, that all three of these models are similar in the sense that they focus on first, a risk free return, which includes both a real return and an inflation adjustment. And then they add one or more risk factors on top of that. The approach is sufficiently different from the Discounted Cash Flow Procedure, that you tend to get two differing perspectives with different inputs and different philosophy, but in the end, you should get out similar estimates.

Because the cost of equity is the cost of equity. The models are estimating it imperfectly. But they should converge. If they don't converge, you get to point number 3, which is I would recommend that you require the parties to provide substantial justification for the inputs that they are using in the models. These models are very sensitive to the inputs. And when you get different answers it's because you've got different inputs.

I would suggest that you require them to discuss, why an input has changed from the previous year. What is the underlining economics that caused that change? If it didn't change, you should also ask for a discussion of, "Okay, explain to me why it didn't change?" Because perhaps you were looking out there in to the market, and you're seeing that the situation has changed. And if it, if the situation, let's say a leverage or capacity utilization changed, why didn't that effect some inputs?

I would also recommend that you

require a discussion of plausible ranges of inputs. There's been some discussion of the Ibbots forecast. Okay. You're using an average, but there are ranges. Why was a particular input chosen as opposed to the high or the low? Average is certainly a reasonable thing to do, but you should have some sense of what is the range of inputs that people are looking at.

I would also suggest you ask for a comparison between the forecast and recent history of the particular input. And indeed you can even do this on the entire cost of equity. The cost of equity is supposed to measure what investors expect to receive from investing in a security. And that can be compared with what they received in the recent past.

And I think the key issue here is that you should anticipate that there will be differences in the cost of capital estimates. But if the inputs used across the various models are consistent with each other, that difference should be relatively modest. If it's a percent difference, I would consider that relevantly modest. If it's two percent, you're kind of pushing the envelope. If it's four or five, that's way too big of a difference. And at that point I would ask for people to go back or your staff go in and look at those inputs and try to decide where those differences are coming from and what is the most reasonable alternative.

Now I actually have some slides here to sort of illustrate some of this stuff. And intuitively what's going on with the dividend capitalization approach is sometimes referred to as the DCF or Discounted Cash Flow approach, is, this was an attempt to get an estimate of an anticipated return for an investor in a stock. The idea was the investor buys the stock today. We know what the price is. We'll call it P-zero. They're going to collect dividends for as long as they own the stock. And then they're going to sell it for some price. Let's call it P-T. Now once you know that information, you can calculate the return. The problem is we don't know P-T.

And if we could forecast that with accuracy, we'd all be rich.

So the people who are building these models said, "Well, okay let's due a substitution here and we will assume that P-T is the present value, at that future date, of the subsequent dividends out to eternity." Okay. And this is where this growth rate starts to come from. And in fact what we're trying to do is we're trying to forecast future dividends. And the upper equation there basically is saying, "Okay, if I can forecast dividend in year one, dividend in year two, etcetera, and the dots at the end mean that it goes on forever, I could work out what K is." That's the internal rate of return or the, well what will ultimately turn out to be the cost of equity estimate.

Now the problem is I don't know what those dividends are. So I've got to have some forecasting mechanism. The so- called Gordon Growth Model, on which your current technology is based, assumes a constant growth rate forever.

That's the G. And with that you can collapse the top equation into a shorter form which is the second one, where you are summing up those dividends assumed to grow at a constant rate on out to infinity.

It turns out that infinite series has a relatively simple solution at the bottom which says that the current price is going to be the current dividend times one plus the gross rate divided by K minus G. And then what you do is, you rearrange that to get K, the cost of equity estimate. Okay.

That one, is the formula I just showed you, was assuming annual dividends and a constant growth rate. Prior to 1982, your predecessor the Interstate Commerce Commission, was using the equation, I guess, I could point it out of here. Was using -- maybe I can't point it out. The pointer has died. Oh well. The top equation. And the difference between that and the one on the previous page was that, this one assumes continuously paid out dividends. And this was actually the formula that was in the paper written by Myron Gordon and Andy I. Shapiro. For reasons that I don't fully understand, but it's been described as using the average of those two formulas, starting in 1982 the ICC and subsequently yourselves, have been using the formula at the bottom which is indeed the average of the previous two. The key issue here is, that all three of these formulas, the results are very, very sensitive to what you plug in for G. And you can just look at this thing and you can say, "Well you now the first term is a couple of percentage points. The second term which is the G is whatever you plug in for G." If you plug in 13.66 for G, you're going to have some number bigger than that by one and a half to two percent. Okay. So it's very sensitive to G.

And the issue then becomes, well what happens if you don't think it's going to grow at a constant rate forever? And the problem is that, if the constant rate that you assume is substantially higher than the growth rate for the economy, you wind up with the result that the firm or the industry in question becomes the whole economy. It comes to dominate everything. If they're growing at a slower rate then the whole economy, then mathematically they disappear.

And so you say, "Okay. Economically this doesn't make sense. How do I fix the problem?" Well the way I fix the problem is, I have an initial growth rate for some period of time, say five years. So TA could be five years. So I'm going to use a five year forecast. It doesn't have to be five. It could be three, seven, whatever you think is reasonable. But I use something for the first period of time. And then I have a transition phase or perhaps more than one. But here I'm assuming just one transition phase from TA to TB. Let's say TB is ten years. So I have a transition from five to ten. And then after ten, I assume a terminal growth rate which is normally set at the estimate for GDP growth. Okay.

So if you do this kind of procedure you wind up, here's the equation, if you don't like equations, you don't have to look. But the first line is you're growing at one rate. The second line is the second period where you're growing at a different rate. And the bottom one is that final terminal situation where you're growing at the same rate as the economy as a whole. And this can be solved. And this is in fact a very standard thing to do. It's in textbooks. Ibbotson and Associates actually publishes this one of these. It's not rocket science. But the thing here that's important, is that once you allow for not growing at the same rate forever, the differences can be very, very large. Okay.

Model -- this is Table 1 out of my verified statement. The Model Zero here is growing at 13.66 percent forever. And you get the 15.18 percent cost of equity estimate that was the 2005 number. Now if you decide, "Well, gee I don't really think I can grow at that rate forever," and I used a GDP estimated growth rate of 6 percent, one can debate that, but you're going to get numbers from people typically in the range like five and half to six and a half percent currently with the current inflation forecast and so on. And I used 6 percent. And I said, okay. Suppose we have an industry growing at 13.66 percent for the first twenty years, and then we drop down to 6 percent. Well the difference is pretty large. The cost of equity estimate drops from roughly 15.2 to 10.2.

You can play around here with different numbers. But the point is that, once you say its not going at the same rate forever, you get numbers, up here, the difference between Model 1 and Model 6 is a little over 2 percent. You get a much closer range for the estimates that are coming out. Now that's the, if you will, the benefit of suggestion 1.

Suggestion 2, was you mandate a second approach coming from a different perspective. Here I've got the Capital Asset Pricing Model laid out. It's a risk free rate plus a risk premium. And there's not too much issue about how to estimate the risk free rate if you're worried about a long term cost of capital. Because when you go for a long term cost of capital you want built in there the market's forecast for inflation over the long run. And that's fundamentally the reason or the rationale for using a longer term risk free rate like a 20 year rate as opposed to the 90 day rate. Is you want the 20 year inflation expectation as opposed the next 3 months.

The problem or the issue with implementation is not whether it's hard, it's whether you can agree on the beta estimate and the market risk premium estimate. You can get forward looking beta estimates. You can get adjusted betas. You can get estimates for the price of risk. But people are going to disagree about what's the right number to put in there. And a mechanical procedure is going, is going to potentially get you some unusual answers. Okay.

Now the Fama French Model, which has been mentioned, is a variation where there are three factors. Arbitrage pricing theory, there can be three factors or more than three factors. But the technology is similar in the sense you start with a risk free rate. You say, "Okay. How much of a risk premium should I have? How much should the sensitivity be?" And the betas here, I've got three of them, are the sensitivities to the different factors. And then the ER1 minus RF is the risk premium or the price of risk, if you will, for that factor.

Now the benefit really for comparing a result like this for the CAPM with the Discounted Cash Flow approach especially if you're using a multi-phase version is, you start to see where the disagreements are coming from. And then you can drill in and try to make some sense out of, well, okay what is the most reasonable input estimate? Do those input estimates line up with what we're seeing actually happening with the firms and the industry? And with the best forecast we can get for the near future.

And with that I will include, but will be happy to answer any questions you may have.

CHAIRMAN NOTTINGHAM: Thank you. Next we'll move on and hear from Mr. Charles W. King for ten minutes.

MR. KING: My name is Charles W. King. I'm the President of the economic consulting firm of Snavely King Majoros O'Connor and Lee.

Who you wonder is Snavely King Majoros O'Connor and Lee? We're a small consulting firm. Been in business for 35 years. Our general subject areas are three. Telecommunications, public utilities and transportation. Our principle activity is the preparation presentation of expert witness testimony in regulatory cases. Our client base are users of these three, three industries. Our principle telecommunications client is the Federal Government. Our principle utilities clients are state funded consumer advocates or public service commissions. And our principle transportation clients are shippers.

I am not a transportation expert. I am in the utility area, but I testify in public utility cases on the subject of rate of return, among other things. But in the last, you'll find the list in my statement, the last five years, I've testified in 14 separate cases on rate of return. As we speak I'm preparing a rate of return testimony in four cases. Two in Maryland, one in Missouri, and one in North Dakota.

I'd like to look first at the finding that this Board made last month or maybe two months ago concerning the rate of return for the railroads. That return for, on equity was 15.8 percent. And the question is, is that a reasonably reasonable return in comparison with other estimates? We have in this slide a comparison of the 15.8 percent with experienced returns. The Ibbotson experienced returns for period 20 -- 1926 through 2003, and you see that's 12.4 percent. `71 through 2003, 13 percent. And S&P's Index of, I believe this was just the last few years, 12.84 percent.

So your estimate, the Board's estimate of railroad return is significantly above overall market returns experienced.

Now let's look at estimates of future market returns. These are the return estimates that were produced by the utility witnesses in four of the cases that I have participated in. As you heard the, one of the requirements of the CAPM Method is a estimate of the aggregate return of the entire market. And these are those aggregate returns. Presumably looking forward. As you see, they range from 11 to 13.9 percent. And even the 13.9 percent though, is a full percentage point plus another 28 hundreds, 28 basis points. So that's 128 basis points below this Board's estimate of the equity return for the railroads.

Now this equity, this difference would be justifiable if we had any evidence that the railroads were significantly more risky then the market, in general. But there is no such evidence, and quite the reverse. These are two measures that come out of Valueline. Valueline's beta is used more by utility experts than any other beta. I don't know that it necessarily is the better one. But it certainly is the one in the most use, in rate of return cases. So I have presented that here. As you see the railroad's average about at the market average.

The other thing that Valueline produces is a safety rating which is a measure of investor risk. Here the railroad's average 2.25. The market average is 3.0. And I think we can conclude from this, that the railroads are not more risky than the market. In fact, there is evidence that they may be less risky.

Another comparison is the overall cost of capital. In examining analyst reports, I found that at least two analyst organizations have estimated the cost of capital, and this is aggregate cost of capital for the individual railroads, and here you see their estimates. Now Citibank is quite low. There in the range of 6.1 to 6.3 percent. Legg Mason estimates a little higher range from 8 percent up to 9.2 percent. But all of those are dramatically lower then the Board's finding as to the individual railroad's aggregate cost of capital, using it's formula. As you see those estimates range from 11.84 to 12.87 and average at about 12 percent.

So how is it, that the Board's DCF formulation produces such a very, very high estimate of equity cost and overall capital costs? Well one of the reasons is the formula, is the DCF Formula itself. As you see it consists of these two elements; growth and dividend yield. Dividend yield for the railroads is very small. It's only at 1.5 percent. Were investors only interested in dividend yield, they wouldn't buy railroad stocks. What they buy it for, is growth. And the Board's estimate is 13.66 percent which is derived from the forecast produced by Ibbotson Associates of analyst estimates.

Now why do these analyst estimate such a high growth rate? Well I've been through all of the analyst, not all of them, but a lot of the analyst's studies of the Railroad Industry and individual railroads. And here are five principle reasons that they find that the railroads will grow dramatically. Motor carrier problems, high fuel cost, and shortage of drivers. This produces head room for price increases. Is has not existed in the past. Also the growth and long haul intermodal, driven largely by Asian imports coming into the West coast. There's been a significant improvement in train scheduling so that we're getting better utilization out of the fleets. And then frequently cited, is weak regulatory constraints. And I'll have more on that later.

But the characteristic of all of

these with the possibility, with a possible exception of the last one, is that they will not last forever. The motor carrier problems, even if they get worse, sooner or later the advantage of the railroads over the motor carriers will exhaust itself. And there and with that exhaustion will come the exhaustion of the head room for price increases. Sooner or later the railroads will increase prices to the point that shippers can't stand it. And their traffic will fall off. And their, their rate of increase in earnings will decline. And that's true of the other, other items. Those are all short term, three to five year effects. And that, that is what drives the 13.66 percent forecast.

And that's why I have recommended in my statement, that the Commission adopt the FERC, Two Step Earnings Growth Formulation. Now we had concern expressed a minute ago on how one should weight the short term and the long term. I don't know that FERC has got it right necessarily, but what they do do is weight short term two-thirds and long term one-third. And this begins to, this modifies the rate of growth to a level that's more reasonable and acceptable. Here you see the 13.66. This commission, this Board has adopted weighted two-thirds. And the Congressional Budget Office forecast of GDP growth of 4.5 percent. That is their long term forecast. And that's weighted one- third. And you get a growth rate of 10.61 percent when you add the 1.52 percent dividend yield you get an equity return of 12.13 percent.

And a 12.13 is high, but it is well within the range of the, of the overall market returns that I had cited in two previous slides of 12.4 to 13 percent for experienced returns to equity, and forecast returns to equity of 11 to 13.9 percent. So that is the, that is my recommendation with regard to the equity return.

When we get to the issue of how we should put together the equity return and the debt return, we have to go to the problem of circularity. This Board has announced that there is no circularity. And this is some time back. Maybe it was the ICC. And the reason was, I believe it was the ICC prior to the formation of this Board, and the reason was of the Commission found that there was no effect of their regulation on the profitability of the railroads because most of the traffic, 70 percent of the traffic, is unregulated. Unregulated by reason of the fact that it is below a threshold of 180 percent revenue over variable cost. That's true of revenue.

But it's not true of operating profit. Operating profit is about two-thirds, one-third the other way. Most of the operating profit is from traffic above 180 percent RVC. And that means that in fact the past perception that railroads are not, the railroad profitability is not effected by regulation may require revisiting. And it may require revisiting particularly in light of the substantial increases that are being imposed on traffic that is above 180 which will drive that red portion of that right hand bar to an even larger percentage.

Now there are two ways in which the Board's treatment of its rate of return calculation effects that rate of return calculate -- effects, I'm sorry. The Board's calculation of rate of return effects the profitability of the railroads which in turn effects the Board's calculation of rate of return.

First because we have weak regulation, there's substantial head room for the railroads to increase highly profitable traffic by even more percentages. And the reason that they can do so is, that many, that all but one of them are found to be revenue inadequate. And that creates a high earnings forecast. Because as you noted the analysts find substantial head room, weak regulatory constraints, and therefore expect significant increases in earnings.

The other way of which the Board's find, Board's approach to finding rate of return influences the railroads is through the market valuation of the equity to debt ratio. The Board uses current market values for equity and debt. Because the railroads are profitable, they have high stock prices which gives them high market equity valuations. Which then flow in to the DCF formula, I'm sorry, the compositing of equity and debt for the purpose of capital estimates capital cost to estimates. And that in turn creates further profitability.

Now the solution to the circularity which I believe exists. First, we can limit the effect of high earnings forecast by using the FERC two step procedure. Second, we can eliminate the impact on the capital structure coming from market value by reverting to the book value weighting that was used by the Interstate Commerce Commission prior to about 1990.

So my final recommendations are to continue to use DCF Formula, but to use the determinate cost of capital for the railroads. Adopt a two step, two step procedure used by FERC for identifying growth factor. And use book value of debt and equity in determining the capital structure of the railroads.

When you do that, applied retroactive or retrospectively to 2005, the equity return is 12.13. Well within the range of equity returns of the overall market. And the total return is 8.99 percent. And that's well within the range of, of capital costs estimated by the analyst back in slide 4.

Thank you very much.

CHAIRMAN NOTTINGHAM: Thank you Mr. King.

We'll next proceed with Mr. John Ficker representing the National Industrial Transportation League. Welcome Mr. Ficker. And please proceed. You have five minutes.

MR. FICKER: Thank you Mr. Chairman. Mr. Vice Chairman. Mr. Mulvey.

It's good to be here again. And I think if my reflections are accurate, this will probably be the last testimony in this building by anybody before a hearing. I think your move is shortly to happen. So I take with great distinguishment that I be the last person testifying before this august Board in this august room. So thank you.

My, my notes here say, good morning but I think it's afternoon now. So I'll amend that part of my testimony.

I can't tell you how much I appreciate the economic education I've had here this morning. I am not an economist. I make no claim to be an economist. I always relish the fact that people understand this so much better then I do. And it's really an opportunity for me to learn a lot here this morning.

But I want to talk really one thing and then give you a few thoughts about it. I represent those who move the goods and commerce in this country. And nothing is more important to us then have a healthy viable financially strong transportation industry. Rails, air, ocean, highway. It all is important to be strong. Our country depends on it. Freight transportation is the circulatory system of our economy. And unless we have a strong economy, strong transportation system then our economy will suffer as a result.

But in that debate, in that discussion there must be balance. And I think that's what this proceeding is all about. Finding a balance between those who use the system and those who provide the services in order for those, everyone to feel that they're getting the best benefit from the system.

You all know the League and I won't go into a great deal of history about the League except to say one thing, we are proud and quite proud today to say that this is our 100th anniversary. In 1907, a group of traffic men got together in Chicago and formed the National Industrial Traffic League. And on August 2nd, and we're proud to say that this year we will celebrate our 100th anniversary. Lots of our League members are involved in rail transportation and rail has been at the heart of this organization from the very beginning. And that's why we're here today.

According to the Statute as I understand it, the Board is to maintain and revise, as necessary, the Statute to determine revenue adequacy. And I think that's why this proceeding is so important because at the heart of revenue adequacy is the cost of capital.

There's clear evidence though today that what we have is slightly out of balance. And I listened to those who testified previous to me, and again, I learned an awful lot, that what's going on in the Board's recommendation and the Board's output is significantly different from what the market place is determining the rail industry to achieve. And that's where I believe we need to step into balance.

And let me give you a couple of examples that kind of cite this. First, the Board's current methodology led to a finding in 2005 that out of the seven Class 1 Railroads only the Norfolk Southern was revenue adequate. And I have a terrible abomination for that word because revenue adequacy to John Q. Public and revenue adequacy in this room are two different meanings, absolutely. But the conclusion contrasts what the financial communities says.

For example, Jim Valentine who is a noted Morgan Stanley rail industry analyst estimated that in 2005 CN, BNSF, NS, CP were all, all earned their cost of capital. And Scott Flowers, another respected analyst similarly predicted that the CN's rate of return on invested capital in 2005 would exceed its cost of capital. And that CP's cost of capital was in the same range as its return on invested capital. Five out of the six of the major Class 1 Railroads were predicted to earn their cost of capital in 2006.

Yet despite these reports, by various respected analysts, the Board's methodology resulted in a declaration in 2005 that in BNSF, CN and CP were all still short of returning, of earning their cost of capital. If the Board continues to follow this methodology it's likely it will have a similar thing for 2006.

I have to say as a sidebar, that last year I was in this very hearing room for some event, I can't recall what it was, I think it was a retirement, excuse me, I am fighting a cold, that -- and I was talking to the previous Chairman and he was very concerned about the reports that were initially coming back on the rate of return for the railroad. Saying he sent the staff back to rework them over and over again. Because he couldn't understand why the cost of capital, they were showing below threshold for revenue adequacy, whereas Wall Street was saying something entirely different. But that's just a side bar.

The second reason for this inconsistency is that the internal, excuse me, that the internal indications of the Board's methodology is in need of repair. And the previous testifiers fairly well indicated that.

And again, I am not an economist. And I don't want to, don't want to jump into whether a DCF Model or what's the other one, CP --

CHAIRMAN NOTTINGHAM: CAPM.

MR. FICKER: -- CAPM. Thank you. Whether those are the right approaches. But the question about, is the it the right approach or the wrong approach, do you use the same approach over and over and over and over again? Our economy evolves, our country evolves and I think you should take a hard and serious look at that.

Here's an example that was pointed out to me. The CN and BNSF were about as far away from revenue adequacy in 2005 as they had been in 2004, despite significant jumps in their returns. The reason for this odd result was that the agency's cost of capital determination increased from 10.2 percent in 2004, to 12.2 percent in 2005. A 20 percent increase in the cost of capital in a single year, in the absence of an increase in inflation or any other circumstances that would explain such an increase.

Finally the League would note that all the parties to this proceeding, both the railroads and shippers have an interest in an accurate determination of cost of capital. No one is here proposing for things to be anything but. The League supports and will continue to support a strong financially viable rail industry. But the League believes that the Board's stand for measuring their financial health should be accurate and in tune with the judgement of financial markets.

Therefore, the League urges the Board to undertake a reexamination of the methodology used in determining the Rail Industry's cost of capital and the methodology for circulating rail carriers individual, calculating rail carriers individual rates of return.

The League does not at any time, at this time, take any specific position on specific methodology. We'll leave that to the experts.

The League urges the Board to seriously consider the suggestions that were presented and initiated in this Rule Making

And I thank you for the time that you've given me. I hope I was in my five.

CHAIRMAN NOTTINGHAM: Thank you Mr. Ficker. We appreciate your efforts getting here. I know you were doing some travel this week as were many --

MR. FICKER: Transportation got -- I got stuck in Chicago for two extra days.

CHAIRMAN NOTTINGHAM: Similarly, I want to thank Dr. Hodder for coming from Madison, if I heard correctly.

DR. HODDER: That's correct.

CHAIRMAN NOTTINGHAM: Well welcome to spring break here. It's a balmy 25 or whatever it is out there.

Just have a few questions if I could. Let's see, I guess with Mr. Moates you, you made perhaps for the first witness just by luck of the draw to use the phrase today, not a new one to us of course but, "revenue adequacy." I took a note that you, you added a couple important words just before those two words, "long term."

I just want to make sure I understand or is the phrase long term revenue adequacy in Statute or in case law or regs? I'm still only six-seven months into the job. I want to make sure I get the benefit of your, your knowledge whether, whether what you meant when you said, "long term," how meaningful is that? And perhaps help us with what you would see as long term.

MR. MOATES: Chairman Nottingham, the term, "long term," is not in the Statute. But this agency, the ICC and the STV have, put it this way, long recognized that revenue adequacy, if and when a particular railroad company achieve the target number in a given year, is not a short term concept. It has to be sustained.

How long is long term? I think everyone at this table and everyone we represent have debated that, you know, in many different forum for many, many years. There has never been an occasion, to my knowledge, where this agency has been called upon to determine whether a particular railroad had achieved long term revenue adequacy. Now whether that may be an issue before you, in the next several years, frankly, I only hope so. Because I hope that we're going to have the kinds of returns for you know, the various Class 1 Railroads that are members of the AAR that will cause us to come to grips with that problem.

But the short answer is, again, it is not in the Statute but has been recognized by this agency for a number of years and I think the economist would all agree that hitting a particular number in a given year, one year, maybe even two years, whatever, would not be meaningful in itself. The ability to sustain the level of revenues to achieve the kind of capital that the railroads must compete for, not just among themselves but with all the other components of the economy, is what we're talking about.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Rosenberg, would you care to touch on that? If we were on your, in your experience, if we were to be asked to look at revenue adequacy, do you anticipate that it, we would be asked to do so in the long term fashion or?

MR. ROSENBERG: I would agree with Mr. Moates. That the, that the prior agency formulations, it has been in terms of long term revenue adequacy. And avoiding the situation where it fluctuates one year it is and one year it isn't.

By the same token, I think it's possible and it should be a determination that's made prospectively. If you get to a certain point and it looks like the conditions are stable then you don't have to wait the two years, three years, four years, five years, ten years to get confirmation of what's already set there. And we would also take issue with the statement that something is waiting to happen. If you calculate cost of capital properly, at least properly in our view, and you look at what returns have been, I think you got a case that some of the carriers are there now. And I think that's what Wall Street is recognizing as well.

CHAIRMAN NOTTINGHAM: Thank you.

Mr. King, your presentation, you touched on a series of developing market indicators, developments in the freight rail market, one of the points you made was that there is, there has been, in recent years improved train scheduling, performant practices. It's not everyday that I hear a distinguished articulate ship representative talk to me about improved train scheduling performance. I want to give you a chance to elaborate on that. It's refreshing.

MR. KING: The citation was to the analyst reports. And I was merely drawing out of those reports, and there's dozens of them that I reviewed, the main points that they were making and improved train scheduling was one of them. And they -- it translates into greater efficiency. I can't speak from any personal knowledge as to the nature of that improved train scheduling. Although I'm sure my partner, Tom O'Connor could. And as a consequence I'm afraid I can't shed much further light on this particular topic.

CHAIRMAN NOTTINGHAM: Thank you. Mr. Moates, on the issue of improved, in your experience in working with the industry, do you see that that's an accurate description of developments in the railroad market?

MR. MOATES: Yes I do. I think it's been well publicized and I think the shipping community is well aware of the fact that, I think all of the major North America railroads, I should be careful about all, the vast majority of the major Class 1's now are attempting to run, and as I understand it, running successfully, in most cases, scheduled services, particular scheduled services for industry segments.

Initially I think it was focused on intermodal, the United Parcel Service and customers like that. The concept has been expanded. And I think even for example coal shippers have seen, I believe, and have indicated publically in some cases, they have seen much more reliable predictable service from the railroads.

Now obviously there are always going to be problems. And we've had really difficult weather across the country in the last week. And it wouldn't' come as a surprise to learn that, you know, rail service in different areas has been adversely effected. And so, just as it has been for the airlines.

By the way, Dr. Stangle came from Boston but he took the train so he got here.

(Laughter.)

And I must say, Mr. Ficker, the AAR congratulates the League on its $100^{th}$ year anniversary. And I was struck by the fact that if, I didn't know, if the originators gathered in Chicago in 1907, I rather suspect that many of them came by rail. But, so I think there has probably been a nexus between --

MR. FICKER: There weren't many that flew.

(Laughter.)

CHAIRMAN NOTTINGHAM: Mr. Ficker I -- you're in touch presumably with customers of the railroads on a daily basis.

MR. FICKER: Yes.

CHAIRMAN NOTTINGHAM: Do you hear about --

MR. FICKER: As a matter of fact I heard a few things this morning.

CHAIRMAN NOTTINGHAM: Do you hear a lot about improvements in train scheduling and related service improvements?

MR. FICKER: I think you have to look at this, Mr. Chairman on a longer term picture. Over the last ten years, you've seen mergers take place and enormous downturns in performance in the rail industry as a result of those merging. Whether you go back to BNSF, the BN Sante Fe, the UPSP or the Conrail, at each, each junction there was a significant downturn in service resulting in loss of traffic, loss of -- increase in the number of cars that companies had to, companies had to acquire.

And then that sort of, we came out of that in the late `90's and then the unforeseen influx of traffic in 2003 to 2004 driven substantially by Asian imports, really impacted things. To the point where San Pedro Bay was referred to as the D-Day Fleet because ships could not make port. Because there was so many ships waiting to discharge and there wasn't enough capacity to take it away. Now that was not strictly a rail issue. That was a highway issue. That was a port issue. But a significant volume of traffic. So I think what we're seeing is improvement. But we're nowhere near back to where we were prior to the merger times of the early `90's, when service was much more predictable.

I think that to the expense of the merchandise shipper, the single car shipper, the intermodal service is improved substantially. I know that UPS pulled a great deal of its traffic away from the Railroad Industry in 2003, 4 and 5 because they couldn't meet their commitments to their customers. So they put it over the highway. I think some of that has come back. You would probably need to check with them to verify that.

But overall, I think service is on a upward trend. But one of the things that we continue to talk about in our organization, is value. It's not about pricing and cost. It's about what you get for your dollar. And I don't think that, unfortunately as any market rises and falls and all of our members live and breathe in commodity environments where prices fluctuate with supply and demand, and unfortunately you've seen that hit the transportation industry very significantly over the last several years. But unfortunately the value isn't quite there where it should be today.

CHAIRMAN NOTTINGHAM: Thank you. Mr. King you had mentioned, in the course of your remarks that there has been, I want to make sure I understand this correctly, a notion or a belief somewhere that the freight rail sector of the U.S. is not impacted by government regulation or profitability is not impacted?

MR. KING: Yes.

CHAIRMAN NOTTINGHAM: Can you expand on that?

MR. KING: It has to do with the prohibition that comes out of the Hope Natural Gas Case. Against a regulatory scheme where the action of the regulator effects the measurement of the factors that go into establishing the regulated rate. In that particular case, it was the valuation of rate bases for, in this case, a gas pipeline company. And they, the pipeline was hoping that they would make a market valuation. Well of course the value of the pipeline was a function of what rates got of the Federal Power Commission at the time, now FERC. And therefore, it became circular.

And this issue came up with the, and

as a result, every commission in the country that regulates a monopoly service uses book value for its, for both its capital structure and for the rate base, that is the base against which the allowed rate of return is applied.

And that was originally the case with revenue adequacy findings. The ICC, when it made it's first series of revenue adequacy findings, based it on, based the compositing of the various components of capital on book values. Then in, I believe the early 1990's, the ICC observed that most of the traffic owing to the Stagger's Act had been free from regulation. And reached the conclusion that that being the case, its finding of revenue adequacy would not significantly effect the value of the stock and therefore the capital structure that was used to composite capital elements.

And so ever since, the ICC and now this Board, use market valuations. Well what I was suggesting in my remarks is times have changed. The importance of monopoly or market dominant traffic has increased dramatically with the growth of largely coal and chemical shipments. And with the increased profitability of the rates for those shipments. As a consequence I think it's time to rethink that earlier finding by the ICC that this Board's finding of revenue adequacy or inadequacy no longer effects the profitability of the railroads. And therefore their stock valuations. I think now it does.

CHAIRMAN NOTTINGHAM: Thank you. I have some more questions, but I'll defer for the moment.

Vice Chairmen Buttrey.

MR. BUTTREY: Not quite sure how to ask this question but, it seems when accountants add up the numbers two and two they get four. And when economist add up the number two and two they may not get four. They may get something else. I'm trying to think down the road to what the Board might do or what direction the Board might go in. No offense, Commissioner Mulvey.

MR. MULVEY: He's just come up with some lawyer jokes.

(Laughter.)

MR. BUTTREY: Well I thought I might try to add a little levity here.

MR. MULVEY: Yes. Thank you.

MR. BUTTREY: In trying to add up what I've heard today. From what I heard from the Professor and from you Mr. Rosenberg is that you'd be quite happy with a result that would come down where Mr. King is right now. Is that accurate or is that off the mark?

MR. ROSENBERG: Well speaking for myself -- Dr. Hodder may have his own, his own views.

MR. BUTTREY: Well he's the economist. He's going to have, a different view.

MR. ROSENBERG: In part, are you going to the cost of equity or the cost of capital?

MR. BUTTREY: Well I'm not saying where I'm going. I'm just asking you how you like Mr. King's, conclusion of what he would recommend. Mr. King is pretty certain that he has the right idea here. And he may have the right idea here. I don't know. But I'm just curious about whether you like his proposal or not.

MR. ROSENBERG: We probably like where it ends up. We think there are probably other ways. And probably sounder ways to get there frankly. For example, on the cost of equity, the FERC, two-thirds, one-third. We don't, we don't believe that that is fully thought out. It's an awful, it's very heavily weighted to the analyst projections. Higher then it's warranted.

When with respect with the capital structure, we think that the current equity heavy weighting does not reflect honest and efficient management, that a proper structure would be more heavily leveraged. And so it might end up close to what the, what's based on both then, but you would get there in a different direction. And also we would reflect the high proportion of operating leases, as discussed in our prior evidentiary submission. Professor Hodder.

DR. HODDER: Is PSAB, does PSAB weigh in on that, on that determination of whether you using, where you're using, where you're expensing the leases or not. Is that a PSAB rule or is that something else?

MR. ROSENBERG: No. I'm reasonably confident that the PSAB calculation would say, you know, an operating lease is, is, is an expense and not a debt. What I am saying is that Wall Street, and we provided information about that, will capitalize it. Also in BNSF and UP, for their annual reports, the Regulation G, Pro Forma, if I have the term correctly, capitalizes, as well. It looks like, although not all the information was there, in terms of their incentive compensation, that they look for return on invested capital. And they capitalize it, for that reason, as well. I think it may be an example where the, where the economic treatment does differ from the accounting treatment. And then I'll leave it at that.

DR. HODDER: With the, with regard to the cost of equity estimation, I guess, I would counsel against going for short cuts because it may work okay for awhile, but then they may cause a real problem. And so I would actually, I would go for a three phase DCF approach, where you actually see, "Well why I am giving it this weight?" Because that's what comes out in the economically sound calculation.

With regard to the, with the book versus market value, economists really like market value. I can understand the legal argument about the circularity and I guess my thought would be on that, you probably want to go for something like the appreciated replacement cost or something that would get you a value that was not going to be driven by what was happening with the stock price. But did not reflect the cost of something that was put in place 25 years ago.

MR. BUTTREY: Any rebuttal by anybody else? Mr. King, do you have a follow up to that at all?

MR. KING: Well, I think, I think efforts to develop depreciated replacement cost have foundered on, what it is replacement cost? And that has been a real difficulty when that methodology has been employed. It's not a bright line kind of methodology as it is when you go either to market or to book value.

MR. BUTTREY: Anyone else?

MR. MOATES: If I may, Vice Chairman. First of all, on the issue of the operating leases, if you look at page 11 of my submitted testimony today, we point out that WCTL's proposal of the Board reclassifying operating leases from the expense item to a debt item would flatly violate ICTA. WCTL acknowledges that kind of a classification would not be consistent with gap accounting.

And by Section 11161 of the Statute, tells the Board to, generally conform this cost accounting rules to gap to the maximum extent practicable. And it explicitly requires -- the Board's rule governing revenue and expense accounting by carriers be quoting, "Consistent with generally accepted accounting principles uniformly applied to such carriers." End quote. That's section 11164.

You didn't ask me directly, but I'll volunteer, the AAR would not embrace Mr. King's proposal. A number of the points that Mr. King made, he made them very eloquently. I compliment him for that.

But he did say at the beginning he's right. His firm in the transportation area represents shippers. He has a point of view. His partner Mr. O'Connor is known to you. He has been here in the small shipper context and the couple mediated chemical company cases that you've had in the last couple years.

And he made a couple of points, that I think Dr. Stangle had addressed, that Mr. King did not respond to, including the lack of propriety in our view of comparing utilities to railroads, which he did. And a number of the figures he put up there, were for a single a year. Making comparisons to a lot of your numbers over a longer periods of time. We were looking, we were snapshotting a single year versus multiple year comparisons.

I don't mean to speak for Dr. Stangle on that, but I listened to what he said. And I know he made that point.

MR. BUTTREY: Dr. Stangle, do you have anything you want to say or are you pleased, are you satisfied with Mr. Moates' characterization?

MR. MOATES: Careful how you respond.

DR. STANGLE: Well, you asked the question initially, Vice Chairman Buttrey about the FERC Recommendation. It just seems to me that there are a whole range of possible changes that you might consider. And you ought to do it deliberately including, you know, keeping the method you have now or considering alternatives.

But it's an important choice that you face. And I don't think you've gotten all the knowledge and expertise that you could gather on that question. So I would advise that you study it carefully.

MR. BUTTREY: Thank you.

CHAIRMAN NOTTINGHAM: Commissioner Mulvey.

MR. MULVEY: Thank you. That's the whole purpose of this hearing today and why we are trying to listen to as much input as possible before making a change in this very important procedure I don't have any lawyer jokes. As an economist I will point out what is pretty evident today in the old economist joke that, if you laid all the economists in a line around the world, they never reach a conclusion. That seems to be true here today as well.

I will say a couple of things. There was a question about whether or not the Board should be changing something like the way it evaluates the cost of capital and departing from a long standing tradition of 25 years. But isn't it true that other agencies, and in fact we heard from the Fed, I know also that the FERC has also looked at its approach, have made changes over time. So isn't it important to look at the way we do things as times change.

Someone mentioned in their testimony that the fundamental economics of railroading have not changed. And that's true. But it is also true that economic conditions in the railroad industry certainly have changed. And that might cause us to look at the way we evaluate the cost of capital. Anyone want to comment on that?

MR. MOATES: Well I since I think I made those remarks, let me start. And perhaps I was misunderstood here, so I apologize. There's not a suggestion of any kind from the AAR that it's being critical of the Board looking at the issue. It's an important issue. It's something that you might want to look at every couple years going forward.

My point and the Association's point

is that contrary to what these other commentors has suggested, there is absolutely nothing that has been presented to you, in this record or for that matter in the record of Ex Parte 558, that really does demonstrate that there is a flaw, let alone the term used fatal flaw, in that DCF methodology that you have been using for about 25 years. The fact that it's been used and used effectively for that time, I think is important.

And I think I made the point earlier that because of the significance of regulatory certainty and the like, you would not lightly depart from that, as you presumably would not lightly depart from any other important regulatory philosophy or point that you had embraced in any other area. So we're not suggesting that as a matter of law, you couldn't change it.

We certainly aren't suggesting that we don't think there's anything in this record that even comes close to causing you to depart from it at this point in time. I could understand, and I'm hearing, you know, there is genuine concern and interest in whether something more fundamental has changed in economics that makes the CAPM less difficult to implement. And we frankly believe it is.

I've heard economists refer to CAPM as theoretically elegant, but almost impossible to implement effectively frankly. Theoretically elegant is wonderful. It's great in the classroom, but you're not in the classroom and we're not either. We're trying to compete for capital, as I said before, in the real market place.

So if that interest is there, in my opening remark I said I had understood your comments earlier this week in Ex Parte 558 to suggest that if you wanted to go forward, you would do that in a formal Notice of Proposed Rule Making. I assume that to be the case. And if that is the case, we obviously, will participate in as helpful way as we can. And I would expect that all of the parties would likely offer you even more competing points of view from other, you know, very impressive economists.

And I think the gentleman from the Fed made it clear when they asked for comments. Not just on the methodologies, but even on how to adopt a beta. They got comments from well meaning, intelligent, experienced people all across the spectrum. I think you can reasonably expect to see that too.

MR. MULVEY: One of the things we did was, to ask our economics staff to look in the literature to see what the, current thinking was on, the way that best reflects modern finance theory in calculating the cost of capital.

And the speaker from the Fed also noted that there seem to be a consensus developing away from DCF and towards the CAPM approach in the academic literature. But Dr. Stangle you mentioned that there was a lot of criticism in the literature about the CAPM approach. Would it be possible for you to submit some, following this hearing, some of the citations to that literature? Because we did not see much in the way of the criticisms of the CAPM approach compared to the DCF approach in the literature search that we conducted here.

DR. STANGLE: Well the Fama French article that's cited in Dean Hubbard's statement, and I cited also in 2004, in the Journal of Economic Perspectives --

MR. MULVEY: Yes.

DR. STANGLE: -- is highly critical of implementation problems with the standard CAPM. But of course they're endorsing their own model.

MR. MULVEY: Right. Well one of the other articles in that same economic journal by Perold very much endorsed the CAPM Model as opposed to the DCF Model. So it is a matter of academic debate. But of course academic debates eventually become public policy. And we don't, try to say, "Well that's all academic." We're are prisoners of a dead economist as you all know.

We saw very, very different betas also in your Table 3. And could you elaborate on why these betas were so different? Is it just simply a matter of the timeframe? Is it a matter of what's included in the risk factors? I mean these are substantial differences between the railroads and over time.

DR. STANGLE: Right. Sure. Well it's because of all the factors you mentioned. Bloomberg uses an estimation period of between three and five years. Ibbotson uses two years. Thompson uses three. Valueline two or three. So there, that's between two and five years.

MR. MULVEY: Yes.

DR. STANGLE: That contributes to the variability. Bloomberg uses monthly data. The other vendors listed in that Table use weekly data. That contributes to variability. The market proxy Bloomberg, Ibbotson and Thompson uses the S&P 500. Valueline uses the New York Stock Exchange Composite. Bloomberg uses a 30 day Treasury. The other vendors use something else. Also Valueline, Mr. King put it up on the board, and in my Table 1 it shows values very close to one. They have a adjustment factor that basically normalizes everything to get it, result very close to one. So all of the vendors approach this differently. They have their own expertise. I think they're all respected. But they came up with widely different numbers.

MR. MULVEY: So we would have to choose what we would think would be the appropriate time frames and the appropriate methodology and the appropriate vendor for the betas.

DR. STANGLE: Or you could --

MR. MULVEY: Or we could assume it's one.

DR. STANGLE: That would be --

MR. MOATES: That would be wrong. That would be wrong.

MR. MULVEY: But that would be wrong.

MR. ROSENBERG: We would actually

agree with Mr. Moates on that one.

DR. STANGLE: Actually I wanted to address something that the gentleman from the Fed mentioned. And that is, I mean they can basically do whatever they want. They're not a, they're not a firm, in the traditional sense. I think if you tried to estimate the cost of capital for the Federal Reserve, it's got to be close to the risk free rate.

MR. MULVEY: Yes.

DR. STANGLE: But they're competing with public firms. So they don't want to, if they just came in as the 95 pound gorilla and used the cost of capital that was close to the risk free rate, they would drive the other firms out of business. You don't have that luxury. Your firms are publically traded. I don't think you want to impose that sort of lack of market discipline on them.

MR. MULVEY: Anyone else on that question?

Dr. Hodder, you seem to suggest that

there's more than one appropriate methodology for determining the cost of equity and that different methodologies should yield similar results when they're based upon consistent assumptions. Is it your position that the Board should employ multiple methods of determining the cost of equity simultaneously?

Or would you think that we should choose one method and then use the others as a cross check? In other words, you would you be more favorable towards us averaging different estimates or choosing one and then using the others as a cross check?

DR. HODDER: I would not favor just picking one. And what I was trying to articulate was, if you use two or three or however many you want to use, and then, if they're not giving you consistent numbers, you pursue the question of why am I getting different numbers? It's because there's something inconsistent in the inputs. So my recommendation basically is, not to average, but to try to pursue the inputs to the point where you get fairly similar numbers. Now if at that point you want to say, "Hey, I've got a 10 percent and an 11 percent. I'm going to use 10 and a half." Fine. But I would not go in to averaging, you know, 7 and 14. And, you know, getting a 10 and a half that way. I think that would be a mistake.

The benefit of the multiple approaches is that they surface the inconsistencies. And that allows you and your staff to drill in and say, "Okay. What do we think is really going on here?" So if you have a 10 or an 11, and you think 11 is the right number, then I would say you ought to come down on 11, and not necessarily average.

DR. STANGLE: Both Professor Hodder and Dean Hubbard had a statement, similar statement that in the long run, these techniques should come up with similar answers. The problem is to me, well that might be true in theory, it often doesn't occur in practice. And I think in 2005, had you had a second approach as a cross check, you would have found wide divergence. I think it's going to be very difficult for you to specify, for the party's satisfaction, how you are going to resolve these, reconcile these differences. And that's the beauty of your current technique. You have one. And you the parties have to live with it.

But I think if you have additional Rule Making on this, you're going to want to seek a lot of expertise on how to resolve these differences. I think the problem with the CAPM has been that it takes awhile for it to catch up with this forward looking nature of DCF. That's why you had a big controversy around the 205 numbers. But it doesn't mean that the DCF was wrong. It means that the CAPM was lagging.

MR. MULVEY: Well as Mr. Ficker points out, the Railroad Industry in 2005 had a record year, record profits which continued into 2006. And the industry is getting healthier. At the same time we say the cost of capital has gone up, suggesting that the riskiness of the industry has gone up. And that's sort of counter-intuitive. And I think that's one of the, things that shippers say, "What a second. This is, count erintvitive. -- We have this situation where as the railroads get healthier and healthier and, they can never become profitable because they're never going to make the cost of capital because the analysts are always going to forecast to Continue and infinition these growth dividends and earnings."

DR. STANGLE: Actually the -- now, their growth forecasts, some of the ones I've looked at for future earnings for the industry, are already coming down. It's not that the rates aren't positive, but the rate of growth is decelerating.

MR. ROSENBERG: If I could, if I could add a couple things to that. You know, it may be, it's also built on a larger base, of course, with the increases that have come. Mr. Moates, in the beginning was talking about the measuring stick that keeps going up. And that's what we feel is happening with revenue adequacy standard. As the railroads increase those earnings, they're being paid for by the shippers, our members. And starting to feel like Sisyphus just rolling up. It comes back down. And we have to push, push it up again. So we have the concern with that, as well.

I don't know if you want to add something as well.

DR. HODDER: Yes. I guess I would take a modest issue with Mr. Moates comment about, whether or not the current technology is fatally flawed. I would say that it is, if you have a situation where the growth rate is substantially different from the economy as a whole. And to give you sort of the classic, suppose that you had an estimate of zero growth for the next five years. Would you come out and say the cost of equity was one and a half percent when the risk free rate is up around five? You would say, "This is nonsense." And you would need some kind of an adjustment. Well we've got the flip side of that. We've got a high rate. And you need some sort of mechanism that will allow that rate to get built in at a high rate, but then gradually decline to something that matches the economy.

So I think that where you got the problem right now is, locked in to this constant growth rate forever. And I think it's fairly easy to break that problem, get around that problem by mandating multiple rates. Different rates in different phases.

Now, the difficulty there with the economists is that, you know, they're going to have different views on what the rates ought to be. Where the phases should start and end. And your going to have some fuzziness. I mean this is not going to be a very mechanical process. And I think that the best way to wrestle with that issue is to come at it from a couple different directions. And then try to force a set of assumptions on the growth rates and the timing of the growth rates that seems reasonable and is consistent with what you're getting in terms of risk adjustments from the other methodology.

MR. MULVEY: Dr. Stangle, yes. Go ahead.

DR. STANGLE: I hope you all heard something in Professor Hodder's initial remarks. And that was, when an industry is growing at less then the average of the economy, in the long run, that industry will disappear.

So the Railroad Industry, if you look over the past 20 or 30 years, it's growth rates have been substantially less then the S&P 500. It has traditionally been a capital starved industry. One in which you found it to be revenue inadequate year-in, year-out. It's odd to me that in one year in which suddenly they're doing better, you know, there's a lot of clamor about, wait a minute. This is too good. There's the concern, and I think it's somewhat tongue and cheek that Professor Hodder mentions that, well in a 100 years the Railroad Industry will be bigger then the rest of the economy. I can assure you that will never happen. That's one forecast I'm confident in. Maybe a 100 years ago the Railroad Industry was a very big part of this economy. Today, firms like Microsoft, a single firm, has a market cap that's bigger then the entire rail industry. It's day in the sun, is today. No question about it. It's doing better. It's earnings are growing faster then the S&P 500 Average. But how long will that last? Probably not very long.

MR. MULVEY: You said that the the WCTL raised this issue initially for the growth in 2005, the increase in 2005, but isn't it true that your initial filing of this goes back before that?

MR. ROSENBERG: We had made a filing at least several years ago.

MR. MULVEY: Yes.

MR. ROSENBERG: And at that time we were, we were criticized for not having put in the specific calculation. This time we did put in a specific calculation.

MR. MULVEY: But the concern about the Discounted Cash Flow as an approach and that it overstates --

MR. ROSENBERG: As to the realism of the Board's calculation, it goes back, I think you could go back to, I think it was Commissioner Owens concurrence or descent may be nine or ten years ago. I would need to check. When he said that what the Board's revenue adequacy findings at that time were not consistent with what, with perception in the investment community. It's a problem that's been around. It's not new. We would object to statements that this methodology has been producing accurate sound results for the past 25 years.

MR. MOATES: Don't go back too far because you're going to get back where you're going to find the shippers complaining and urging your predecessor to discard the CAPM, even as a correlation which was the way it was being used. And the ICC did that.

MR. MULVEY: That was my next question. That the railroads new claim that the shippers, had opposed the CAPM approach about ten years ago in a hearing. And it seems views have changed. Maybe it's longer than that now.

MR. ROSENBERG: I believe it was at least probably 25 years ago. And I think I was probably in, well maybe I was out of law school at that time. But --

MR. MOATES: I am older you than you, Bob. It's more like 20 years ago.

MR. ROSENBERG: I think that goes -- well. The decisions I did look at show that the CAPM was coming with the figure that was very close to the DCF. Technology resources at that time were not at the level of development and sophistication they are now. It could well have been a very significant burden for what worked out to a small difference. And as Dr. Hodder would point out, if the two were converging at that time that would have been a healthy sign. But they don't come anywhere near converging now.

Also the state of the industry is different from what it was back then, as well. And you can also see what's happening in the academic literature and what's being used elsewhere as well. And the Board's current methodology, you know, it may be relatively simple. It may be easy to administer. It may be mechanical. But it's not realistic in today's circumstances.

DR. STANGLE: Commissioner Mulvey, can I -- just one other comment you made. And that was about the health of the industry relative to beta.

MR. MULVEY: Yes.

DR. STANGLE: I think beta has increased for the rail industry in the last three or four years. But that's not necessarily a sign of ill health. The technical definition, if you'll permit me, for beta is the covariance of the return of the firm with a, with the return of the market.

MR. MULVEY: Right.

DR. STANGLE: If you will. And so I think what this is picking up is, that because there was this slide that Mr. King had there about all the developments in the industry recently. But increases in demand, better scheduling, Asian imports, a lot of things, I think, have changed such that the returns of the rail industry are now much more like the overall economy. Before there was some insulation. Maybe they were carrying bulk commodities more then they are today, as a proportion of total traffic. But whatever it is, the market now demands that the rail companies deliver higher returns because those returns are more correlated with the overall market. So it could be a sign of health. But it means their cost of capital is higher.

MR. MULVEY: Right. The literature suggests, be careful with beta because it could be reflecting rising prices and health rather then increased riskiness.

DR. STANGLE: Exactly.

MR. ROSENBERG: That's the exact point I was trying to make. Rates have been going up. Railroads are earning more, relative to the general economy. That's what you're seeing. The fact that rates are going up, the fact that the railroads are earning more money, the stock prices are going up, that's not the same thing as saying that the investors are demanding returns. They're happy to get them, and they'll of course pay a premium for them.

MR. MULVEY: I have more questions but go ahead.

CHAIRMAN NOTTINGHAM: Okay. Thanks Commissioner Mulvey. I have a couple more questions.

I think what you're hearing up here is some interest in the question of whether the mere fact that in this recent year, for example, when the railroads have performed very well financially, that some find it surprising that the cost of capital would go up significantly. And we'll say, as a non-economist, when I first saw that, I was a little bit surprised. Just would have assumed just, you know, generally speaking and I hope that the distinguished economists here can help educate me a little bit on this. Should I be surprised by that? Is that unusual? Does that mere fact call in to question the accuracy and the usefulness of our current methodology?

I'll let each panelist take a shot at answering that, if each one choose to. Dr. Hodder.

DR. HODDER: Sure. If you think about this thing in the context of the CAPM or the Fama French Model or Arbitrage Pricing Theory, basically you have a cost of equity that's due to a risk free rate which is driven in part by inflation. And some risk premium. Perhaps more than one. So that you then ask the question, "Well did the expectation of inflation go up?" Seemingly the answer to that one was, no. Or at least not very much. Did the risks go up? And they would have had to go up fairly substantially . If you look at that and you say the answer is, no, then you come to conclusion that there's something wrong with the model.

I think, from what I looked at, I think the single biggest problem or the most obvious difficulty with your current technology is, as soon as I put in a couple more periods and allow that growth rate to come down, then all of a sudden the number drops a lot. And, so if I look at that, I say, "Well gee, there's something, problem with the model." Well for playing with models in the classroom and so forth, this model is tremendously, your current model you're using is tremendously sensitive to the growth rate. Why do we think that the growth rate went up? Well because the analyst forecast went up. But when you, when you project that out forever which apparently is not the case, apparently their projections are starting to come down, you get a result that's driven by just the G part. And so you say, "Well all right things are good." But did that mean the cost of equity went up? And the normal answer would be, no. The cost of equity stayed the same. We had some good times. We got some profits. The price may have gone up, but the cost of equity didn't change.

CHAIRMAN NOTTINGHAM: Okay. Mr. Stangle.

DR. STANGLE: Chairman Nottingham, I think your original sort of puzzlement over why would the cost of equity go up when the industry is doing better financially, I think that's a good question frankly. I think it's somewhat counter- intuitive. But the cost of equity is what investors demand for a rate of return. And since they're not no longer looking at railroad stocks as the equivalent of, you know, the local gas company, they're saying these are vibrant companies that are carrying the nation's goods. And most of the Chinese imports that consumers are demanding. All those flat panel TVs or all the automobiles in the world. They, they're saying, "I want a market return. I want some," the S&P 500 last year earned 15 percent. That's the rate of return they want to earn if they're going to hold a railroad stock in their portfolio. Maybe several years ago they might have said, "Okay. I don't need that type of return because I'm not taking as much risk." But the risk of holding railroad stocks now is considerably higher because their returns do vary. So, I mean, maybe we have a disagreement here, but I think the cost of capital has increased, for that very reason.

CHAIRMAN NOTTINGHAM: Mr. King.

MR. KING: Well I sort of agree with both of my prior speakers. But this --

DR. STANGLE: The end part.

MR. KING: Yes. The function of return to equity is a function of risk. And risk has nothing to do with, well it doesn't have much to do with how profitable or unprofitable a company is. It has to do with how predictable those profits are. Whether there is a likelihood of extraordinary increase or extraordinary reduction in the earnings of a company. And that is presumably the measure that beta attempts to get to. And the betas indicate that, at least the betas I've looked at, I haven't looked at these others that Mr. Stangle put on, indicate that the railroads are currently around the level of the overall market.

The reason you get alleged increase in the cost of equity has nothing to do with increase risk. It has to do with these analyst projections. And that's what drives the rather mechanistic way that the Board has been calculating equity return.

A short time ago Dr. Stangle said that it's inconceivable that the railroads could indefinitely keep on earning the kinds of increased returns that they have experienced in the last few years and are projected to experience in the future. And that's exactly my point. You have to put in a factor that modifies this implicit assumption, built in to your finding of last of last December, that indefinitely the railroads are going to experience a 13.66 percent improvement in their earnings each year. That can't happen. And that's why I recommend a modification using the Two Step Method that FERC has proposed.

There's been a lot of objection to the idea of any formula. And a suggestion that we should look at a whole lot of range of equity return estimations. You can do that and that's what every public utility commission does. But it only does it after it's received lots and lots of testimony, conflicting testimony of many, many estimates. And then usually the commission sort of pick a number. Because there is no mechanical way of performing that calculation. And that be your choice, to go in to that kind of evidentiary hearing each and every year to find the revenue actual number. The alternative is to stick with the formula, but to make the formula a little more realistic then the one your using now.

CHAIRMAN NOTTINGHAM: So it sounds

like Mr. King, you would agree with Dr. Hodder then that our current methodology weighs growth disproportionately. The growth factor disproportionately drives that upward.

MR. KING: Well yes, it does. But that can be fixed if you, if you fix the growth factor, so it doesn't include any irrational assumption. That irrational assumption being that this kind of increased growth will continue indefinitely. And that's exactly why the FERC picked it's formula. Because the pipelines were also being forecast to increase their earnings at astronomical rates. And the FERC said, "No, this isn't possible. We've got to modify this formula." So we bring it down to something that reflects the long term probability of improved earnings.

CHAIRMAN NOTTINGHAM: Dr. Stangle, is it a irrational assumption that growth will continue forever at 13 whatever percent?

DR. STANGLE: Well it's not irrational. It's the future of that type of model. Is it realistic? No. But it would be a problem if you didn't return to this question every year. If you set that in place and said, "Okay, we're going to go to sleep now and not return to this question year-in, year-out," then that would be a problem. In fact if you set the thing too low, you'd starve the industry of capital. If you set the rate too low. If you set it too high, we would have a railroad running down every street here in this city. But --

MR. FICKER: You couldn't do it, the environmental impact statement.

(Laughter.)

DR. STANGLE: Couldn't pass the environmental impact statement. But the fact is there are market forces out there that will prevent this from getting out of whack. And since you do reexamine the question every year, the feature of the model is not as big a problem as the critics make it out to be. It's a matter of practical implementation.

CHAIRMAN NOTTINGHAM: Mr. Moates you

touched on and others, that when this was looked at the past some 20 years ago, the parties had different recommendations for us. I believe some of your clients were on the other side. If I understand it correctly. I wasn't around here either, 20 years ago. That the railroads were basically arguing for more of a CAPM approach, and is that fair to say? And that the shippers were arguing for the approach we currently use?

MR. MOATES: My memory may not be perfect on this. In fact, I'm pretty sure it isn't. And there may not have been the railroads. At least at that point in time, we had filings by the eastern railroads and the western railroads. And they did not always meet perfectly. But as a general proposition I wouldn't be surprised if that may have been true. But I don't know that any of the railroad interests were advocating the CAPM exclusively. There are people in this room, I take you to Mr. Rocky back there for example, who would be able to correct me on this.

But I do remember the shipper interest being very unhappy with the use of the CAPM later on, once the DCF had been embraced by the ICC and it began to generate the annual revenue determinations. And the ICC, as I said before, did I think in the late 80's, eventually stopped doing the CAPM even as a cross check on the DCF results.

And I honestly don't remember exactly what the different railroad positions were at the beginning. And as you know, this thing started not many years after Staggers. Early 80's. And went on for quite a long period of time.

CHAIRMAN NOTTINGHAM: Vice Chairman Buttrey. Commissioner Mulvey.

MR. MULVEY: Yes. This came to mind while sitting here. We have a little table we put out about the railroad cost of capital and the, performances of the individual railroads in making their cost of capital. And there are people who noted that one railroad in the past couple years has earned it's cost of capital.

None of the other Class 1's have. If you go back to the 90's, middle to late 90's, some of the other railroads did earn their cost of capital, and did it quite handsomely. And those were the Soo Line and the IC and some of the other railroads that have since been absorbed into Canadian railroads.

And what was the economic condition of those railroads at the time that they were earning their cost of capital so handedly. Do anybody recall? Well I see some gray hair there.

MR. MOATES: Well you must be looking at me.

MR. FICKER: I think there's a couple elements that might be this, you know, I'm just reflecting my own personal observations of a few years in this industry, around this industry.

The Soo Line was an overhead railroad. And their costs were considerably lower. I mean, they just grabbed trains from the CP and took them to Chicago and that was it. That's not a hard thing to do and hard to run.

So as they, as they acquired and ran their property. And the IC, if you recall through the, I believe, it was late the 80's and early 90's, they built a double track railroad. And the new person that took that over decided we're not going to run a double track railroad. We're going to park one, and we're going to run down the other one. And then when that one wore out, he went down the other one. So he didn't have to invest anything. So there was some economic models and situations.

And one of the things that this points out, I think very clearly, and Mr. Moates, I want to complement you on your thing that you're absolutely correct, that the record has no indication whatsoever of any flaw. It's the economic realities in the market place that recognizes the flaw. That's the, even Chairman Nottingham points that out. This doesn't make sense. And that's what I said in my statement earlier. It's about balance in finding this.

But I think when we go back and

reflect on those two railroads, what happened. That's kind of my view. Certainly not the least position necessarily because I don't think anybody can go back that far. But those were two different railroads and two different environments. I'm, I assure that, probably the D&RGW, would have been revenue adequate if it had been through those times because, for the same reason. It picked up traffic here and handed it off over there, and didn't do a lot of, a lot of stuff. So its costs were down some.

MR. MOATES: Well Mr. Ficker's right to a point. He has a very colorful way of expressing it. There's some other things going on there. And the Grand Trunk Western should have been thrown in there too.

MR. FICKER: Right.

MR. MOATES: And it's also part of the Canadian National today. A lot of what the results showed for those railroads in given years had much to do with the way costs and revenues are allocated as between the Canadian and the

U.S. portions of those systems. Had an awful lot to do with it. And you can see, if you go back and look at it, and you apparently have, thank you, there's some pretty wide swings in different eras for some of those railroads your mentioning. They'd be way above revenue adequacy one year, and way below the next. Had much more to do, I think, with the allocations and the revenues and expense then how they were actually --

MR. FICKER: You mean figures like and liars figure.

(Laughter.)

MR. MOATES: The Canadians aren't here so I don't want to cast dispersions on their oversight of that.

The other thing though, and Mr. Ficker is right about this. The Illinois Central, the old Illinois Central Gulf, it was the combination of the Illinois Central Gulf Mobile Ohio --

MR. FICKER: Right.

MR. MOATES: -- had quite a sprawling network in the south. There was a very, how should we say, a rigorous slumming down of the physical plan over a fairly short number of years. So they ended up with a very efficient plan from Chicago to New Orleans double track. Very little structure otherwise. And that was a very efficient railroad. But the last thing I note about this, you know, in the years of the Illinois Central, and the Soo Line, and the Grand Trunk were all substantially above the revenue adequacy determination, not one of those railroads ever had a rate case. If that tells you something.

MR. ROSENBERG: If I can interject my own two cents about this. I think if you went back, in particular, to the early 90's, you looked at the main railroads, including those that had rates cases, you would look at, they were making substantial progress towards revenue adequacy for that time during the early 90's.

I actually think if you look at the

two year beta chart that Dr. Stangle constructed, it would show high returns for that period. But then what happened is that the railroad industry engaged in a series of mergers. Which had some very adverse consequences for shippers. It had some adverse consequences for the railroads at the time. And that's one of the reasons why there wasn't progress, you know, revenue actually wasn't achieved a few years after that because of those decisions.

MR. MULVEY: It does seem to me that these two approaches, the Discounted Cash Flow and the CAPM approach, both of them are subject to volatility in certain assumptions. For example, on the DCF approach,it is the volatility of the analyst forecast. And we saw in some of the testimonies how widely they ranged. On the other hand, on the CAPM approach, there's a lot of variation in the estimates of beta. In your opinions, are either one of those more or less reconcilable then the other?

DR. HODDER: Well mechanically, if

you used the same data, the same time periods, the same data frequency to estimate beta, you're going to get the same number. Now the issue becomes really, what is a forward looking number? You're not really interested in what was the number five years ago. It's essentially, what do I think is the best number to use now, going forward? And in fact people have gotten in to business of forecasting betas. They take the stuff from the past and make adjustments.

I think the issue with the DCF approach is not only the analyst, the variability in the analyst forecast, but if you parcel this thing out and you say, "We got three phases." You say, "Well okay, so what's the growth rate in the second phase? And when does the second phase start? And how long does it run?" And, you know, those things are judgement calls. And that's the issue here is, with any of these, you're going to get some variability across reasonable people are going to come up with somewhat different answers. In which you just try, in my view, is you try to narrow it down. And try to, you know, get it in to a range where it's a percent, a percent and a half as opposed to five or six.

MR. MULVEY: Dr. Stangle.

DR. STANGLE: The, as I said earlier, the virtue of your current method is you don't have these controversies or judgements to make. And I guess one, one choice you face is how many, how much staff resources do you want to devote to this? I mean, you could, you could have a very long hearing with a lot of expert witnesses around time period for beta, how many adjustment periods and transition phases to have with DCF.

Frankly, I think you're going, if you have two different methods, it will be a rare year in which they are within a percentage. You're going to have wide dispersion. You're going to have a lot of controversy. Are you willing as a Commission to or a Board to devote all the resources necessary to resolve those differences?

MR. MULVEY: Still you would agree it's an important issue and one that we should get right if at all possible. I mean, to get as accurate a measure as possible. And of course there's volatility, as has been pointed out, in the analyst’s forecasts as well. And if you only have a handful of analysts and that group of analysts could change and you'd be getting variability based upon which analysts you are looking at.

There's also talk about using a Two Step approach where you would have, as in the case of the Fed approach, where you have a short period and long period of time. By the way there's no time period, right? That's two-thirds, one-third is --

MR. KING: It's two-thirds, one-third. But the presumption is that the two-thirds is a sort of three to five year framework.

MR. MULVEY: Yes.

MR. KING: And then the other one-third represents the remaining.

MR. MULVEY: Remaining years. Okay.

MR. KING: Periods of years.

MR. MULVEY: So it is a three to five year period for the two-thirds?

MR. KING: Well that's what the analyst reports are.

MR. MULVEY: Okay.

MR. KING: Essentially, certainly I know Valueline predicts the three to five year, well no, four to six years.

MR. MULVEY: Yes.

MR. KING: And we settle on five as being the forecast.

MR. MULVEY: And your approach wants to do say, maybe a Three Stage approach where you would have zero to ten, ten to twenty, and then on out, and from twenty to infinity?

DR. HODDER: If I, if I was doing it, for openers, I'd probably do zero to five, five to ten, and then to infinity. And for example, that's the, that's the approach that Ibbotson uses. But, you know, I would suggest that what you would do is, you would take testimony and you would try to decide what you thought was the most reasonable way to implement that. And then say, "Okay. We're using zero to five, six to eight."

MR. MULVEY: Yes.

DR. HODDER: Whatever you thought was a pretty reasonable way to do it. I think one of the benefits here is, once you go to the multistage thing, you don't get nearly as big a swings. And so that narrows it down quite a bit there.

I think the other benefit is that because you're now focusing on growth rates, whereas then when you go over to the CAPM or Fama French or whatever, now you're talking about risk. Okay. Risk is in the DCF Model. You just can't see it.

MR. MULVEY: How do the railroads feel about the adjustment to the DCF that would take into account Dr. Hodder's suggestion that we drop the assumption that the railroads grow forever at the high rate, and segment in to a short term, intermediate term, and long term growth rate?

MR. MOATES: We would welcome the opportunity to comment on that in a formal Rule Making.

(Laughter.)

I'm sorry. I don't think I can, I can not, on behalf of the industry, give you answer to that today. I think our position, I don't think, our position remains, coming in to this hearing, that we don't believe there is, there's been a requisite showing requiring you to do that. But if you do go for it, and you do want to have comments on the methodology, on the implementation, all the rest, I'm confident that the industry will do its best to be able to express its position. But I can't do that today.

MR. MULVEY: Thank you. Dr. Stangle, you want to go any further than that?

DR. STANGLE: Well said.

MR. MULVEY: Well said. There was also some suggestion about looking at the capitalization or the capital and debt equity ratios of the industry. And right now we weigh our analysis two-thirds equity, one-third debt. There was some suggestion that if we switch our, measure of equity from market- based to cost- based or replacement value or whatever, that would change the result. Has anyone looked at what the size of that change might be and what the impact of that might be? Replacement cost, replacement cost could be very, very difficult to estimate. But would book value be better or would book value be too much, something to --

MR. KING: I have the book value calculation in my statement. And --

MR. MULVEY: I thought you did.

MR. KING: -- it is on page 18 of my statement.

MR. MULVEY: Okay.

MR. KING: And you lay that side by side with the Board's calculation and its order of last December, I think you'd be able to see the the difference. It's effectively fifty-fifty on book value basis. I believe it was like sixty-forty equity debt on a market basis.

MR. MULVEY: I think now it is almost two-thirds, one-third isn't it? Yes. It's going up.

MR. KING: It is getting greater now because of the bid up of the market prices.

MR. MULVEY: Yes.

MR. ROSENBERG: Commissioner Mulvey I believe that, for example, at FERC when there were cost of capital issues, they look at what would be an appropriate debt equity structure to begin with. That's one of the first steps, I believe that is subject to check. It's fairly common to have a fifty-fifty debt equity make up for example.

MR. MULVEY: Anyone else on that?

CHAIRMAN NOTTINGHAM: Thank you Mr. Mulvey. It occurs to me that businesses, for many good reasons, probably make their own cost of capital calculations on a regular basis. Is that, first let me just quick, get a quick, is that a fairly common practice, Mr. Moates, in the railroad business that your clients would have reason to make cost of capital determinations for their own internal reporting or? And I will ask the same question to Mr. Ficker, others, Mr. Rosenberg who represent in this.

MR. MOATES: I'm confident, it is the case that each of the railroads determines what it thinks its cost of capital is because it actually has to go out there in the market and secure that capital in a competitive environment. How each one of them does it, I really don't know.

MR. FICKER: I would concur in that assessment. Having been in the private sector for many of my illustrious years, that that is done at different corporations in different ways, they have their own internal reviews of what their cost of capital is versus their earnings and depending on the nature of their industry. Some are capital intense, others not. I've spent time in the Forest Products Industry, in the Paper Industry and it was very capital intense and those decisions were made every year, reviewed every year internally.

CHAIRMAN NOTTINGHAM: Mr. Rosenberg.

MR. ROSENBERG: For utilities though often have to get regulatory approval to issue, to issue capital. Utilities are also, if we are talking electric utilities, and I don't think I'm to far out on a limb with natural gas pipelines, they are subject to pervasive regulation. All of their rates are regulated, so the cost of capital is certainly taken in to that account.

Again, one of the particular questions I made in my initial comments is that it was, we have seen no indication that these figures that the Board uses, or what the railroads actually consider in their own internal calculations, it's one of the dogs, one of the dogs that didn't bite and I think that Dr. Hodder can also address how firms look at their internal cost of capital as well, in a variety of contexts.

DR. HODDER: Well it's certainly a

very standard procedure that would be done, probably annually, and I think the expectation usually is it didn't change a whole lot from one year to the next. And the typical approach I think starts with the CAPM and uses some kind of Discounted Cash Flow as a cross check.

I would say that the rationale for that is, sometimes firms are trying to figure out, well what should the cost of equity be for some project that's not traded in the market, so it does not pay in dividends etc. And they want to go in and they want to estimate a beta for that project and perhaps adjust it for the capital structure of the project. And the CAPM lends itself to that sort of a procedure.

But the basic sorts of things I advocated to you is what I expect a good Chief Financial Officer to do with his staff. He'd say, "Come in, you know, give me the numbers, give the ranges. Tell me about the inputs. Why did you pick this one? What are the other alternatives?" And then they would make a judgement.

MR. MOATES: I would say that the question does bring to mind a little bit the, somewhat related complaint we've heard in rate cases from time to time. And the Board has been pretty consistent in answering, the same way the railroads have. That is, railroads you must have your own internal way of costing things, so why don't you produce those internal costs and we'll compare them to the way the regulator does the cost? I'm sure that the railroads just like these other businesses have ways of calculating cost of capital for different purposes, for purposes of determining, you know, as I said, how to go out and try to compete for scarce capital in the market place. We all know they have their own processes, including determinations of hurdle rates they have to clear for approval of projects and the like. But I'm not sure that those methodologies are so confident -- are all over the map too, of, would inform necessarily your determination of what the industry cost of capital should be.

And having said that, I also suspect their view is fairly highly proprietary which is at least one of the reasons, I don't know what they are.

(Laughter.)

CHAIRMAN NOTTINGHAM: Well Mr. Moates, with all due respect I don't. Some of us may have a higher degree of respect for your client's abilities to, I'd be -- to me it would be very meaningful to see what the industry actually, albeit potentially confidential and we would have to be careful in how we tread in this area, but very meaningful to see how the actual industry that we're proposing to determine how they actually look at it themselves in some, whether we need to do it in some masked way or some way to protect confidentiality.

Similarly we already took from Mr. Ficker and some of his, sampling of his members just to get a sense as, as to whether, the way the railroads look at their cost of capital is consistent with other complex business organizations. And it's -- as a government agency trying make a snapshot decision each year on what's going on out, and what market conditions are out in the economy, it would be very meaningful to see, have the benefit of your members experience.

I don't know if there's a way. Would you at least be open to try to work with us to figure out a way to help us better understand that, while protecting confidentiality and business secrets?

MR. MOATES: I would absolutely be open to convey back to the members of the association your desire. Really, I'm not trying be coy. I really don't think I'm in a position to sit here and say, yes. I mean we want to be helpful but I know that there are great sensitivities that the CFO's and the controllers have about the methodologies, the numbers and the like. But we certainly will go back and consult on that. I get the message.

CHAIRMAN NOTTINGHAM: Thank you.

MR. ROSENBERG: Chairman Nottingham, we noted in our comments that a number of the railroads have significant stock buy-back programs. For example, in the yesterday I think both CSX and BNSF announced there's a chance of continuations or expansions of those programs. And that, you know, in calculating whether or not to do that, you know, involves a comparison of what the rates of return will be versus that of the market and is it the best interests of the corporation and the share holders. And we need be taking those matters in to account, in that context as well.

CHAIRMAN NOTTINGHAM: Thanks. I did just want to point out that, Dr. Stangle your point's well taken about sheer costs in time and staffed hours that changing our procedures could trigger. I will say though something that is this important, we are spending a lot of time on related issues that are driven by this very data whether it being rate cases or in a whole range of issues that come up in rate cases. And so we're laboring hard on trying to resolve disputes that are really all about this data when you start peeling or much about this data. And so to my way of thinking that's, the time and effort's not going to be the foremost concern. It's going to be, are we, are we where we should be now? Is there a better more accurate approach that we should be taking? Because if there is, I think it's worth any effort because it's that important an issue.

DR. STANGLE: Okay.

CHAIRMAN NOTTINGHAM: That concludes my questions. Vice Chairman Buttrey.

MR. MULVEY: I have one more, and it's testing everybody's kidneys. But at any rate, on this issue of the capitalized leases, the Western Coal Traffic League suggests that when the railroads make their presentations on Wall Street they use GAAP

They take the capitalized leases out.

Well, on the other hand, if you did

that, you would have to put them -- you take them out of the expense category and you put them in the capital base measure rate of return, right? So wouldn't that offset to some extent?

MR. ROSENBERG: Well you would have an offsetting calculation. The asset base would be increased. Expense would be reduced. But that's what BNSF in particular is explicit that it does, with its regulation G pro forma and the indications are in calculating its incentive compensation, for its executives, that that's the calculation it makes. And also it's the calculation that Wall Street makes as well.

MR. MULVEY: That would include --

MR. ROSENBERG: At least by the three-fourths that we attached to our testimony.

MR. MULVEY: And that would include its return and all though. Okay.

Do you want to comment on that?

MR. MOATES: No, I really can't.

MR. MULVEY: That's the same issue as before, yes.

MR. MOATES: Yes. I mean, I referred to the portion of my prepared remarks on page 11 where we addressed that --

MR. MULVEY: Right.

MR. MOATES: I'm not familiar with the being BNSF.

MR. MULVEY: It does run against -- you're right, it does run against the GAAP principles, but it's a non-GAAP presentation.

MR. ROSENBERG: Right. And we did attach it to our, to our filing.

MR. MOATES: I do know that BNSF and UP note that it is non-gap when they file with --

MR. MULVEY: Right.

MR. ROSENBERG: And the SEC requires that explicit dimension.

MR. MULVEY: Right.

Well thank you.

CHAIRMAN NOTTINGHAM: Well that concludes this hearing. We appreciate all the witnesses' time and patience today. It's a very important topic clearly. We look forward continuing to work through this and again very much appreciate your participation. With that we are adjourned.

(Whereupon, the above entitled matter was concluded at 2:22 p.m.)