UNITED STATES OF AMERICA

SURFACE TRANSPORTATION BOARD

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PUBLIC HEARING

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IN THE MATTER OF:                : Docket No.
                                 : EP 722
RAILROAD REVENUE ADEQUACY &      : &
PETITION OF THE WESTERN COAL     : EP 664
LEAGUE TO INSTITUTE A RULEMAKING : (Sub-No.2)
PROCEEDING TO ABOLISH THE USE OF :
MULTI-STAGE DISCOUNTED CASH FLOW :
MODEL IN DETERMINING THE RAILROAD:
INDUSTRY'S COST OF EQUITY CAPITAL:
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Wednesday,
July 22, 2015

Surface Transportation Board
Suite 120
395 E Street, S.W.
Washington, D.C.

The above-entitled matter came on for hearing, pursuant to notice, at 9:30 a.m.

BEFORE:

DANIEL R. ELLIOTT, III	Chairman
ANN D. BEGEMAN	Vice Chairman
DEB MILLER	Commissioner

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

(9:11 a.m.)

MR. ELLIOTT: Good morning and welcome. Today we begin a two-day public hearing to consider issues related to railroad revenue adequacy and issues regarding how the board calculates the railroad industry's cost of equity capital. When I started this proceeding it was in recognition of a change in the railroad industry. As recently as the 1970's, the industry was in dire financial straits, plagued by bankruptcy and deteriorating physical assets. In the intervening decades, however, the railroad industry has rebounded tremendously - due in significant part to regulatory changes designed to foster a return to revenue adequacy. Today we are on the midst of a rail renaissance. The rail industry carries a vast range of commodities, from agricultural products and energy products to manufacturing inputs and retail goods - traffic that amounts to more than 1.7 billion tons of freight a year. Now that the industry is both financially healthier and restructured with far fewer large railroads, I believe the Board should continue the process I began of examining its core policies to insure that they fit today's modern rail industry and meet the goals that Congress laid out for the agency.

The Board's re-examination of its rail economic regulatory policies does not necessarily mean that significant changes to these policies are in order. Assessing the effects of any proposed regulatory action in this proceeding is a consideration of the utmost importance. Recognizing that, my goal is to make sure the Board's policies reflect thoughtful, balanced decision-making that takes into account a modernized rail industry and sound economic principles. I would like to thank my fellow Board members, Vice Chairman Ann Begeman and Commissioner Deb Miller, for supporting me in carrying out this important evaluation. I would also like to thank the parties for their thoughtful comments and for the extensive economic analysis many of them provided. The Board's decision-making benefits greatly when stakeholders contribute their views in a proceeding like this one.

Before we begin, let me just take a few minutes to review a few procedural points about today's hearing. We want to hear today and tomorrow from every party that has filed a notice of intent. To allow that to happen we will have to ask the parties to stick as closely as possible to the time that has been allotted. We recognize that that is not always going to allow you to say everything you want to, but we want to make sure that there is an opportunity for everyone to speak. We will keep the record open for fourteen days after the conclusion of this hearing to allow for the filing of additional written comments. You will have a light before you at the front of the room. One minute before your allotted time has expired a yellow light will appear. When you see the red light, your time has expired. Please conclude your thoughts at that point. If you are scheduled to speak, please make sure that you check in with the clerk at the front of the room. I have also been asked to remind speakers to please speak clearly into the microphone. In addition, the public should be aware that a video archive of the entire hearing will be placed on the STB website within a few days of the close of the hearing. In the unlikely event that we have a fire alarm or other event requiring evacuation, please proceed in an orderly fashion out of the double doors at the back of the hearing room, and out of the building through the front entrance. Specific instructions have been posted at the back of the hearing room for assembly and notification of return, if any, to the hearing room following any evacuation.

Also a note regarding slide presentations. If you haven't done so, please send an electronic copy or two hard copies to the Board's Office of Proceedings within the next two days. Contact information is available from the clerk. Finally, if you have not done so already, please turn your cell phones off. Also, we will be taking a lunch break. We haven't set the exact time, but it will probably be after the third panel, but we'll see how the panels go as we go forward. With that I will turn it over now to Vice Chairman Begeman.

MS. BEGEMAN: Thank you, Dan. I want to join in many of your comments. I certainly agree with much of what you said. I strongly supported initiating this proceeding back in 2013. I've been working on these issues for most of my career, not specifically railroad revenue adequacy, but that issue really did come to the forefront when I was on the Senate Commerce Committee when we worked on the 2009 reauthorization bill and there was a provision that talked about the need for the Board to do what we are doing now. So I think it's long overdue.

This is a very complex, complicated subject matter, and I really appreciate all of the different filings and the fact that so many are here today and will be here tomorrow to offer their views. Mostly I want to hear what you have to say, and I'm trying to stay somewhat open-minded, although I do have strong opinions. I'm not looking to turn the clock back on the industry. You know, the industry's success is key to shippers' success, but I'm very interested in everyone's comments. I thank you, Dan, for chairing the hearing, and I also thank you, Deb, for scheduling this hearing when you were acting Chairman. So thank you both. I think we're all eager to continue this process.

MS. MILLER: Well, good morning. I, too, want to welcome you here and apologize to those of you from out of town for bringing you to D.C. in July. Although I must say, you're lucky to be here today and not earlier in the week. I kind of wanted to play hooky today. It was such a beautiful morning as compared to what we have had. I also want to say a thank you to staff and, to note for those of you who have been in this room many times since the last hearing, we have new television screens which are bigger. Hopefully that will make it easier for you all to see. We have a new sound system and we're hoping that we'll improve the quality of the audio, and we have Wi-Fi in the room. Hopefully, for many of you, that will make these hearings easier for you to keep up with your daytime job and being in here. Staff had to scramble to get everything done and hooked up, but I'm, you know, really pleased to see it all done today.

I was thinking this morning, and I think we could sort of say, you know, today's hearing brought to you by the Staggers Act. Thirty-five years ago I don't know that anybody could have imagined that we would need to worry about the issue of revenue adequacy. Hard to imagine that we could have gotten here. So it's a true testament to the Staggers Act that 35 years later we even have a need for having this hearing at all. Certainly no one, having read summaries of everyone's comments, is asking us to turn the clock back or to fully regulate railroads in any way. And certainly that's not a goal of anyone on the Board that I'm aware of. We've made remarkable progress, and we certainly want to keep that going. And I think it's a good thing to remind everyone and to remind ourselves that when we're talking about the regulation the STB does, we're talking about five percent of the car loadings, currently, based on today's information that are available for our regulatory effort. So it's not the entire freight movement on the system that we're even talking about today, but a much smaller slice of that pie. I do think, though, that with the improved financial health of the railroad industry, it's time for the Board to give meaning to the concept of revenue adequacy. And in particular to consider what relief, if any relief, should be afforded to shippers once a carrier has become revenue adequate.

I have noted several times in other venues that I consider the issue of revenue adequacy to be part of the issue -- excuse me, I don't consider revenue adequacy to be separate from other issues that are before the Board, such as the NITL proposal for reciprocal shipping -- excuse me, reciprocal switching or the "grain rate" hearing that we had last month. And it is my belief that what we should do, at the conclusion of this hearing, as a next step, is to propose changes to the existing regulatory framework based on all of those issues that are before the Board.

Now whether that means a drastic rewrite, an overhaul of our regulatory framework, a few tweaks, or perhaps concluding we need to stay with the status quo, I certainly couldn't say today. I simply think it's important that we bring these proceedings to a close as soon as possible. With that, I am eager to hear the testimony and get started with today's hearing. Thank you all for being here.

MR. ELLIOTT: Thank you very much, Vice Chairman and Commissioner. Now we'll have the first panel come up. I think we're going to note before we start that we do have Wi-Fi access now, and I believe that it's on one of the sheets that you grabbed when you came in. So we heard some mild complaints over the years that you can't look at your phones. So hopefully we've remedied that. So I urge you to try it out, see how it works. This will be the first time we used it. Okay. Now we'll hear from the first panel, Western Coal Traffic League, and you have sixty minutes.

MR. DOWD: Thank you. Chairman Elliot, Vice Chairman Begeman, Commissioner Miller, I represent the Western Coal Traffic League, Consumer's Energy Company and South Mississippi Electric Power Association, and they're known collectively as the Allied Shippers. With me today are Dr. John Hennigan of Micro Consulting, former director of the ICC's Office of Economics, and Dr. Harvey Levine, Independent Consultant and Former Vice President for Economics and Finance at the Association of

American Railroads. With our allotted time today I would like to briefly summarize the positions of the Allied Shippers on the two main issues raised by the Board in this proceeding, which are set out in detail in our comments. And respond specifically to the five questions posed in the Board's May 8th notice. Then among the three of us we hope to answer any additional questions that the Board may have.

The first topic on which the Board invited comments in this case is whether changes should be made to the methodology used to make annual, industry-wide determinations of revenue adequacy under the governing statute. The Allied Shippers' position is that the STB should revise its approach so that its findings catch up with the consistent assessments of the financial and investment communities, and accurately reflect the major railroad's obvious financial health, both currently and prospectively.

In his testimony in both phases of this proceeding, Dr. Levine demonstrated that by any reasonable measure all of the major U.S. railroads have been revenue adequate as defined in Section 10704-A for a number of years, and confidently can be expected to remain so for the foreseeable future. He detailed the metric supporting this conclusion in his testimony, and I will not repeat them all here. But when one looks at such indicators as increased dividends, robust Cap X plans, combined with share repurchase programs, lower operating ratios, higher returns on equity and stronger stock prices, it is clear that the carriers have broad access to necessary capital and are earning revenues that meet the statutory criteria.

Dr. Levine also debunked the rather extraordinary claim advanced by Union Pacific that it and the other carriers actually face major capital shortfalls, showing that such a position can only be sustained by manipulating the test specifically to produce that answer. To bring the Board's annual determinations more into line with the proven financial realities and statutory criteria, the Allied Shippers propose that the Board consider expanding its analytical model from exclusive reliance on the mathematical return on investment cost-of-capital formula to a multiple indicator approach, as was advocated by former ICC Commissioners Clapp and Gilliam in the proceeding where the return on investment cost-of-capital test was adopted. We suggest that the Board consider utilizing the six indicators discussed by Dr. Levine: market-to-book ratio, debt-to-capital ratio, operating ratio, return on shareholder equity, cash flow return and dividend-payout rate. The general recommended approach would be to develop a composite index of these indicators and use it as a check on the results of the return on investment cost-of-capital test. Specific procedures and data sources should be developed through the notice and comment process, so that all interested parties and stakeholders can have input, and the Board can have the benefit of their evidence and viewpoints. One thing that the Board should not do is entertain the railroad's arguments for adoption of a replacement-cost approach to measuring a carrier's investment base for revenue adequacy purposes. The practical obstacles to such an approach have been documented and acknowledged for the past thirty years by the Board, its predecessor, the Railroad Accounting Principles Board and railroad economic experts who are not in the employ of the railroads. And as Dr. Levine and Dr. Hennigan testified, those obstacles remain today, tellingly, with one exception. The railroads and their witnesses in this proceeding offer no solutions to the proven flaws in the replacement cost approach. They simply argue that the Board should stop using revenue adequacy for any regulatory purpose until solutions to the problems with using replacement costs are found, the same solutions which have defied discovery for thirty years. Effectively, they propose to write revenue adequacy out of the rail regulatory scheme all together now that it can no longer be used as a propaganda tool. As we said in our comments, this is an argument for regulatory nullification not progress. The one exception, CSXT, suggests that the railroad could solve, or the Board could solve the replacement cost problem by performing a full stand-alone cost analysis on each railroad every ten years and index the results for the years in between. CSX does not explain how the Board would perform these analyses fairly without engaging in the multi-year, multi-million dollar proceedings that currently are required in order to determine stand-alone cost for only a portion of a single railroad system. They do not address who would pay for these proceedings, how the Board could craft accurate indices to adjust the values every year or how their approach is materially different from the one previously considered and rejected by the Board in Ex Parte 679. All the railroads also ignore the need for a revision of the cost of capital methodology to accompany any replacement cost-based investment calculation in order to avoid double counting inflation. As the

RAPB previously found, the lack of a solution to this problem alone makes serious consideration of a replacement cost approach futile.

The second major issue raised by the Board concerns implementation of the revenue-adequacy constraint under the coal rate guidelines. It bears repeating that this is not a proceeding to consider whether the Board should adopt a revenue-adequacy constraint. That was done in 1985 when revenue adequacy was acknowledged by the ICC to be the first logical constraint on a railroad's pricing on captive traffic. That finding was affirmed by the Third Circuit, applied by the ICC in a number of a cases arising in the wake of the adoption of the coal rate guidelines and remains a key element of the law of rail regulation today. The purpose of this proceeding is to affirm the methodology to implement the central principle of the revenue adequacy constraint as explained by the ICC, which is that once a railroad is revenue adequate further differential pricing on market dominant traffic cannot be justified.

As we explained in our comments, the Allied Shippers submit that prior precedent establishes the basic constraint that should be applied. As was held in CF Industries versus Cope Pipeline, a revenue-adequate carrier should not be permitted to impose further real rate increases on a captive shipper's traffic. The constraint should be available for invocation by any shipper that brings a complaint against a rate increase and is able to establish Board jurisdiction through a showing of market dominance. Once the shipper shows market dominance and that the defendant is revenue adequate, any new rate increase imposed by that carrier on that shipper's traffic should be deemed unreasonable and unlawful subject to two limited exceptions.

First, a revenue-adequate railroad should be permitted to adjust captive rates for actual cost inflation as measured by the RCAF, adjusted for productivity. This will prevent the constraint from threatening the carrier's revenue-adequate status and will give effect to the ICC's admonitions in the guidelines that carriers should not be subject to arbitrary rate freezes, and should not be required to adjust their rates constantly to exactly maintain an equilibrium with revenue adequacy.

Second, and also consistent with the guidelines, a carrier should be permitted to adjust rates on particular traffic beyond actual inflation if it can show a specific need for higher revenues, specific harm that would result if it could not recover them from the shipper in question, and an inability to raise the needed revenue from any other source. The burden of proof to establish that a rate increase in excess of actual inflation should be allowed would be on the carrier. Just as the burden of proof under the stand-alone cost test falls on the shipper. Consistent with established board precedent in this area, revenue adequacy for purposes of the guidelines should be determined on a case-by-case basis. And a shipper invoking the revenue adequacy constraint should be permitted to present any evidence that it considers relevant in order to demonstrate that the railroad meets the criteria of Section 10704. However, in recognition of the long-term nature of the revenue adequacy concept and in order to avoid delay in the threshold determination, Allied Shippers propose that the Board also adopt a presumption that a railroad whose four-year average return on investment is equal to or greater than the average of the industry cost of capital, properly determined, or the multi-factor analysis threshold over the same period, is revenue adequate for purposes of the guidelines.

The four-year approach is consistent with the Board's three benchmark methodology and reflects a reasonable business cycle. As we did in our comments, we emphasize that the constraint we are proposing would apply only to individual movements following a showing of market dominance in a complaint proceeding, and would operate only to limit the carrier's ability to increase a captive shipper's rate once it is has satisfied the revenue adequacy test. In its May 8th notice, the Board also posed five specific questions with respect to the revenue adequacy issues raised in this proceeding, and I would like to turn to those now.

Question 1. Reference the guidelines observation that revenue adequacy should be measured over time and ask what an appropriate measuring period would be.

As we stated in our comments, and as the Board and its predecessor have confirmed, whether a railroad is revenue adequate for purposes of the coal rate guidelines first constraint should be determined on a case-by-case basis. However, we endorse a four-year rolling average as a sound basis for a presumption of revenue adequacy. Four years is consistent with the time period reflected in the three benchmark methodology and it was specifically endorsed by then Commissioner Clapp, in Ex Parte number 393.

It is consistent with the admonition in the guidelines that railroads should not have to adjust their rates annually to precisely match the revenue-adequacy line and it is reasonable in light of our primary remedy, that rate increases beyond actual inflation would not be permitted on captive traffic. The shipper would bear the burden of persuasion both as to market dominance and revenue adequacy and if the complaint is successful, the railroad only has to cancel a specific rate increase or set of increases on that shipper's traffic. Given the practicality and limited reach of our proposed remedy, a four-year measuring period for purposes of establishing a presumption of revenue adequacy is appropriate.

Some of the railroads in this proceeding have criticized the use of various financial metrics to measure revenue adequacy on grounds that they are not sufficiently long-term in their outlook. A four-year analytical period addresses this alleged problem and smoothes out bumps or anomalous results that might be observed in one or two indicators. The railroads have also advocated the use of exceedingly long measurement periods, such as the life of the assets employed in the rail business, but this is simply another argument against any meaningful rate constraint based on revenue adequacy. A remedy that requires the analysis of data over a 20 or thirty-year period and can't be employed until the records spanning a period of similar length is established is no remedy at all.

Question 2 asks whether a revenue-adequate railroad should be required to pre-justify future rate increases and whether such a requirement would be consistent with the governing statute and previous case law.

Allied Shippers' position is that the revenue adequacy constraint must be applied consistent with the existing statute and in the context of the coal rate guidelines. Section 11701 limits the Board's authority to regulate rates to complaint proceedings. An established precedent clearly places the burden of persuasion on complainants, both with respect to jurisdiction and the merits of rate relief. Under our proposal, therefore, a captive shipper would have the burden of demonstrating both market dominance and the revenue adequacy of the defendant before invoking the presumption that an increase in its rate beyond actual inflation is unreasonable. The railroad then would have the ability to rebut this presumption by showing either that its proposed increase did not exceed RCAFA inflation, or that it meets the specific revenue need criteria set out in the guidelines.

That need criteria comes straight from the guidelines, which were approved by the Third Circuit. And the remedy that we propose does not require departure either from the statute or prior precedent. The Board employs rebuttable presumptions in a variety of contexts, including the limit price rule that was adopted recently from market dominance determinations. Similarly it allows for the possibility of individual rate adjustments to the revenue and the variable cost ratios identified in the three-benchmark methodology.

Question 3 asks whether a revenue-adequate railroad's ability to continue to differentially price should be limited to all captive shippers or just a subset of the most captive. And if the latter, how the Board can best determine those most likely to be the subjects of market power exploitation.

Allied Shippers would caution against adopting a revenue-adequacy constraint that is susceptible to over complication or could slide into a sack-type analysis. Under Section 10701-C, a railroad is permitted to control its own pricing unless it enjoys market dominance, in which case the rates on the market dominant traffic must be reasonable. Neither the statute nor the Board's precedence contemplate degrees of market dominance, and as we have noted, rate relief from the Board can only be secured upon complaint, which itself is a differentiating process. The statutory scheme clearly contemplates that rate regulation is to be applied on an individual shipper basis. Allied Shippers' proposal reflects these rules and concepts and does not assume differentiation among shippers other than that which may result from individual choice or circumstance. Once a railroad achieves revenue adequacy all captive shippers should be eligible equally for protection against further differential pricing, consistent with the guidelines.

However, individual shippers must elect to raise claims. Some may choose not to complain for various reasons. Some will be under contract and cannot complain, and each must make its own showing of market dominance. Under our proposal the Board's task is not to attempt to divide a hypothetical over-recovery pie. It is to ensure that the pie does not get larger at the expense of a specific complaining shipper.

Question 4 asks for comment on proposals to tie revenue adequacy to the availability of broader competitive access remedies. The Allied Shippers take no position on this question or on the matters at issue in Ex Parte number 711 as they may relate to revenue adequacy. However, it is our view that any expansion of the availability of competitive switching or other access relief should not compromise a captive shipper's rights to rate relief under the guidelines, or alter the rules for determinations of market dominance as a jurisdictional prelude to that relief. The availability of a potential alternative remedy should not serve to undermine those remedies that currently exist.

Finally, Question 5 asks about the impact of a revenue adequacy constraint on the railroad's ability to invest in their networks. As the Allied Shippers foretold in our opening comments, the railroads as a chorus have proclaimed the end of reinvestment and the demise of the industry if a meaningful revenue adequacy constraint is adopted. At least insofar as our proposal is concerned, these claims are dramatically exaggerated and factually groundless. The Allied Shippers' proposal imposes no limitation on railroad returns at all. It simply limits the ability of a revenue-adequate carrier to impose further differential pricing on that relatively small segment of its customer base that is captive and takes up the burden of initiating a complaint proceeding. Inflation adjustments would preserve the carrier's margins even on this traffic. And railroads remain free to earn and retain all higher returns resulting from increased efficiencies, cost reductions, stronger pricing on competitive traffic and other sources besides exploitation of captive shippers.

In that regard, we note that the governing statute directs that increased revenues from competitive traffic should serve to reduce the cost burden born by captive traffic not increase it. Furthermore, under our proposal the carriers would retain the ability to attempt to prove that the shipper in a particular circumstance should be exposed to a rate increase beyond real inflation if the specific need criteria set out in the guidelines are met.

The logical end of the railroad's argument against any constraint that would "limit returns," is that there can be no rate constraint at all predicated on a carrier's revenue adequacy. As we explained in detail in our comments, such an outcome squarely conflicts with the court-approved coal rate guidelines and the governing statute, including the rail transportation policy goals set out in Section 10101(6). Moreover, as we showed in our comments, Professor Baumol, himself, has explained that stand-alone costs do not represent the gold standard for determining reasonable rates, but instead is an upper limit that does not preclude application of an alternative constraint when a monopolist already is recovering revenues at a level that allows its full sustainability.

The record in this proceeding, including in particular the evidence submitted by the Allied Shippers, clearly demonstrates that the railroads suffer from no shortage of capital, and that on a current and prospective basis they enjoy revenues that are more than sufficient to fund needed system investments. Their stock repurchase plans are just one indicator. In its comments the AAR argues that such programs are not indicators of excessive revenues, but this is a straw man. The issue is not whether the railroad's overall revenues are excessive, it is whether they are adequate under the governing statute such that captive shippers no longer should be required to absorb differentially higher prices.

Assuming honest and efficient management, a railroad's decision to commit hundreds of millions or billions of dollars to the repurchase of equity is a strong indicator that management believes that it has more than enough revenue available to meet capital investment and other internal corporate needs. A revenue-inadequate railroad starved for capital that chose instead to spend money propping up its stock price could not be considered properly managed. To the extent that the railroad's recent and remaining service problems are capacity-related, we submit that they are a consequence of revenue allocation choices made in the past, such as efforts to right-size their systems and not a shortage of revenues. Dr. Levine showed on opening and in reply that the railroads have had access to all the capital they need for many years. Captive shippers should not be compelled to continue to pay higher rates to make up for the results of the railroad's elections concerning whether and how to use that capital. Allowing revenue-adequate carriers to further increase rates on captive traffic is more likely to lead to increased equity buy-backs and higher management compensation than it is to increased capacity or improved service.

This concludes our prepared

presentation. We thank the Board and invite any questions that you may have.

MR. ELLIOTT: Getting back in practice. Thank you for your presentation. Commissioner?

MS. MILLER: Thank you. So Mr. Dowd, one of the things you talked about was that the four-year period comports with a business cycle, but I'd like to hear you say a little bit more about it, because four years does seem a bit short if you're looking at -- even the last recession that we had. I forget when it was technically considered to have come to an end, but, you know, it certainly felt like it was more than four years. I'd just like to hear a bit more about why you consider that to be reflective of a business cycle.

MR. DOWD: Well, the concept of a business cycle can be seen as fairly elastic, and our reference to a four-year cycle, a four-year period as being reasonable is tied both to precedent, to the Board's use of four years as a reasonable period in a three-benchmark methodology, and also to the limited nature of our remedy. The remedy that we're proposing is to limit the ability of a market-dominant railroad to take increases above inflation in rates on a captive shipper's traffic. That is a very limited remedy both in scope and in nature, and as a consequence the length of time that would be needed to measure the carrier's revenue-adequate status does not need to be exceedingly long.

MS. MILLER: I want to go back -- I think you actually said this quite clearly in your testimony, but I want to be sure I understood. So when you talk about those remedies, is this correct, that in your proposal the shipper would have to, in essence, bring the complaint, they would have to show market dominance and they would have to show through their pleadings that the railroad was revenue adequate? Is that the way you laid that out?

MR. DOWD: Yes. And that's consistent

with how we read the statute. The shipper has the burden of proof in order to secure rate relief from the Board, and whether that relief is in the form of a rate prescription under the stand-alone cost constraint or a rate increase limitation under the revenue-adequacy constraint, the shipper would in either case bear the burden of presenting evidence to support that.

MS. MILLER: And then your proposal that the limitation be that the rate can't be greater than inflation, absent a showing by the railroad of why they need that increase, would apply then only to those captive shippers who have, in fact, brought a complaint before the Board?

MR. DOWD: That's our proposal. Yes.

MS. MILLER: Yes. Thank you.

MS. BEGEMAN: I think you actually clarified a couple of the questions I had as well. With respect to your comment about replacement costs, which I know can get a lot of people exercised just by saying those words. I think Dan and Deb are real familiar with that, but help me understand your perspective of why it makes sense that the Board judges rates, through the SAC process for example, using replacement costs, but that we shouldn't use it to judge revenue adequacy? You know, we also typically almost always allow replacement costs, or rather the asset base, to be marked up after mergers, et cetera. So I'm just trying to understand the inconsistency, why it makes sense to judge rates one way, but to judge railroad revenue adequacy another.

MR. DOWD: I'd like to ask Dr. Levine to chime in here. I've been dominating this panel so far.

DR. LEVINE: Yes. Thank you. It's my pleasure to be here. In regard to revenue adequacy and replacement costs, what we're dealing with here is essentially investor expectations. And when investors look at the array of opportunities, they're not looking at replacement costs at all. They're looking at historic book-value cost for all companies. General accounting principles and financial principles and best practices are really the language of the business community. If you, for instance, if you access Jim Cramer on Mad Money on television, you'll never hear him mention replacement costs.

If you look in the railroad's annual reports, the shareholders or their proxy statements, you'll never see return on an investment based on replacement costs. I've never seen a Wall Street analyst say don't buy the stock because the return on investment using replacement cost is so much lower than the return on investment using book value. That's the language of the business community. It's the language that the investor sees and analyzes, and virtually all companies across the board use it. And I've used the replacement cost in their annual reports or in their financial reporting. Now let me say also that railroads -- and I would urge the Board, aside from reviewing the annual reports, the R1 reports that it receives, look at the annual reports and the proxy statements that the railroads file with shareholders in mind. Replacement costs are not a consideration.

So to even the playing field, it's an analysis of return on investment traditionally for virtually the entire S&P 500 and everybody else. And that's, I think, what the difference is.

DR. HENNIGAN: Commissioner Begeman, just to add a comment to your question about the how and why of this, the revenue adequacy is a top-down approach where you're dealing with the entire entity, the entire railroad. And the replacement cost issue is what is the cost of that entire railroad now and for the future? In a stand-alone cost constraint test it's a bottoms-up approach, where what you do is you create a hypothetical railroad that is sort of custom made, custom-made hypothetical railroad. So it's bottoms-up. You know exactly what you're pricing and you price it directly. So there is an ability to say we have the following equipment, services and whatever and price it. So it's much easier. That's how it's done.

In terms of mergers, the market actually puts a price on the value of that merger. So what's missing in the top-down is a market, an easy to reach market price. In mergers a price is stated. You know what you're dealing with in terms of the price. Bottoms-up, you have a specific railroad that you're pricing. So as the Commissioner has said for the past thirty years, the practicality of reaching a replacement cost, you know, estimate for railroads is very very difficult.

MS. BEGEMAN: Well that I'm certainly familiar with, but I guess this is a topic that I hope throughout the hearing the various witnesses will feel free to comment on, because I do see something of a disconnect, and I'm really trying to get as fully informed on the topic as I can. As for the specific proposal you had with regard to how the constraint could be applied to judge a rate, if you could just give me a little more clarification. If the rate is found to be unreasonable -- the shipper has shown market dominance and the carrier is revenue-adequate, and supposedly assuming a railroad is unable to meet the other two tests, which would allow it raise or to defend its rate against the shipper -- is this only brought under an increase? I mean, how is a rate prescribed? You haven't -- we haven't really determined what the rate should be. So is it that the shipper is only challenging an increase?

MR. DOWD: Well that would depend on the claim brought by the shipper. Under the guidelines --

MS. BEGEMAN: How would the court determine what the rate should be?

MR. DOWD: Well under the guidelines and the Board's prior precedence, it's very clear that the individual constraints under the coal rate guidelines can be brought collectively or individually. So if a given shipper experienced a rate increase and made the determination that it was unwilling to invest the time and the cost of seeking a rate prescription under the stand-alone cost constraint for example, but its railroad, who was believed was revenue-adequate, it could elect to file a complaint and attack only the increase that it had absorbed, which as we foresee it, would be probably a shorter and considerably less expensive undertaking than a full-blown sack analysis. In the alternative, a shipper who, and there's actually a case before the Board now where this is the case, a shipper could bring a complaint, both under the stand-alone cost constraint and under the revenue-adequacy constraint where it's urging rejection of a rate increase based on revenue adequacy, and then further a prescription of a lower maximum, reasonable rate based on the stand-alone cost test. So in the first instance it would be up to the shipper to decide what relief it chose to seek and then present a case consistent with that.

MS. BEGEMAN: So, not to put words in your mouth, are you saying that you're envisioning the revenue-adequacy constraint approach only to be used for challenging an increase? It's not to actually determine the rate, for example, that SAC does, in which you would you get all the way to a prescription, where you determined what the rate should be, but rather you would bring a revenue-adequacy case in order to fight an increase? Is that right?

MR. DOWD: Yes. Our proposal would constrain the ability of the railroad to take additional rate increases on a particular shipper's traffic. I know that others in this proceeding have proposed remedies that would involve perhaps rolling back existing rates, and I'll certainly defer to them to address that.

MS. BEGEMAN: And then if you could also just clarify something for me. The two things that the railroad would have to prove are the increased costs, and the second one was that you could only get it from, I think you said that shipper. But I think I read in your written testimony or written comments or filings that you could only get it if you couldn't get it from any other source but captive traffic. To me that's two different things. Is it just that specific shipper or is it about captive traffic in general? I mean are we going to be picking winners and losers of captive shippers?

DR. LEVINE: No. I don't think that you would be picking winners or losers among captive shippers.

MS. BEGEMAN: Would we only be looking at that particular shipper or is the proposal that the railroad looks at, says that one of its defenses is, that it needs it from captive traffic or is it from that shipper? It wasn't clear.

DR. LEVINE: Our proposal, it would be shipper-specific. The railroad would need to demonstrate that for this particular traffic it requires revenues that are greater than those that would be earned with inflation-adjusted rates, and then has to demonstrate what the need is, the specific need for the revenue, the reason why it has to get that revenue from this traffic, and why it cannot raise that revenue in any other way. And if the railroad is revenue adequate, it may be the unusual circumstance where those factors arise, but if they did then the carrier would have the option to demonstrate the need.

MS. BEGEMAN: And then, I guess, one final question, at least for now. You mentioned with respect to the question of whether or not somehow revenue adequacy should be tied to competitive access -- although you said you didn't really have a position -- the one thing that you did stress was that if a shipper were to have competitive access it should not affect their ability to challenge rates. I think that's what you said -- you could still bring the rate case.

DR. LEVINE: Our position on that is that the adoption --

MS. BEGEMAN: You shouldn't be

prevented from seeking remedies. I think that's what you said.

DR. LEVINE: Yes. Our position is that if the Board were to adopt expanded competitive access relief, the fact that that remedy was potentially available should not be used to undermine the shipper's ability to demonstrate market dominance in their particular circumstance and challenge the rate.

MS. BEGEMAN: But how are you market dominant if you have competitive access? That's what I'm trying to get to. I'm just not understanding. It seems to be a disconnect. You either have competition or you don't. Either you're market dominant or you're not.

DR. LEVINE: If the Board were to expand the availability of competitive switching for example, there would still be a question in any particular circumstance whether that option actually provided legitimate effective competition. The switching fee could be set at a level that makes is unattractive for another carrier to come in, for example. So our position is simply that the adoption of an expanded competitive access remedy in and of itself should not undermine the existing market dominance analysis. Whether and under what circumstances a specific shipper may have effective competition available would be based on the facts, you know, presented in that case.

MS. BEGEMAN: Thank you for clarifying that.

MS. MILLER: I wanted to ask a follow-up question related to competitive access. So I might be putting words into your mouth, but is the position of your clients that they didn't have a statement to make on competitive access today, is that an indication that they just don't see competitive access as having significant value?

MR. DOWD: No. Our statement should be interpreted simply as the Western Coal Traffic League, Consumer's Energy Company and South Mississippi Electric Power Association don't take a position on tying revenue adequacy to a competitive access remedy.

MS. MILLER: And, excuse me, one last question. So I wasn't here when the competitive access issue was before the Board. Did WCTL take a position on competitive access then?

MR. DOWD: The position that the Western Coal Traffic League took in Ex Parte 711 is consistent with the position it's taking here.

MS. MILLER: Which means that ---

MR. DOWD: That it should, that the availability of an expanded competitive switching option should not be used to undermine the existing market dominance model.

MS. MILLER: But does WCTL support the idea of expanded competitive switching?

MR. DOWD: I did not specifically participate in that proceeding.

MS. MILLER: Okay.

MR. DOWD: And I would be reluctant to characterize the details of its comments at this time.

MS. MILLER: Okay.

MR. DOWD: We can acquire that as a supplement.

MS. MILLER: Okay. Thank you.

MR. ELLIOTT: Quick question. I'm taking it back to the burden issue. I see that the shipper would be establishing revenue adequacy and market dominance, but then at that point it sounds like it flips to the railroad. Wouldn't that create an Administrative Procedure Act burden, problem, by shifting the burden back to the railroads, because it would seem to me that the burden initially would be on the railroads to show whether or not that increase was reasonable or not?

MR. DOWD: No. I don't believe so, Mr. Chairman, because the constraint as we proposed would require the shipper to demonstrate market dominance and demonstrate that the defendant is revenue adequate. And that would be the merits phase if you will of a challenge to a rate increase under the revenue-adequacy constraint. So the demonstration of revenue adequacy would give rise to then a rebuttable presumption that the rate increase is unreasonable. The railroad would then have the option of seeking to rebut that presumption, but that is not the same thing as putting the burden of proof on the railroad in the first instance. The shipper will have already carried its burden of proof under the two prongs for the constraint, market dominance and revenue adequacy.

MR. ELLIOTT: So if we impose something like you're proposing it's your position that we would be able to withstand an appeal, because I assume that's something that the railroads would raise at that point, that there has been a shift.

MR. DOWD: Yes. We believe that the constraint that we've proposed is fully consistent with the statute, and should be sustained on review.

MR. ELLIOTT: And is there any case law in a similar position? I know this is a very unique regulatory scheme, but are you aware of any case law that would support that?

MR. DOWD: I can't cite specific decisions for you, but the ICC and the STB in the past have used rebuttable presumptions in a variety of contexts and the courts have not upset them.

MR. ELLIOTT: Okay. And then following-up on that part, it sounds to me, okay, it flips over to the railroad once you establish revenue adequacy. So it sounds like unless the railroads come back with something, more or less, that the rate increase, when it's revenue adequate -- I mean, for the most part it's not going to take place. What I worry about is that, okay, we stop them going over revenue adequacy as far as revenues, but what happens on the flip side when they're not revenue adequate? There's nothing that balances the two. So here you're cutting them from going up, but there are going to be times when they're below the number and they're not going to be able to do anything to make that up. So it seems like they're going to be at a disadvantage. Do you understand what I'm saying?

MR. DOWD: I think I understand your question, but I ---

MR. ELLIOTT: You don't like it?

MR. DOWD: No. To be perfectly frank I don't share your concern.

MR. ELLIOTT: Okay.

MR. DOWD: The constraint would apply to a single captive shipper's traffic.

MR. ELLIOTT: Sure.

MR. DOWD: And the railroad, and in our example we presume the railroad is revenue adequate, the railroad would have inflation protection on even that traffic going forward. If the fortunes of the railroad in the future changed and the railroad became revenue inadequate, and it desired to focus on that shipper, that individual shipper's rate and increase it. The Board, as it does in all of these adjudications, retains the authority to reopen the matter.

Under that example, one of the underpinnings of the relief is no longer effective. To wit the railroad is no longer revenue adequate, and I would think the railroad would have an argument on reopening that the constraint on its ability to increase that shipper's rate should be lifted. So there would be a remedy in that circumstance, but I think that given the narrow scope of the remedy that we're talking about, where it is a limitation on rate increases beyond inflation for an individual shipper who is part of a subset that Commissioner Miller suggested was only five percent of traffic. Let's assume that it's ten percent. It's still a small segment of the railroad's overall traffic base.

So the notion that the constraint we're proposing is going to somehow impact the overall revenue adequacy of the carriers, I don't think, there's no logic there. I don't see that happening.

MS. BEGEMAN: Can I ask a question?

MR. DOWD: Sure.

MS. BEGEMAN: How long does the rate, I'm just going to say cap, because it's the only thing I can think of, but how long does it stay in effect? I realize that the Board still has control to some degree, that it could reopen probably on its own or on a petition by the carrier. But, under SAC, a weight prescription is for 10 years. How long would this rate, which isn't really a prescription, apply? Is it forever until there's some change in revenue adequacy or change in the need --- I guess, the costs? How does it get to fluctuate?

MR. DOWD: Well to answer that question I think you need to look at it in the context of what actually goes on out there in the marketplace. And if you look at, for example, the Board's rate prescriptions, in the majority of cases where the Board has prescribed rates, the full prescription period, which used to be twenty years, now it's ten years, very frequently does not run out. What happens is the parties are able to negotiate a contract which takes over, or there is a change in the nature of the traffic, or there are other changes that impact that commercial relationship.

So while hypothetically, so long as the carrier was revenue adequate and so long as the shipper was continuing to make the same movement of the same traffic over the same route, the limitation on supra inflation rate increases would remain in effect. Forever, I think, is not realistic because you're likely to have commercial relations between those two parties or other changes that will impact the rates.

MS. BEGEMAN: One concern I have from what you're saying -- and feel free to try to convince me otherwise, and I hope others will comment on it as well -- but you know one of the things that you said from the beginning part of your testimony is that you're sort of envisioning this new rate process, you know, an easier process, not SAC -- which for that I commend you

-- but this certainly would have the potential to be utilized much more than the few SAC cases that have come before the Board in the past twenty years. This could become something that gets used quite frequently, and so there could be a whole lot of rates capped.

I can understand you using just the one shipper example. That doesn't seem necessarily to affect the network and the ability to invest, but if this should become a very popular rate capping process it could have a really big impact. So I'd like you to comment on that.

MR. DOWD: Well I think that the impact is quite limited because you start with a small subset of the railroad's traffic which is even eligible for the constraint. So whether it's ninety percent or ninety-five percent of the railroad's traffic ---

MS. BEGEMAN: But it could affect every captive shipper if ---

MR. DOWD: And then within that subset

you have to eliminate those captive shippers whose traffic is moving under contract. And a considerable amount of captive traffic does move under contract. Parties are able to reach agreement on contracts even if there's no competitive alternative. So those are the ruled ---

MS. BEGEMAN: I haven't heard that very often.

MR. DOWD: I'm sorry?

MS. BEGEMAN: I haven't heard that very often.

MR. DOWD: Well in the marketplace it is not at all uncommon for a single-served shipper, in particular an electric utility, to still have a contract with its serving carrier. So you eliminate the contract traffic, and then of course you have the traffic which is captive but is otherwise exempt. So there is a relatively small universe of traffic ---

MS. BEGEMAN: I think that's how Deb got down to the five percent figure.

DR. HENNIGAN: Okay. Commissioner, let me just make this a bit more broad. The purpose of revenue adequacy is to constrain ultimately the Ramsey pricing that's allowed for these captive shippers under the Staggers Act. So there's always been the notion of revenue adequacy that at some point in time the rates at this five percent, or whatever the number is, are paying to cover the overhead and fixed costs of these railroads. There will come a time perhaps where it's not necessary for them to be paying these high differential rates. So where we are right now is that it may be that time, that the railroads are revenue adequate.

So these rates that you're worried about for the future are historically much higher than the incremental cost of moving the traffic. Staggers allowed, the Congress allowed regulation to allow the railroads to recover their costs from these captive movements, and the stipulation in Staggers was that if, and the ICC and STB, if the railroads become revenue adequate then these captive rates should be constrained, you know, in the future. So I think there was always this notion, sort of this quid pro quo that when you become revenue adequate you shouldn't expect to be charging as much for these movements as you have in the past, because your rates are much higher than the incremental cost.

So it's just a broader perspective on why this issue, why we're dealing with this issue.

MS. BEGEMAN: Right. And that's what this is all about.

DR. HENNIGAN: Yes.

MS. BEGEMAN: Trying to figure out what was intended, what is intended, what makes sense. All right. Thank you.

MR. ELLIOTT: I had another procedural question. With respect to, okay, let's say you do the test that you've proposed and in this instance the railroad wins. And the increase is not found to be unreasonable. So at that point would the shippers still be able to challenge the bottom rate from the increase? So let's say you lose on the increase itself, but what about the rate at that point?

DR. HENNIGAN: Well if the shipper's initial complaint included a claim that the existing rate was unreasonable under the stand-alone cost constraint, for example, then a finding that the railroad, for example, was not revenue adequate and therefore the rate increase would not be constrained under the revenue-adequacy constraint, the shipper would still be left to try to press its claim for rate relief under the stand-alone cost constraint.

The Board and its predecessor held numerous times in the years following the adoption of the coal rate guidelines, when it routinely considered rate challenges under all three constraints: management efficiency, stand-alone cost and revenue adequacy and frequently found that relief was not available under one or two of those constraints but then provided relief under the third. In the Arkansas Power and Light case, for example, where the railroad was found to be revenue inadequate and the shipper's case under the management- efficiency constraint was not upheld, but its claim under stand-alone cost was.

So in your example, if the shipper had also pleaded a challenge to the underlying rate under a different constraint, that challenge could go forward.

MR. ELLIOTT: I just want to clarify. So in my hypothetical the railroad actually would be considered to be revenue adequate although they saw the increase that they made to be reasonable because the railroad, let's say, lost a bridge and they had to put a bridge in. As a result they had to increase their rates. That would be their argument, I guess. So at that point, if they determine that the increase was reasonable and the railroad was revenue adequate, wouldn't it be difficult to have a SAC test at that point, because how can you say the rate's reasonable and then, I mean the increase is reasonable but the rate itself is not?

DR. HENNIGAN: Well I wouldn't want to speculate on the quality of the evidentiary presentation that a shipper in your hypothetical could present under the SAC test, but what I will say is that our proposal, consistent with agency precedent, is to add the revenue adequacy constraint as an available remedy for rate increases. The availability of the stand-alone cost constraint as a remedy for unreasonable rates generally and as a vehicle for rate prescriptions would remain fully available and fully in effect. Whether and to what extent a shipper's inability to demonstrate that it's entitled to relief under the revenue-adequacy constraint could impact its stand-alone cost case, that's speculative and I wouldn't go down that road without seeing the evidence.

MR. ELLIOTT: Okay, one final question. Your proposal, and I think Ann hit on it, that it creates a simpler way for you to challenge something, a rate. In this case an increase. Very recently, the TRB came out with a study that I'm sure everyone in this room is familiar with, and they suggested an alternative method, obviously through arbitration, a rate-comparison test. Let's assume that we can somehow bring that within the confines something similar to a 3B test, but just more a simple rate comparison test. If we do something like that in a revenue adequate instance would you find that to be satisfactory, something along those lines?

DR. HENNIGAN: I just want to make sure I understand your question.

MR. ELLIOTT: Sure.

DR. HENNIGAN: Are you asking our view on a revenue adequacy constraint where once the carrier has shown to be revenue adequate the rate is evaluated by reference to other comparable rates?

MR. ELLIOTT: Yes. I guess --- let me even broaden that. Let me just say, generally speaking, we create an easier way to bring a rate case. I mean now we have the SAC test. Everyone knows that those are very complex and difficult to handle. So what if we move more towards the rate comparison approach as opposed to a SAC approach generally?

DR. HENNIGAN: Well we ---

MR. ELLIOTT: I left you speechless.

DR. HENNIGAN: I don't want to appear to be avoiding your question, but the Western Coal Traffic League and Consumers Energy and South Mississippi, you know, I couldn't express a position on that. We would have to see a specific proposal from the Board and consider it. I'm sure we would participate in a proceeding to consider it, but I wouldn't be able to speak on their behalf here on that subject.

MR. ELLIOTT: Sure. Okay. I know it was a little off the track, but since it was out there and I have you here I thought I'd ask you the question. Deb?

MS. MILLER: Before we let you go I've got two more questions I'd like to ask. So I want to go back to the inquiry Ann was making but ask it a little different way. So, you know, based on the numbers in the handy little pie chart I have in front of me, currently, today about five percent of the traffic based on carloads is subject to our regulation. There's roughly another fourteen percent of it that's under contract, but if not under contract could be subject to our regulation. So I think where Ann was going and the concern is if this process becomes simpler, faster, quicker, are we going to start to see a lot of traffic that currently is not subject to our regulation but moving to put itself into a position to be subject to our regulation because they find that to be a better way to hold down their rates? And then would we not be talking about a small slice of the traffic, still not, you know, a majority of the traffic, but a much bigger slice of the pie?

MR. DOWD: Well first of all our experience does not support the notion that shippers go out of their way to put themselves in a position where the regulatory scheme is their remedy. If they have the ability to contract, if they have the ability to negotiate acceptable commercial arrangements they will do it.

With respect to the scope issue, I would echo, you know, Dr. Hennigan's response, which is that the notion that once carriers became revenue adequate their ability to continue to differentially price their captive traffic was imbedded in the coal rate guidelines. It has always been understood that when the time came, that the carriers achieved revenue adequacy, they would then no longer be able to exercise continued differential pricing on their captive shippers. And if that time has come, and we believe that it has, that is the predicted and intended consequence of the coal rate guidelines as initially promulgated and court approved.

DR. HENNIGAN: Commissioner, whether it's five percent or nineteen percent that you're concerned about, any shipper in that category, if they wanted to make, to avail themselves of this procedure we're talking about, would have to come and file a complaint against the rate, determine, you know, prove market dominance and then prove that the railroad's revenue adequate, which may already be a fact. But that's an affirmative burden on those nineteen percent of traffic to come forward in a regulatory proceeding to, you know, to take advantage of it. It's not difficult, but it's not a simple process. And it's shipper by shipper on particular traffic. So there's a constraint on sort of the use of this as a regulatory tool. It's leverage for the shipper in a way, but it doesn't necessarily translate into outcomes at the commission level.

MS. MILLER: Thank you. And then one final question. The way you have this process set up, that the burden is initially on the shipper to come in to show that there's market dominance, revenue adequacy and then what's the term, rebuttal presumption or ---

DR. HENNIGAN: Rebuttable presumption, yes.

MS. MILLER: -- rebuttable presumption

would be on the railroad. So what do you envision would be the kind of an argument a railroad might be able to make that would justify a rate increase above inflation?

MR. DOWD: There are a number of very experienced and talented railroad counsel in the room today, and I would encourage you to ask them that question.

MS. MILLER: Okay. Thank you.

MR. ELLIOTT: Thank you very much. We really appreciate your testimony.

MR. DOWD: Thank you.

MS. MILLER: Thank you.

MR. ELLIOTT: And we'll now call up Panel II.

MR. ELLIOTT: Okay. You may begin.

MR. SIPE: Good morning Chairman Elliott, Vice Chairman Begeman and Commissioner Miller. My name is Sam Sipe. I'm outside counsel for the Association of American Railroads in Ex Parte 722. AAR appreciates the opportunity to appear before the Board today. With me on this panel are Edward Hamberger, President and CEO of AAR and two distinguished economists, Professor Joseph Kalt and Dr. Roger Brinner. Each of us will be offering testimony on different aspects of the Board's inquiry into revenue adequacy. I will make some brief introductory remarks and will later conclude our panel's presentation by responding to the questions sat out in the Board's notice of hearing.

The premise of this proceeding appears to be that it could be appropriate to regulate railroad rates based on whether a railroad's overall revenues are deemed to make that railroad revenue adequate. AAR firmly believes that that premise is categorically wrong. Under the governing statute, revenue adequacy is an aspirational goal rather than a ceiling on rates. The concept was introduced into the statute when the nation's freight railroads were in a state of financial collapse. Congress' clear desire was to remove the regulatory shackles that had led to financial peril and had instructed the ICC to adopt policies that would allow railroads to pursue and achieve financial health.

Congress expected the railroads to do that through reliance on prices determined by the railroad's set in response to shipper demand. Rate regulation standards like those advocated by the shippers in this proceeding that do not replicate competitive market outcomes would result in misallocation of resources and a gradual contraction of the rail network. Congress freed the railroads to act like other firms in competitive markets and to set rates in response to market demand. This freedom was implemented, in part, by significantly limiting the scope of rate regulation. The Board is limited to evaluating individual rates for specific movements and may do so only upon complaint and only when a railroad has market dominance over the traffic. A top-down determination that a railroad earns adequate revenues across its entire system does not reveal whether any individual rate is reasonable.

There has been much discussion in this proceeding of the suggestions in the coal rate guidelines that in a regulated setting a railroad need not earn returns greater than its cost of capital on a system-wide basis. But as explained in AAR's comments, this inchoate revenue-adequacy constraint was not grounded on any statutory authority or sound economic principle. Moreover, it has no coherent application to freight railroads, whose traffic is predominantly unregulated. Let me emphasize that the specter of earnings regulation is not a straw man concocted by the railroads. The revenue adequacy constraint of guidelines could be characterized as contemplating earnings regulations and that constraint is heavily relied on by shippers in this proceeding.

All of the revenue adequacy rate regulation proposals advanced by the shippers are premised on the notion that there is something wrong with railroads earning more than their cost of capital. That notion points in the direction of earnings regulation, and it is incorrect. Now it's possible that we will hear over the next two days, under questioning from the Board, some disavowals of earnings regulation by shipper interests. And that would be an encouraging development. Nevertheless, the Board should recognize that shipper proposals from making rate relief available on virtually all market dominant traffic of revenue-adequate carriers are arbitrary, punitive and economically unsound.

Existing rate standards, most notably SAC, are predicated on economic principles that promote efficient allocation of resources through reliance on prices set in response to shipper demand. At this point I'm going to turn it over to Mr. Hamberger and I will conclude the panel's presentation later by responding to the specific questions the Board noted for this hearing.

MR. HAMBERGER: Thank you, Sam. Chairman Elliott, Vice Chairman Begeman, Commissioner Miller, on behalf of the members of the Association of American Railroads, thank you for the opportunity to appear before you this morning. AAR's members build and maintain the nation's coast-to-coast freight rail network, thereby insuring that the U.S. economy functions efficiently and effectively, and that millions of passengers have reliable transportation on Amtrak and commuter trains that access our rail lines. As Commissioner Miller noted in her opening comments, the partial deregulation that Congress and the Carter Administration put in place 35 years ago literally transformed a dying industry into one widely recognized as the best in the world.

Partial deregulation laid the foundation for the industry's success, and allowed the railroads to earn enough to make massive investments in rail infrastructure. This private investment allowed rail productivity to surge, leading to lower rates that in turn attracted larger volumes of new traffic with freight rail competing head-on against other modes of transportation, such as trucking, pipelines, air cargo and barges.

These two days of hearing at the STB on revenue adequacy, quite naturally, are of huge importance to our companies, because whatever action you take will directly impact the financial well-being of the freight rail network and the industries and the customers that we serve across America. Make no mistake, as you take up revenue adequacy you are painting on a much larger canvas than just the inside of this room. What you are considering and may decide in this hearing room, just a stone's throw from the U.S. Capitol, will ripple across the economy and ultimately impact almost every American. This is not a hearing about an arcane formula of what constitutes adequate revenue at any given freight railroad. It is a hearing about the future of the U.S. economy. It is a hearing about whether our nation will continue to have a world-class freight rail system to propel its economic success. And yes it is a hearing about whether you will let the U.S. freight rail system back on a trajectory of failure, back to where it was before the Staggers Act. And that is exactly why Congress in 1980 established revenue adequacy as a goal and not as a mandate to constrain the revenues of freight railroads.

Now comes a handful of interest groups that want you to cut their transportation costs by direct government intervention at the expense of the greater good. Let's call it what it really is. They want you to institute a regime of wide-ranging price controls on freight railroads. The reason economists, and you'll hear later, are skeptical about price controls is that they distort the allocation of resources. When the marketplace cannot respond to increased demand you get shortages and quality deterioration. And to try to prevent erosion of quality the agency controlling prices then has to actively regulate the service quality as well.

At the end of the day what that means for the rail industry is very simple. If you cut rail rates you discourage innovation, productivity initiatives and diminish revenue. And if you diminish revenue you curtail the amount the rail companies are able to return to their networks, which currently is huge, twenty-nine billion dollars in 2015 alone, 575 billion since 1980. If you curtail this level of spending then this agency could very well be responsible for the frustration of a number of important government policies and national goals. And I'm not being theoretical here. Seven very specific policy goals in danger should the Board cap the revenue that railroads can earn by misapplying the concept of revenue adequacy.

First, of course, is the policy of improving service. Less money to invest means that railroads will have to make hard choices. They will not be able to invest in building capacity in as many locales as shippers demand. That will result in less reliable service. Look at how the railroads responded to the service challenges in 2013 and '14, rapidly and with a huge infusion of capital. Demand will only increase. That's because the U.S. population is projected to grow by seventy million people by 2035, generating 2.8 billion more tons of freight, a 22 percent increase.

Number two, the policy of increasing exports: exports help drive job growth and sustain the economic recovery. U.S. producers rely on our effective and affordable freight rail system to get their goods to U.S. ports to compete on world markets. Fully one-third of U.S. exports get to market by rail.

The policy of achieving energy independence: freight railroads are a key contributor in the effort to wean America off foreign sources of oil. By providing safe and reliable transportation they have played a large role in allowing domestic oil production to flourish and for U.S. energy independence to become tantalizingly close. They accomplish this by being able to apply massive resources to the market to meet the changing commodity demands.

They have also contributed to this goal by becoming the most fuel-efficient mode of land transportation with each new, greener locomotive costing between 2.5 and three million dollars.

The policy of enhancing safety: safety investments by freight railroads and tracks, switching and signaling systems, and yes including ten billion dollars for positive train control, bridges and tunnels and equipment have been and remain one of the most important ways to enhance rail safety. It is not a coincidence that the accident rate has declined 80 percent since 1980. A well-maintained railroad is a safer railroad.

The other equally important factor to improving safety is recruiting and training the world's best rail work force, the combination of investments and a well-trained, dedicated employee base lead to 2014 being the safest year on record.

Number five, the policy of increasing freight railroad's share of freight traffic: in order to lessen highway congestion and to use a mode that is more energy efficient, reducing greenhouse gases, the national rail plan, prepared by the U.S. Department of Transportation, proposes a goal of having rail move fifty percent of all freight traffic transported over five hundred miles. I will remind you that the cost of a new intermobile yard can easily exceed two hundred million dollars.

The policy of improving on time performance for Amtrak and insuring reliable service for commuters: demand for freight and passenger service will increase in the next twenty years. Since freight railroads serve as the operational foundation for much of America's passenger service, investments in the network must keep pace or else service for Amtrak and commuter services hosted on our lines will deteriorate.

And finally, the policy of increasing the resiliency of the national freight network.

Two major hurricanes that struck the Gulf Coast in 2005 demonstrated that the cost would be extraordinarily high for strengthening freight rail facilities vulnerable to the threats of rising sea levels and severe weather events. This lesson was driven home when Hurricane Sandy devastated the East Coast.

I submit to you that these seven very specific policy goals have broad, bipartisan, executive and legislative branch support. The common theme in meeting all of these policy goals is adequate revenue to maintain and expand the one hundred forty thousand mile rail network, and there is a direct correlation between what you decide in this proceeding and whether railroads will in fact have the necessary resources and correct incentives. In short, this Board would be putting the attainment of these goals at risk by acceding to the demands of the handful of interest groups seeking to use revenue adequacy as a means for achieving far-reaching price controls.

The U.S. Senate recently signaled the way forward for the STB. The STB Reauthorization Act of 2015, which is forcefully supported by many shipper groups testifying in this proceeding, was passed by the full senate by unanimous consent in June. It would provide commonsense process improvements to allow the Board to work more efficiently and at the same time recognizes the need for freight railroads to provide billions of dollars in private spending so tax payers don't have to. In fact, the bill explicitly states that in considering the concept of revenue adequacy, the Board must consider the infrastructure and investment needed to meet the present and future demand for rail services. Nothing could be clearer. The U.S. Senate fully recognizes that if this Board caps our revenue, thus moving in the opposite direction of this bill, then freight railroads will, in fact, not be able to meet the present and future demand for rail services.

It took decades for the railroads to

rebound from the brink of ruin, decades and massive private investment. Indeed the industry is an example of how private companies can provide sweeping public benefits, but decades of progress could be undone in the blink of an eye. Over these two days you will hear detailed legal and economic arguments. They are important to be sure. But let me urge you not to get caught up in the minutia of these arguments so that you lose sight of the bigger picture that I have tried to paint here this morning. America wants to remain a global economic leader. U.S. government officials want to insure energy independence. Passengers need to have access to state-of-the-art rail lines, and U.S. companies want to ship their products to new markets and create new American jobs. Right now freight railroads are able to help attain these goals. We are able to help attain these goals right now because of thoughtful governmental leadership. Freight rail success today is due to the foresight of the government leaders in 1980 who unleashed the transformational power of the marketplace through partial deregulation. Subsequent federal involvement in rail economics, both in the legislative and regulatory arenas, honored the belief that a developed nation requires a top-notch freight rail system, and that that system is best provided by private companies in control over their resources rather than through the government.

The message to you is clear. Continue to honor that belief. Thank you for your attention, and I'll now turn it over to Roger Brinner.

MR. BRINNER: Good morning, Chairman Elliott, Vice Chairman Begeman and Commissioner Miller. My name is Roger Brinner. I appreciate the opportunity to appear before the Board in this important proceeding. I have a PhD in Economics, and I taught Economics at both Harvard and MIT. I've spent the bulk of my professional career consulting foreign advising U.S. firms on how to position themselves for financial success in competitive markets. My experience is directly relevant to what I understand to be one of the central issues in this proceeding, which involves what policies the Board should promote in light of the improved financial performance of the nation's freight railroads and the possibility that they will achieve what the Board calls revenue adequacy.

The first point I would like to make is that comprehensive evidence confirms that railroad industry rates of return are not greater than market norms. They are less. The rail industry rate of return investment has consistently for the past decade been substantially lower than that achieved in the private sector by other relevant, referenced industries. As I described in my written testimony, my calculation is based on widely used Bloomberg data, and I cite that just because it is a high quality source that's checked by firms themselves, because they want to make sure the reporting is accurate. So it's a widelyrespected database. It shows that railroads earned a 7.2 percent return on average in the past decade, 2004 to 2013. Other industries with similar economic characteristics have fared far better. Aerospace and defense earned 15.7 percent, pharmaceuticals, 15.4 and electrical equipment manufacturers earned 15.6 percent. Exhibit 1B from my opening statement shows that the railroad industry return on invested capital has been consistently below that of these other industries since 1998, and the exhibit we reproduced here just reminds you of that.

In contrast to the large gaps between rail and peer returns, each of these peer sectors has cost of capital very close to that of rail. Exhibit 2 reproduced here, compares the weighted average return on invested capital to the railroad and to industries with similar economic characteristics. With the phrase similar economic characteristics, we're referring to the critical characteristic that each of these comparables to rail requires massive capital expenditures in the course of ordinary business operations relative to other sectors. In other words, the rail industry has achieved a lower rate of return is not attributable to a lower cost of capital or other economic characteristics that would logically differentiate its normal dependable return from returns of meaningful peers. The highlighted area there just shows you comparable costs of capital. And you'll note that rail sits about half the 15 percent level of these reasonable referenced industries.

So that leads us to the second important point I would like to make. It's perfectly normal for an industry to regularly earn more than its cost of capital, both as a matter of economic theory and empirical experience. The rates of return in most other industries clearly show that firms in a competitive market are not limited to earning an average return equal to the weighted cost of capital. For most industries, the ROIC is well above the corresponding cost of capital identified by the diagonal line. This is certainly most dramatically true when the economy is near full in employment and all invested capacity is fully utilized, but it's equally true in looking through the full business cycle. In competitive markets the average ROIC should exceed the weighted average cost of capital according to theory, and does so according to sound data.

A critical socially beneficial role of firms in the U.S. economy is to seek and develop attractive investment opportunities and pursue those that have expected returns at least equal to the cost of capital, equal to or exceeding. By simple arithmetic, if you pursue all projects promising more than or at least equal to the cost of capital and you pursue none offering less than the cost of capital, your average expected return must be greater than the cost of capital. It really is that simple. The prospect of returns exceeding the cost of capital spurs innovation through proven risk-taking, and these investments will lead to the productivity improvements necessary to raise the American standard of living.

Now the notion that a firm subject to regulatory oversight might be penalized for or prevented from achieving an average return above the cost of capital is irrational. What would the regulator want industry executives to do to match but not exceed the cost of capital? Would you like them to pursue too many projects, including those not expected to cover the cost of capital so as to reduce the average? No. Would you want them to execute those opportunities potentially, earning more than the cost of capital, but do so in an inefficient and cost-squandering manner so as to cut the realized return? No. Instead, wise regulation would encourage rail executives to pursue the right opportunities efficiently, earn a higher than cost average return and be able to attract the market capital that will obviously sustain the rail industry America needs. Capping returns of the cost of capital would undeniably create truly perverse incentives and asymmetries versus the rest of the economy. This would undeniably lead to too little capital attracted to rail, and that capital which was attracted would be encouraged by the regulator to be poorly managed. This discussion broadly explains why successful firms can be expected to earn more. Moreover, it summarizes detailed firm-specific behavior witnessed in the budget cycle of very many well-managed firms. In the next exhibit I show you the type of discussion I have witnessed and which railroads and every industry pursues during their budget cycle. They get requests for new investments from all their divisions. They sort them. They rank them, and in this example I say all right, the top yielding project number one is asking for $700,000. The scale doesn't matter. They're illustrative with reasonable weights of return and relative values. And this project, because it perhaps is very important to this firm, yields a twenty-three percent rate of return. In a rail industry example perhaps this would be relieving a bottleneck that's come because of a surge of unexpected traffic. So if the high volume with affixing a bottleneck would give you a high rate of return. So that twenty-three percent is associated with the $700,000. So the cumulative of RIC is just the RIC on that project. If you keep layering in the incremental projects, you'll see by the time you get to the sixth project, which has an 11 percent rate of return with a comparable investment, the investments have cumulated to four million but the average return is 17. 17 is just the average of the 23, 21, 19, 16, 14 and 11. That goes on everywhere. And then they look at the next project and they say you're only offering us eight percent. Now our cost of capital is a given number. We know from experience that not all projects work out as well as they hoped, that project managers have a certain amount of unbridled optimism perhaps when they bring forward a project in their division. So we set a hurdle rate that's a little bit above our official cost of capital. So in this example I say eleven. So that's their cut-off point and they reject all below a level. That's how you get to an average return if it's higher than the cost of capital.

Now this is for one project cycle, one year's budget meeting. You repeat that over the life of the enterprise and, of course, the average of the average is the number that you come up with. Now this isn't just tied to capital budgeting. I'd be happy in Q&A to show you how this phenomenon of the average value being far higher than the cost is pervasive in your own personal behavior. It's a notion known as consumer surplus. So we can explore that if you feel uncomfortable with this.

So if railroads were regulated to cap their average rate of return of their costs they would be put at a disadvantage as they strive to attract sufficient extra investment dollars, because they'd be asked to do something very different from what every competitive industry does.

Now let me switch topics and speak briefly about the subject of financial metrics. The Board correctly looks at return on invested capital to assess railroad revenue adequacy. Although I do believe it measures the asset values somewhat incorrectly. Some commentators and testifiers suggest that the Board should abandon the use of ROI or extend the beyond it and look at short-term financial metrics that are prevalent in the media, like railroad stock performance or the six other metrics that Mr. Levine suggested. I often tell the students in my economics and finance classes, if you just read the paper your economics I.Q. is severely threatened. The journalists, the journalists aren't trained in finance or economics. People will talk about anything that seems to them to be interesting whether it has any theoretical relevance. And I'm afraid, as I remarked in my counter to Mr. Levine's testimony, that's what it feels like he was doing today, doing to you.

Railroad stock performances improved over the last decade, and those who invested at the right time have certainly benefited, but the improved performance of railroad equities reflects improved rail performance from a very depressed starting point, not supernormal earnings. This exhibit shows you the price earnings ratio and you see from 2000 to 2013 this was the data that was available, and I prepared my testimony in the middle of last year. Finally, the rail price earnings ratio came up to match that of the standard Forbes 500 aggregate. For 2014, last week I pulled the data together and rail has once again fallen below. I show you this not because I'm recommending it, but just to show you that the multiple of earnings today is in the neighborhood of the aggregate but it's far from being regarded as excessive.

Other financial metrics like return on equity or operating ratios provide only partial and often distorting information about financial performance. ROIC is the core measure of financial performance that must be assessed to determine long-term financial viability and to provide meaningful comparisons of financial results across industries. Some commenters point to the railroad's ability to pay dividends and to repurchase stock as evidence that railroads have excessive earnings, but such uses of funds are appropriately pervasive throughout the economy. Investors look to firm to provide both short and long-term returns for the investor's commitment of capital. In the short run, investors often want to see a portion of cash flows immediately returned to them as dividends or reflected in improved prices created by current share repurchases. In the long run, investors also expect sufficient funds to be reinvested in the firm to keep the firm competitively modern and to expand its capacity commensurate with market growth. Such reinvested capital eventually improves earnings and thus improves share prices to give the investor a long-term return. As I note in my testimony, the exact chosen mix of these three uses of funds, dividends, repurchases and capital spending, at any point in time for any firm, depends on the economic and financial situation of each firm and of the national macro economy. But despite the Board's appropriate use of an ROI standard, its current approach to evaluating railroad ROI produces misleading results. The Board's calculated results are in my opinion systematically overstated to the use of depreciated original cost to asset values and the treatment of deferred taxes. Economists and investors both know that the rate of return should be calculated using the replacement cost of assets. Investors evaluate investment opportunities based on the current cost and market value of assets rather than the original decades-old cost of assets.

The Board's treatment of deferred taxes is also not consistent with the manner in which investors consider deferred taxes when they evaluate investment opportunities. Investors in other industries expect to earn a return on deferred taxes. So deferred taxes are left in the asset base when measuring return on investment, such as in the Bloomberg calculations I shared with you. The Board, on the other hand, excludes deferred taxes from the railroad's investment base and thereby overstates the potential attractiveness of railroad industry's investments relative to other industries.

The final point I would like to make today is that railroad revenue adequacy should be evaluated over the full service life of assets. The economic value of an investment needs to be determined over an appropriate life, such as its service life. By examining investment, excuse me, by doing so the returns can be calculated across a full and relevant range of economic, financial and competitive conditions. Use of the shorter snapshot time frame to assess performance can and probably will result in an incomplete and unreliable assessment with no guarantee that, as they say in the financial press, past performance are indicative of future performance.

As I explained in my written testimony in this proceeding, railroad assets have exceptionally long lives. According to the statistics published by the Bureau of Economics of the U.S. Department of Commerce, rail equipment service lives are twenty-eight years, and railroad structure lives range from thirty-eight to fifty=four. To determine whether returns are sufficient to replenish rail assets the STB would need to take account of the long lives of these rail assets. This morning the shippers alleged, contrary to all facts, that four years is a reasonable business cycle. I stifled laughing. Since 1959 we have seven recessions of various degree. So we got fifty-six years and seven recessions. I would call that eight. All right? And, in fact, some of those were minor recessions. If you look from when the economy got the full employment in 1969 at four percent, the next time we got to four percent was 1999, thirty years. There are wide varieties in business cycles, and picking just one with an average of eight years will give you a somewhat arbitrary representation for an industry whose service lives are so long.

In conclusion, I would emphasize that the available evidence indicates the railroads are not earning excessive returns, and should not be punished for improved financial performance by restrictive regulation that inhibits them from behaving the way other firms reasonably do in competitive markets. Thank you very much.

MR. KALT: Thank you very much, and thank you for allowing me to speak to you today. My name is Joe Kalt and I'm the Ford Foundation Professor Emeritus of International Political Economy at the John F. Kennedy School of Government at Harvard University. Throughout my career the economics and regulation of the railroad industry have been key issues addressed in my work. And at the risk of sounding a bit like a pedantic professor, which I am, I'd like to begin with some discussion of some of the basic economic principles at work here.

In particular this proceeding raises the broad issue of whether the Board will continue to embrace economically-sound methods of rate regulation. The starting point for addressing that question is the core principle that the public interest is best served by rate regulation that seeks to replicate competitive market prices. Competitive markets compel sellers of goods and services to produce what they offer consumers at the lowest possible cost. Competitive markets also propel sellers of goods and services to figure out what the consuming public wants and needs, inducing sellers to tailor their goods, their services and their pricing appropriately. Competitive markets operate by price and profit signaling, showing consumers low prices where supplies are more abundant and higher prices where cost makes supply more difficult to provide. At the same time competitive markets show sellers opportunities for higher profits through expansion where strong demand is tending to hold prices above costs, and to discourage supply where the opposite occurs.

Based on these most basic of economic principles, rate regulation which serves the overall public's interest in a healthy and efficient economy only imposes rate caps where competition is absent and where regulation can be more effective in pushing prices to the levels they would have if competition were present. The centrality of competitive market prices to the public's interest in a healthy and national economy is not some mere ideological predilection. It is undergirded by decades of Nobel prize-winning economic research. In fact, the competitive pricing standard is behind the revolution in economic regulation that has taken place in the U.S. and in most of the rest of the world over the last several decades. Old style public utility or earnings-based regulation that is franchise monopolies with their rates or prices regulated to produce revenues just adequate to cover their accounting book asset values plus a cost of capital. That old style of regulation has reluctantly been abandoned because it distorted market forces and ultimately harmed the consuming public.

In fact, the Staggers Act is a premier example of the successes of regulation, which employs the standard of letting markets determine rates when competition is present, and seeking to reproduce competitive pricing through regulation only when it is demonstrated that market dominance is present and being abused. Various shipper proposals in this proceeding would have the Board impose rate caps of some form based on a carrier's overall level of revenues or earnings. These proposals are not founded on the principle that regulation should separate with equal competitive prices. Indeed these proposals are not even founded on economically coherent principles of revenue adequacy.

I say this for several reasons. As Dr. Brinner has just discussed, the economic evidence does not support assertions that carriers are or soon will be revenue adequate. Such assertions are based on improper and economically flawed measurement of the concept of revenue adequacy. Proper measure of revenue adequacy would be based upon the answer to the question of what overall revenues are contestable, that is a competitive market would provide to want a written system, a system-wide stand-alone railroad. That is a system-wide SAR seeking to provide a same service, perhaps more efficiently, as the incumbent. As Dr. Brinner noted, this basic economic principle is contradicted by attempts to measure and assert revenue adequacy based on comparisons of carrier's market cost of capital to their rates of return calculated on the basis of depreciated book values of often long ago invested capital. We often illustrate the flaw and its much abused historic book value approach with the case I discuss in my verified statement. Consider the case of an older, fully depreciated apartment building. Based on historic book value, a fully depreciated apartment building will be calculated to be earning an infinite rate of return even if it can and does charge no more than competitive market rents for its units. If that apartment building's rental rates were capped based on revenue adequacy defined by historic depreciative book value, our depreciated apartment building would have grossly excess revenues and would have its rental rates driven towards zero. We would then expect the quality and eventually the very existence of that capacity to deteriorate. Such regulation would be economic nonsense. The public interest demands that the apartment building be able to charge the rental rates determined in the competitive unregulated marketplace. Holding prices below competitive levels ignores the fact that the owners of the capital, whether it be railroads or an apartment building have to themselves compete in capital market for the capital they need. Tying their hands with below competitive prices ties their hands in competing for capital. Initially, of course, in my hypothetical here, customers love it. That is, the renters in the apartment building love having rents depressed below competitive levels. But the example that I'm giving is not just the teaching device of this pedantic professor. It is, in fact, the disastrous lesson behind every inner city in the United States where the argument has prevailed that those landlords are rich enough, they have enough money, we can depress their rental rates below competitive levels. Applied to railroads, the principle of competitive pricing and healthy and dynamic industry means basing revenue adequacy on the revenues of a contestable market, would generate to cover the replacement costs of an efficient system-wide czar. It is telling in this proceeding that no responsible party is telling you that replacement cost is not the economically correct measure. Rather, you're being told that it's too hard to calculate and implement. But engaging in economic nonsense because doing what is correct is too hard is the foundation for unsound policy in which parties from any side, carriers, shippers have the ability to manipulate policies that are untethered from sound economic principles. An economic coherent concept of revenue adequacy recognizes that in a dynamic and ever changing economic environment, the revenues of a contestable competitive market would yield to an efficient stand-alone railroad, would represent a minimum target of policy. As. Dr. Brinner has stressed, sometimes professor, the competitive market standard does not preclude as shipper commenters in this proceeding universally assume, a competitive market standard does not preclude a railroad's realizing earnings greater than its cost of capital even over an extended period. When they provide superior service, responsiveness, innovation and/or skill anticipating shifts in market dynamics, shifts in customers' demands, competitive markets can readily earn and sustain revenues in excess of their cost of capital. You've seen Dr. Brinner's data. Under such circumstances earnings in excess of the cost of capital will be associated with expansions of capital and the services the public demands. This is a good thing. It represents the market using its profit signals to channel services and investment toward where consumers are signaling they want more service. What we should worry about is not earnings in excess of the cost of capital that arise because a carrier is meeting consumers' demands and expanding services to consumers. Instead what we should worry about is earnings in excess of the cost of capital that arise because a company has market power and is forcing prices higher by artificially withholding supplies from the marketplace and thereby driving prices and earnings above the competitive levels. The latter does not describe the railroad sector. Far from withholding investment and supply under the Staggers Act the Class I railroads have been second to no other industry in investing and expanding service to consumers. Over the last decade, investment as a share of revenue by Class I railroads has been three times or more than most any other industry in the U.S. economy. In addition in echoing this the professional research literature consistently concludes that the economic evidence does not support assertions to the effect that the improvements in carriers' financial health over the last decade whether to the point of relative adequacy or not, the research does not say that these improvements in financial health have been the result of abuses of market power, which have gone uncurbed by the Board's rate regulation authority. Indeed, for the reasons I have stated a finding of revenue supra-adequacy, earnings in excess of the cost of capital as it is currently interpreted would not tell us that any of our railroads rates were above competitive levels. Whether nor not market power abuse is present can only be determined by factual inquiry and if the conditions pertinent to the specific traffic in specific markets. The

Board's policies have consistently recognized this. There is no economically meaningful metric that would enable a quick wholesale identification of traffic that is subject to abuses of market power. For example, there is no basis precluding that just because particular traffic has rates which yield revenue cost ratios in excess of 180 or some trigger value of R-SAM or any other test metric just because that metric has exceeded cannot tell us whether such traffic is actually captive and being victimized by some railroads' exercises of market power. In short, I find that the shipper proposals to implement revenue adequate constraints are unsound. Proposals to regulate rates based on a carrier's overall level of revenues would untether rate making from the Board's longstanding policy of employing rate maximums only where they are needed because abuses of market dominance are preventing prices from being kept at the levels the competitive markets would otherwise set. A cornerstone of the Board's SAC test approach to rate making has been the recognition that by invoking the standard of contestable markets it prevents distorted cross subsidies. Attempting to regulate individual rail rates based on system-wide revenues as opposed to competent analysis of individual markets competitiveness, and testing rates relative to a competitive standard as provided by the SAC test would certainly create undesirable cross subsidies. Proposals for example to rebate punitively excess revenues to purportedly captive traffic would inevitably leave competitive traffic subsidizing regulated traffic. Similarly, limits on differential pricing triggered by punitive findings of revenue adequacy as opposed to being triggered by violation of a competitive price standard such limits on differential pricing would be expected to leave traffic on lower cost high density lines subsidizing traffic on higher cost low density lines. Differential pricing on the basis of other than the kind of Ramsey pricing that contestable markets would generate inevitably falls back on non-economic assertions of fairness and this inevitable devolves into expensive litigatory and political contests among interested parties. Suggestions that rate capping based on some application of system-wide revenue adequacy would hold down regulatory costs are unfounded and unproven. Perhaps even more importantly untethering rate regulation from coherent economic principles would emaciate the standards that can otherwise be employed to reign in the demagogues and to cut off the extremities of purely self-interested argument. Specific shipper proposals to freeze rates or to impose rate caps on punitively revenue adequate carriers are not consistent with competitive market standards. One way or another such proposals would entail the imposition of price controls on part or all of the carriers' traffic, competitive or captive. As such, they inevitably interfere with the critical role of prices in signaling rational behavior by sellers and buyers. The track record of price controls from the regimes of price controls tried by President Nixon to the dilapidated rent controlled apartments in many inner cities is quite clear from mountains of economic research. Where price controls hold prices below the levels the contestable competitive markets would generate the outcome is inevitably one of discouraged investment, artificially encouraged demand and ultimately shortages of quality and quantity. As one Nobel Prize winning economist put it, "We economists don't know much, I don't like him saying that, we economists don't know much but we do know how to create a shortage. If you want to create a shortage of tomatoes, for example, just pass a law that retailers can't sell tomatoes for more than two cents per pound. Instantly you'll have a tomato shortage." The railroad industry is no way immune from these economics. In fact, the industry is inherently susceptible to what has been called regulation of a sitting duck. Because of its extremely long life capital the industry is a sitting duck for policies in which myopically self-interested parties gradually eat away at the system with destructive policies whose disastrous consequences do not show up for years or decades. In fact, this pretty much describes what happened to the railroad industry in the pre-Staggers era. Railroads were first encouraged to invest and build. By the early twentieth century they were the envy of the world. But once the investments were in place we began a long process of eating away at the installed capital until the system, the sitting duck, was effectively killed. We left it to later shippers and later policy makers to deal with the consequences. Let me conclude by saying that none of this is to say that the Board should not be vigilant in regulating where exercised market power are demonstrated. Quite the contrary, the fundamental principle of replicating competitive prices demands such vigilance. At the same time moving away from the Board's longstanding principles of using regulation to set railroad rates where abuses of market power prevent prices from being set at levels competition would otherwise dictate. Moving away from that standard would be directly contrary to the public's interest in a healthy national economy. Doing so would also threaten the gains that have been made under the Board's implementation of the Staggers Act. The ongoing expansion that the nation's economy demands of the rail sector would be directly threatened by prices which distort shippers' choices over quality and modes of transportation and which distort carriers' investment decisions. Rate regulation, misguided or by mis-measured and misapplied criteria of revenue adequacy employed to impose price controls could only exacerbate the challenge of generating the capacity needed to avoid shortages. We could pretend that the industry's long life capital will last forever and that we already have enough to meet the growing demands of the nation's economy, but the rail industry has to compete in the capital market for investors' dollars. Employing some notion of revenue adequacy to limit rates below competitive levels because railroads purportedly already make enough money could only tie their hands in the competition in the capital market. The Board's SAC test already provides an objective standard for assessing whether rates for specific rail traffic which are found to be subject to market dominance are consistent with the competitive market standard. An objective measure is necessary to control demagoguery and outright stupidity and to avoid arbitrary and economically unsound regulation. The challenge that remains is to work directly on improving the Board's procedures for implementing its SAC test and the associated standard of competitive market pricing. My experience that the Federal Energy Regulatory Commission with the use, for example of technical working groups, i.e. not lawyer working groups, all due respect suggests that there are, in fact, viable processes that minimize disputes and could aid in the approach to such challenges as coming up with, in fact, workable and implementable systems of a competitive market pricing standard but calls for jettisoning such standards and the other elements of the Board's competitive market pricing standard are a diversion from this task and threaten the public interest. Thank you.

MR. SIPE: Thank you, Joe. Let me finish our panel's presentation by addressing the questions the Board identified in its notice of this hearing. You've heard our other witnesses already address some aspects of the specific questions posed by the Board, but I want to address each question sequentially so that AAR's position is clear on the record. First, you asked the parties to address the proper timeframe for evaluating revenue adequacy. I would distinguish here between evaluating and regulating because as you've probably gleaned, we don't think it's appropriate for the Board to be regulating rates based on a finding of revenue adequacy over any time period. As for evaluating, Dr. Brinner has demonstrated that railroads have very long lived assets. These asset lives considerably exceed the length of a business cycle however you might measure it. It would, therefore, be more appropriate to evaluate railroad financial performance with reference to average railroad asset lives than business cycles. As AAR pointed out in its written comments, the railroads' electric utility customers have taken that very position before their own regulators. Second, you asked whether the Board should consider requiring a revenue adequate railroad whose increased rate has been challenged to justify the increase on a complaining captive shipper and I believe, Chairman Elliott, your question about burden of proof under the Administrative Procedure Act may have some relevance to that question and let me just state so the record is clear that we believe that the proposal Mr. Dowd was setting out this morning would be inconsistent with APA requirements by shifting one critical element of the proof of unreasonableness from the railroad to the shipper. Professor Kalt has explained imposing what could amount to a rate freeze on market dominant traffic by requiring revenue adequate railroads to justify rate increases on such traffic would be unsound policy from an economic perspective nor could such a requirement be reconciled with not just the APA but with ICTA. That statute does not permit the Board to assume a rate is unreasonable just because a railroad is market dominant nor does the statute permit the Board to conclude that an individual rate is unreasonable simply because a railroad's system-wide earnings exceed the cost of capital. A nexus between a particular rate and a railroad's earnings in excess of the revenue adequate level cannot be assumed. This is especially the case since the substantial majority of railroad revenues are attributable to unregulated traffic and that proposition has already been the subject of some observations by Commissioner Miller and some back and forth as to what the actual percentage of unregulated traffic is vis-à-vis regulated traffic. All of us agree, whatever the precise number is, all of us agree that the substantial majority of rail traffic is unregulated not within the Board's purview and the notion that we somehow could be having system-wide earnings determining the outcome of individual rail rates presents, to use another word that has come up a couple of times this morning, a disconnect. Third, you asked whether a revenue adequate railroad's ability to differentially price should be limited for all captive shippers or for a subset of captive shippers that are most likely to be subject to the railroad's market power and I should insert a caveat here that my use of the term captive shippers violates a commandment I've received from one of my co-counsel, but I do so because the Board used the term. I don't want to be hoisted on that petard. In any event, the answer to that question is emphatically no. Limits on differential pricing should be based on whether a rate is reasonable, not on whether a railroad earns revenues that exceed the cost of capital. The statutory prerequisite to a rate reasonableness inquiry is a finding of market dominance. There is no shortcut to determining whether a rate is reasonable via some presumption regarding the extent to which a shipper is subject to market power. Fourth, you asked what competitive access remedies would be appropriate and consistent with the Board's governing statute when a railroad is revenue adequate. Our position is that there is no logical connection between access remedies and revenue adequacy and no basis for a connection in the statute and as the case law makes clear, the Board is not empowered to regulate rates through access remedies. That's the Mid-Tech case both before the ICC and the D.C. Circuit. Access remedies were intended by Congress to address market power abuses that were not related to the level of the rate charged. AAR and its member railroads also presented overwhelming evidence in the Ex Parte 711 proceeding about the service problems that would arise under a forced access regime such as the switching proposal presented by NIT League. Those problems would exist whether or not a railroad is revenue adequate. Fifth, and a question apparently addressed to shipper interests, you asked about the impact of revenue adequacy proposals on railroads' ability to invest in their networks taking into account the service issues that arose last year and Mr. Hamberger has already spoken to that. You heard from him about the importance of and need for additional investment in railroad infrastructure. You've heard from Professor Kalt and Dr. Brinner about the economic principles that govern market driven investment decision. The math is simple. Firms don't make capital investments unless the investments have the potential for earning returns that exceed the cost of capital. That potential is necessary to offset the inevitable shortfalls that occur, for example, when we have a deep recession as we did within the past ten years. Regulation that prevents railroads from consistently earning at least their cost of capital will result in less railroad investment than the market calls for. Lower investment levels have obvious implications for the quality of service that railroads are able to offer and the amount of capacity they are able to provide. Finally, I would like to address the question you raised regarding the Board's methodology for determining revenue adequacy that appears to straddle the line between Ex Parte 722 and Ex Parte 664 sub 2. As you've heard from Professor Kalt and Dr. Brinner, accounting rates of return based on a historic book value do not give an accurate picture of the economic returns being earned by a company. Economic rate returns can only be determined using the replacement cost of assets. In conclusion, let me reiterate the three main points AAR would like you to take away from our panel's presentation. Mr. Hamberger explained why the Board's implementation of a revenue adequacy constraint would pose a serious risk to several vital national policy goals including preeminently the need to continue to invest in an expanding rail network that is a vital engine of American economic growth. Dr. Brinner demonstrated that far from being excessive, rail returns have been below the norm for the past decade and that railroads need to have the incentive and opportunity to earn substantially more than their cost of capital as most firms in competitive markets regularly do. And Professor Kalt explained why shipper proposals to regulate rates based on a carrier's overall level of revenues through various forms of price controls are inconsistent with competitive market principles and would lead to misallocation of resources, underinvestment and gradual deterioration of the rail network, albeit very slow deterioration perhaps. None of us might be around but that doesn't mean that we shouldn't be worried about saddling future generations of transportation users with a system that is not going to make it in the long run. The Board has the opportunity in this proceeding to promote the broad public interest by endorsing the continued growth of a rail industry that is able to replenish its assets and expand to meet market demand through private capital investment. The Board should seize this affirmative opportunity. It shouldn't penalize railroads for having made progress toward sustainable financial health. Thank you very much for your attention and our panel will be happy to try to answer any questions you may have.

MS. BEGEMAN: Thank you all for your testimony. I hope that my questions aren't interpreted that I wasn't listening, but I have a couple of questions I'd like to ask because you were fairly clear on your testimony and, Mr. Sipe, you really did consolidate the main points for us, so thank you, as far as what you wanted to convey. I would like to know what the industry's perspective is as far as what you believe the purpose is behind the Board's annual determination of revenue adequacy, which we do according to the statute?

MR. SIPE: The purpose is to get some sense of rail financial performance whether that financial performance is on the uptick, whether railroads are making progress in terms of becoming financially healthy, whether there is a reasonable prospect that they're going to achieve the congressional goal of being able to recover their full costs and invest in replacing and expanding their assets. It's like a yardstick or a measurement. How are we doing year to year? In fact, I think the very fact that the statute calls for a yearly determination indicates that they weren't thinking of some, you know, long-term assessment of should there be a category for determining how we regulate rates that is based on financial health because everybody agrees that can't be limited to a one year view but if you take a trend line of snapshots, and that's what we've done since Staggers, the message is very clear to everybody, that the railroads have been getting financially healthier, and that's a good thing.

MS. BEGEMAN: You mentioned the other proceedings somewhat tied with this, such as the Board's methodology for determining the cost of capital, which, of course goes into revenue adequacy, et cetera. I think your message was that replacement costs are something that the Board should consider, or the combination of your messages was that just because it's hard doesn't mean that it's not accurate. Could you comment? Before my time on the Board I know that AAR had petitioned this agency to do a proceeding and to look at replacement costs and ultimately I think it was rejected somewhat for being too hard. I don't want to misrepresent that, since I was not here at the time, but please comment, how could it even be accomplished reasonably?

MR. SIPE: Well, let me take an initial crack at that and then maybe Professor Kalt would like to speak to it. I was counsel to AAR in that ill-fated petition. You've silenced me, Mr. Hamberger. So and I think your characterization of why the Board rejected our replacement cost approaches is accurate. It's probably fair to say there were some holes in our proposal but I don't think it was Swiss cheese. It wasn't riddled with holes to the extent that it's irreparable. I think that if we had a serious proceeding designed to come up with a methodology for determining what, in effect, would be something like a system-wide SAC for the railroads that we could get there and if you have any inkling that you might want to regulate rates based on revenue adequacy and that you could lawfully do so which we disagree with those propositions but if you have any inkling that you might do that, then you better get the measure of revenue adequacy right and use the right asset base so you're not imposing remedies on carriers that are not, in fact, revenue adequate.

MR. BRINNER: Well, I'm newer to this than many of my colleagues and when they asked me to help understand rates of return and so forth compared to other industries I didn't know it was difficult to do replacement cost accounting, so I turned to my familiar turf, the Department of Commerce Data. They regularly report for every industry what the historic cost and the replacement cost of the assets are. As a macro economist, I understand how they do that. They simply look at the investment in a given year, multiply that by the change of the Bureau of Labor Statistics measure of prices for specific assets of that type and inflate it and they subtract the part of it that's been depreciated and they move forward to the next year and they do the same. So that's what my team in less than two weeks to look at rail total replacement costs versus historic costs so I wouldn't find it to be an impossible task. I would fear Professor Kalt's notion that if you have a technical working group that could explain procedures such as I used, such as the Bureau of Labor Statistics and the Department of Commerce used you could find a way to get a very good representation of replacement costs.

MR. KALT: I would just add to that

from my experience, I'm actually personally involved right at the moment in a proceeding at the FIRC in which generically I can't talk about the competition, I'll hit parts of it, but generically the same issue is being faced. Historic book accounting showing the pipeline earning more than adequate revenues and yet the market demanding extensions of capacity and recognition that some parties want it to be hard to give the regulator a reason to reject the use of replacement costs because no one recognizes here that it would change the nature of these revenue adequacy calculations and the direction of Dr. Brinner's data show, but through staff to staff discussions again not to criticize my colleagues that I work a lot with but, you know, not disputatious lawyer to lawyer or expert witness to expert witness kind of discussion, but the FIRC has made very good use of technical working groups, staff to staff kind of conversations between these interested parties and I can't go into the details but the finding of mechanisms using data of the type that Dr. Brinner has just mentioned are available, and but I actually think that the challenge is one of finding a process that allows one to have a non-disputatious process to actually work on the problem rather than a litigatory process that makes it so much harder.

MR. HAMBERGER: I would just observe that what made it particularly meddlesome was it was like a summary judgment. We filed the petition to open up a proceeding and rather than have a hearing, rather than open up a proceeding, allow some of the difficulties to be aired and perhaps worked out, the Board, and none of you was there at the time, the Board just basically said no, we're not even going to attempt to try to work our way through the challenges and that was I think the most disappointing part of the decision.

MS. MILLER: I want to ask a follow-up question because this replacement cost issue has been on my mind since I've been at the Board and perhaps I would have flunked both of your economics courses because Dr. Kalt, you said that no one questions the philosophy or the efficacy or the benefit of using replacement costs. It's just that it's too hard, but since I've been here and thought about it I strongly question the logic of replacement costs when you're talking about something like a railroad as I would if you were talking about a highway system. It's something that's been built over 200 years ago, I mean I would question could you even build it today and if you built it today how could you possibly charge a rate to the users of that system that would keep you internationally competitive? It would be absolutely impossible to do so so if you start looking at the replacement costs you've so driven up the total cost that you've just put it completely out of reason and I'm struggling to see how that's a rational approach at all for the system that we're looking at. It might make a lot of sense in other businesses and I can see that it makes sense in other businesses but I don't see it in long lived infrastructure that's been built literally over hundreds of years and the only reason its affordable today is because it's been built over hundreds of years.

MR. BRINNER: Well, the service lives that are referred to for the Bureau of Economic Analysis aren't infinite and they do say the service life extends to 54 years for the maximum so we wouldn't be looking back ---

MS. MILLER: Well, what's that based on? A bridge is probably 100 years. The right of way is forever or the rail is a different life.

MR. BRINNER: They have different service lives for different aspects but in my testimony I showed that there are countervailing effects. You were just referring to the fact that you would expand the denominator tremendously by looking at replacement costs and I noted that you'd also expand the return, the numerator of a return on capital because at the same time that you're making the base bigger by looking at the replacement cost you're also counting as a return in the numerator the appreciation of the assets that remain because prices went up and the difference as I cite on page 15 of my testimony is not huge like I think you feared but it's 2-1/2 to 3 percentage points.

MS. MILLER: So you're saying that in the approach you would take you would also take existing assets that may have been built seventy-five years ago and you would appreciate them up to today's market value, is that what you're saying?

MR. BRINNER: Well, let's take a locomotive. What's the typical service life for a locomotive?

MR. HAMBERGER: Twenty-five years.

MR. BRINNER: Twenty-five years. So let's say that you've got a locomotive that's 12-1/2 years old. I would say when you bought it, it cost one million dollars. Today's value of a full locomotive, you know, if the inflation has doubled, right, it's doubled, but you've only got half of that locomotive because you've depreciated it, but you would include in your income that appreciation of the remaining half of the locomotive that still has a service life and that works to avoid what I think you feared that you're expanding the denominator so much that it'll give you a trivial rate return. I cited that the STB average of 7 Class I railroads is 9.6 percent '04 to '13 and if you do the full adjustments you get, I'm sorry, looking at the wrong exhibit, you get the Bloomberg number is 7.2, so Bloomberg at least is historic if you use the replacement cost you can get to a different number so it's not, the differences aren't huge. There's a direction of the bias that says you're suppressing the return but the difference isn't huge because of the compensating adjustments you make.

MR. SIPE: Commissioner Miller, if I may and I realize this may sound a little confrontational, but I'm actually kind of astonished by your observation because if you believe that railroads can't charge prices that would allow them to sustain, replenish and expand their networks, that's tantamount to saying they shouldn't be in this business.

MS. MILLER: Sustaining and replenishing is quite different from replacing.

MR. SIPE: Excuse me.

MS. MILLER: Sustaining and replenishing is different from replacing and I would absolutely agree you have to be able to charge a rate of return so that you can fully maintain and sustain your network but that's different than saying you're going to charge a rate of return that is big enough that you could fully replace your network. That's the question that I'm raising.

MR. SIPE: Sustaining means replacing over time and if you look, I don't want to get too deep into economic modeling, but if you look at the assumptions that go into the Board's discounted cash flow model that is used in SAC cases, which by the way one of the successes of the SAC process, we all know it's been very difficult, it has lots of challenges. Many of the problems with SAC have been overcome including the universal agreement now on a workable DCF model. If you look at the logic of that model you'll see that it contemplates, it uses replacement costs and it contemplates replacing them over time and sustainability entails replacement over a long timeframe.

MS. BEGEMAN: Can I go back to ---

MS. MILLER: Sure.

MS. BEGEMAN: -- asking some questions? Mr. Sipe, there are two things actually I wanted you to comment on. One, and probably with the next panel whose going to be appearing, I think they'll be talking a lot about the competitive access feature of what the Board had asked in the hearing announcement.

MR. SIPE: I bet you're right.

MS. BEGEMAN: One of the things that you mentioned just briefly was your view of what the Board's authority is and you commented on Midtec and the circuit court ruling. Could you just elaborate a bit on that? You know we had our hearing a year and a half ago, but just if you could comment on some of that.

MR. SIPE: Well the specific point I was making that involved the reference to Mid Tech is that back in Mid Tech, the complaining shipper party was making an argument that competitive access was in effect another way of getting at a reasonable rate and the ICC and the court both held that access remedies are not a substitute for rate regulation. Access remedies as approved by the ICC in the mid-1980s were designed to address different kinds of competitive abuse from abusive market power and pricing so the notion underlying the access remedies that were adopted had to do with conduct type competitive abuses rather than pricing and that's what I was alluding to. Midtec I think bought into that distinction.

MS. BEGEMAN: Thank you, and then just

one last question. At least I'll try to make it my last. Could you comment on -- I may butcher this a little bit -- but Mr. Hennigan, on the previous panel, had mentioned the expectation of what revenue adequacy meant and that when it was achieved what it would mean. Again, I don't want to say this inaccurately, but something to the extent of differential pricing would no longer continue or it would be limited or reduced. I think his view is that that's reality, that's exactly what it meant. Could you comment on what you believe the statute provides and the history provides from what the ICC said in coal rate guidelines?

MR. SIPE: Well that's a complicated question and I don't want to go on and on. I probably could but I don't think that would be wise of me. But let me just say I don't start with the statute. I don't think there's anything in the stature you could find that amounts to an expectation that when railroads achieved revenue adequacy differential pricing would somehow abate or become less differential if you will. I just don't see anything in the statute. Now obviously we have coal rate guidelines and we have that constraint in coal rate guidelines which is obviously the major reason we're here and we don't seem to know for sure what it means. The shippers take it as a given that it means when you become revenue adequate the regulatory regime changes and we say I don't know how you get that. I mean there is an inchoate revenue adequacy constraint but it's not flushed out and nobody has come up with a meaningful explanation of how that could be implemented consistent with the sound economics that have governed the Board's rate regulation through SAC up to this point and let me make another point about coal rate guidelines. You said two things this morning I think, Vice Chairman Begeman, that were connected and your point of departure was replacement costs and you talked about the inconsistency of using replacement costs in SAC but depreciated book values for revenue adequacy and then you talked about the disconnect between I believe the revenue adequacy notion and inability to use replacement costs. I think it's fair to say that coal rate guidelines builds in a kind of disconnect but not literally. The disconnect is built in because we use replacement costs in SAC, we use, the Board uses depreciated original cost in revenue adequacy and if you're trying to get at the same thing, i.e. a reasonable rate from two different perspectives, top down bottom up but you use two different standards for valuing assets, you're not going to get the same answer and that doesn't make any sense to me. So I think there is kind of a historical anomaly in what guideline says about revenue adequacy and if you go back and read the decision you don't find a lot of discussion about that disconnect between two different measures of cost. I don't think you find any discussion. So it hasn't been reconciled anywhere. We raised it in the Koch case. That's another one I lost and my only solace is the guy who argued the case to the D.C.

Circuit because the client was so tired of me was a fellow named John Roberts and we lost there, too, but the Board carefully avoided engaging on the disconnect in the Koch case and there were reasons why it could come out the way it did in that case which I think is very instructive in terms of what we have in the rail sector. That was a pipeline case where the pipeline had set a system-wide rate increase across the board for all of its shippers, so a top down approach fit because we're talking about everybody and we're talking about a one rate increase to the entire pipeline rate structure. In the railroads it's completely different. It is from the bottom up in the railroads. The rate structure consists of thousands of individual rates, many of them negotiated and inserted into contracts, all sorts of different rates on different traffic. There's no one size fits all in terms of rate regulation and so the reliance on the Koch case as a precedent for rail rate regulation based on revenue adequacy is simply unfounded.

MS. BEGEMAN: Thank you.

MR. SIPE: That was a long answer.

MS. BEGEMAN: Thank you.

MR. ELLIOTT: Just to follow-up on that, I'm hearing clearly that the revenue adequacy constraint is number one we don't have to do it. There's nothing in the statute that says we have to, and number two, I'm hearing from the economist and you that it doesn't make sense, it doesn't work, it makes no economic sense. So the third question is, this is a legal question more than an economic question, but can we do it legally? Is there a way legally that we can do it because we have this language in Coal Rate Guidelines. Third Circuit was okay with it so I'm just wondering what the railroad position is as far as can we do it?

MR. SIPE: I'll answer that two ways.

MR. ELLIOTT: Sure.

MR. SIPE: We don't think you have the legal authority to do it but I can understand why someone on the other side might say we have a powerful precedent in guidelines and we have a good precedent in Koch and I've just tried to explain to you why I don't think either of those precedents would hold up. So the second part of my answer is as a tactical matter, you know, might you get by with it if you tried to do it, I would say, you know, there's a chance we would go down with guns blazing, and why would you want to do that if you could find a way to make what everybody agrees, well not everybody, not Professor Faulhaber and a few others, but what most people including most on the shippers side still agree is at least an economically valid framework for rate regulation using the stand alone cost test. If we could find a way to make that easily administrable you absolutely know that would pass muster with the courts because it's already passed muster and it would be economically sound and it wouldn't threaten upending the rail renaissance. Why wouldn't that be the way to go?

MR. HAMBERGER: Maybe this is

tangential to your question, Mr. Chairman, but I would also point to the fact that I believe the S808, should it get enacted, would be the first amendment to the revenue adequacy provision of your statute in 35 years and that the report says that this section emphasizes the clarifying standards of procedures for evaluating revenue adequacy, emphasizes the infrastructure needed in order for rail carriers to be able to meet the present and future demand for rail service so it seems to me that the Senate and presumably the House and the President signs it, the policy is made clear that in taking a look at revenue adequacy you have to take into account the ability to meet the future needs and you were I thought on a very interesting line of questioning with the previous panel about the asymmetric risk that is there when a railroad would be faced with a decision to invest in a project above the cost of capital would not be able to receive the benefit of that risk but should the proponent as the professor here pointed out be a little bit too optimistic and it comes in under the cost of capital the railroad bears that risk but doesn't get the benefit if it exceeds the cost of capital so if you combine all that it seems to me whether or not you have the legal authority and as Sam said we would dispute that. Congress has made it pretty clear where they would like to see you go.

MS. MILLER: So, Mr. Hamberger, can I ask you a question? So is it AAR's position, is this the correct understanding that revenue adequacy under the law doesn't in any way trigger any change in the regulatory framework? There's nothing inherent in the railroad's accomplishment of revenue adequacy that should accomplish or that should trigger a regulatory change?

MR. HAMBERGER: Yes.

MS. MILLER: And then is it also AAR's position that if we calculate revenue adequacy we should do that based on replacement costs?

MR. HAMBERGER: Yes.

MS. MILLER: And why does that matter to use a complicated difficult process to calculate revenue adequacy if in your view revenue adequacy has basically no meaning under the regulatory framework?

MR. SIPE: May I address that at the risk of --

MR. HAMBERGER: Oh, please, go on.

MR. SIPE: -- incurring Mr. Hamberger's displeasure. He rehired me once when I lost.

MS. MILLER: You can go to lunch with me then.

MR. SIPE: I'm picking fights with everybody this morning it seems. It's not my nature. I think that if you were to agree with us that revenue adequacy doesn't trigger a different regulatory regime then frankly we wouldn't care very much about replacement costs because it's like are you measuring it in centimeters or inches, right? It goes back to my response to Vice Chairman Begeman's question what is this annual revenue adequacy inquiry about. It's about measuring. Are they making progress?

You know, what's the slope of the line look like in terms of progress? If you measure progress if you're not going to do anything with that measurement other than to say things are working under our overall regulatory regime the way Congress had hoped that's a pretty good thing, we should be happy about that. If you're going to do that and you're not going to implement rate regulation based on the magnitude of your cost to capital determination, then I don't think we really would need to change to replacement costs. I think we have made the argument in recognition that something could happen down the road this very hearing, so in 2008 we weren't revenue adequate but we said, you know, let's take a shot at replacement costs because the day may come when some subsequent Board says we want to regulate on the basis of revenue adequacy. We ought to put ourselves in a better position if that ever comes to pass. Now the question is on the table and others aligned with me on the railroad side might not give you an identical answer. I'm not purporting to speak for everybody but that's my answer to your question.

MS. MILLER: Because, you know, as you know I've been here for about 15 months, so maybe if I'd been a long-time practitioner, you know, I'd have a different view but, you know, what it seems like based on my understanding of the way the concept and the importance of revenue adequacy had been explained to me as I was coming on to the Board that AAR has changed their position or is much more forcefully advocating a position that revenue adequacy doesn't basically have meaning and maybe that's, I mean honestly, maybe that's always been your position. Maybe that's been clearly and publicly stated but up until the Staggers hearing before the T&I sub-committee, it's the first time I heard anyone say revenue, you know, it doesn't matter if they're revenue adequate. That just shouldn't have an impact and so I'm curious if this is, in fact, a change in position as the railroads have gotten closer to what some might consider revenue adequacy or am I just misunderstanding and that's always been the viewpoint?

MR. SIPE: I don't think it's a change in position. I think what you've seen and heard is that the issue has come into focus in a pretty concrete way via this proceeding and in the past we speculated, you know, could something happen in the future but there was never to use a legal term, the issue wasn't right except in the Koch case, which AAR was not a party to that. Those were private parties. The issue was somewhat teed up there but other than that the issue has never been teed up. I mean when you introduced this proceeding, when Chairman Elliott started this proceeding it focused our attention, you know, very acutely on the issue.

MR. HAMBERGER: I think that's right. I think if there are some colleagues who were around when the guideline case came down I think there was probably some theoretical consternation at the time, but it was theoretical and I think it has become ripe as the industry is finally beginning to achieve some good sustained financial health so I wouldn't characterize it as a change in policy but perhaps more a change in having to address it partially because of this proceeding.

MS. MILLER: So in your testimony today really, and in many ways all four of you have used pretty strong rhetoric, price caps, unable to accomplish the national goals for transportation, those kind of things as the WCTL laid out their proposal they used language like, you know, a narrow scope to this remedy, an approach that really applies to a small sliver of the railroad traffic and I'm wondering if you could talk a bit about why you look at a proposal like that but think that it could have system-wide implications for the ability of the railroads to continue to operate?

MR. SIPE: I think Joe Kalt should speak to that under the rubric of the duck.

MR. KALT: I will say your question, before you asked if I was thinking the same thing. I realize there is a difference in tone. I think it's because, you know, in the less strongly worded part of what I had to say you heard me talk about so called old style public utility regulation or earnings based regulation and I think that independent of whether this is right for the AAR or not, when I talk to other transportation, other regulatory economists it is kind of striking that the Board is considering or is being, you know, there are serious proposals being made, to undertake some form of return to earnings based regulation. One way or another looking at aggregate company-wide revenues relative to some major cost of capital, what's the major cost of capital, and as I said in what I said here and I think I said in my written statement as well, all of the world policy makers, left, right, conservative, liberal, free marketeers, people in still non-capitalist countries have been abandoning earnings based regulation because of three things I think. I'm going to summarize a lot of, you know, research and everything from electric power to railroads to pipelines to telephones and everything else. What's really behind it? Number one is that, and Dr. Brinner touched on it, you introduce severe distortions. It's not just like oh, they're little minor things. When you engage in earnings based regulation if there's an opportunity to engage in padding of your costs, there's actually a word in famous research known as the Average Johnson Effect, if you've got an opportunity to pad your costs because if you don't pad your costs you're going to be found to be revenue super adequate and something's going to get rolled back somewhere someway rate or revenue is going to get rolled back, then we found throughout United States and elsewhere people padded their costs, not because they were evil or anything else, but because they were being rational and responding to the capital markets or, as Dr. Brinner suggests, you're less diligent in taking care of costs and so you end up with famous cases that were used in the electric sector, for example, San Onofre Nuclear Power Plant, they just forgot to read the architectural plans and installed the retaining walls backwards to the tune of a $5 billion error. Why? Because the pressure to hold your costs down gets reduced. There's a sense in these proceedings that oh, if we went to something different it'd be easier. What it does, and it's the second reason that we got so concerned about this regulation, you end up having to have prudence decisions because they're not going to say they padded their costs. You're going to have a prudence hearing and you'll have different kinds of experts and probably different lawyers in front of you fighting over these things of whether the investments make sense. The revenues commissioners, members of the Board, the revenues are too high because they've been inefficient in building their system. Well, that leads to a whole other kind of layer of regulation. And then lastly, this point I know it's easy for it to sound like waving the Staggers' flag is what we transportation economists sometimes call it in our seminars. This has been a tremendous success, everyone recognizes that. But there is that danger and these analogs I draw to things like long lived rental apartments in New York City or something. They're real because we have gone through cycles of this where a system gets frustrated, entices the capital in. It takes a long time beyond our cycles as industry people, as experts, researchers, as lawyers, you as regulators, the really bad consequences are going to happen after all of us are not here anymore. I've always viewed, this is me talking, I can't speak for the AAR. I've always viewed the revenue adequacy recognition of that as a problem. I was a young economist but still involved to some extent, during the late 1970s we had the big sitting duck problem. We had killed the duck through decades of regulation untethered from sound economic principles of competitive pricing, protecting the customers against pieces of monopoly and so forth and quite reasonably you would have a system that would say to the policymakers, to yourselves, to the regulators, let's not do that again. We'd like you to not adopt policies to force you down that path.

MS. MILLER: Dr. Koch, can I ask you a question, though? I mean I grasp what you're saying and I certainly appreciate the concern of that approach and would understand that generally people are moving away from it and if this was a proposal that said that once railroads were revenue adequate they couldn't raise rates beyond inflation across the board, I think all of those things you've said would end up happening and it would be disastrous. What I'm trying to understand, you know, taking in the totality of your testimony, if we're talking about this thin slice of the pie of railroad traffic which is truly captive and that is subject to STB regulation and if you apply this sort of an approach to it, do you see that having some ripple effect? I mean is there some economic reason to think that that remedy to a very small portion of the traffic could have the kinds of consequential impacts that you're talking about?

MR. HAMBERGER: I guess I would defer to Joe in a second but I'd like to just challenge the basic foundation that it is a very narrow approach. If you add the fourteen percent and the five percent, you've at nineteen percent and that's of car loadings. I think if you take a look at it I'd be willing to bet because of Ramsey pricing and differential pricing and elasticity of demand that that nineteen percent of car loadings might be a little bit higher in terms of revenue, so even if it is, even if you say it's equal, one-fifth of the revenue then would be capped and so I don't consider that to be a narrow approach and that is one proposal. I believe another proposal that has been made is that there would be a rebate to the captive shippers from the excess profits received from the competitive traffic, so that then goes much beyond a narrow approach and so, you know, depending on where all of this comes out we're not talking about just a sliver of traffic or a sliver of revenue so I think that is what is driving our perceived and your, as you perceive it, a major concern.

MR. KALT: And I would just say I think your basic intuition is right. The primary area of distortion would be where you create distorted incentives, let's say twenty percent of car loading, whatever it is, but the other thing we worry about is, duh, this is a network industry and so if you're having distorted decisions being made in this section of track or this form of IT, whatever it might be, you're potentially affecting hence distorting the pricing, the supply availability in other sectors and so you, it's not just allocation of railroad resources but allocation of our freight transportation resources more generally and so you would expect some spill-over effect if you will because it's a network industry and like a really important railroad network industry.

MS. MILLER: And I'm wondering, too,

if either of the economists, if you could address this question: one of the things I've, you know, tried to understand in my own mind is in this industry we talk about, you know, setting market rates and the power of a market set rate, which makes a great deal of sense to me, but when you're looking at captive shippers, truly captive shippers, and there are those out there, in fact, is it possible to set a market rate because there is no market or that's what I would conclude and I always thought that's the basis for the sliver of regulation that continues to exist in this county around railroads because there's a recognition that for some traffic there simply isn't really a market component to allow a rate to be set, but is that a misunderstanding on my part of what it means to set market rates?

MR. KALT: No, I think in some sense you're right, that is, we would say in certain situations there may be no competitive market. There may be true market balance going on. They never like me to say that but that's why you have your proceedings, right? Consequently, what you've done, what the Board has done with the SAC test framework is essentially run a hypothetical. It's running a hypothetical of okay, we don't have a market. There are barriers to entry at certain places. But what if there weren't? How would that operate and I know it seems like just a teaching example but it's actually a lot of research about these kinds of things. Think of my apartment house. If I'm an apartment house owner in Washington, D.C. I've got a fully depreciated building. I'm in a very competitive market. There are thousands of these things around. The market will set my rate, because it's a healthy and growing market, will set my rate sufficient to draw in capital of equivalent quality from new entrants and that's actually what your SAC test framework is doing. It's creating a market. It's a hypothetical construct and many of the difficulties arise because it's hypothetical meaning I know that we should have concerns about how difficult it can be to implement how, how detailed it gets and so forth and is it usefully detailed, but that's what you're doing. You're actually saying what you're saying. There's not a competitive market. We'll create a hypothetical market where entry, you know, it's just basically by the way it's anti-trust economics. You know, it's just anti-trust economics, a market with free entry, no one can exercise market power. Its prices are going to be set by what the entrant is holding them at and so it's just basically, we stressed about the contestable markets but it's basically anti-trust economics.

MR. BRINNER: I think, sorry, in such proceedings you're not devoid of market information. You can refer to what's the market cost of labor to run this railroad. You can refer to what's the market cost of tracks, of locomotives, of all that and then adding on a reasonable return, you can say what is the price and there is no market price that is a competitive market, but what's the price that would have been produced in a competitive market with those market based costs, so you do have a lot of market information. The only competitive market piece you don't have is the price and you use your calculator to come up with that after you feed in everything else.

MS. MILLER: So, I'm sorry, I know this is getting a little bit long, but as we have two economists here, I'm interested in going back to an earlier question that Dan asked and that was about the TRB study. Have either of you seen or heard of the recommendations and what I thought was interesting about the approach they were recommending as an alternative to SAC was that what you would instead do is you would, as I understand it, look where you have competitive rates, create a model that could then forecast what a competitive rate would be even where you don't have them and then use that as a way to compare a rate to say is this an appropriate market rate and I'm wondering what your assessment is of that sort of an approach.

MR. KALT: In some ways essentially what you just asked is very closely related to your prior question about the absence of a competitive market.

MS. MILLER: Right.

MR. KALT: I think as colleagues and I have talked about it, you know, of course it's in theory or as a starting point it's not a crazy thing to think that well, let's go look at the price of tomatoes over there and see what the price of tomatoes ought to be here, but as colleagues and I have talked about are the kind of thing we concern ourselves although it would probably increase the demand for economists pretty considerably rather than those engineering types who do the SAC stuff. It would be more the economists. Here's the thing that we worry about. We tend to have captive customers, problems with market dominance where the classic thing that you always get spit back at you by economists, economy as a scale and scope are such that the market doesn't support multiple railroads for example, and in that situation then what that actually means is oh, some other place where I see some multiple railroads competing well that's actually not comparable to where I need to set the rate now, or I see railroads competing with trucks but that's probably not going to be comparable because if you're competing with trucks you wouldn't be market dominant and so the problem in other words arises because it's not anybody's fault in some sense. The technology of economies of scope and scale mean that those pockets where you're concerned about market dominance aren't going to have ready comparables and some colleagues and I have been talking it would probably default back into well, I know how to create a comparable. Let's think of a free entrant and we're back in a SAC world. In other words, you sort of find yourself going back to I'll have to adjust apparent comparables for the costs of entry where these economies of scale and scope make this situation not comparable to any readily observable actual market.

MS. MILLER: Although I mean in the TRB study it seems like they allowed for that because that's just the way you kind of get in the door and then once in the door both parties have the opportunity to make their arguments either about why the rate's too high and doesn't make sense or why this is an appropriate rate for this particular ---

MR. KALT: Yes, but that's ---

MS. MILLER: -- it seems like it gives you the opportunity to both, you know, create the threshold of who gets looked at but then once looked at you can bring in the qualitative reasons why a rate might need to be higher and why that's justified.

MR. KALT: I think what I'm trying to convey, I guess is the more we've thought about it, I've thought about it, at least some of my colleagues, bringing those other things into the room wouldn't just be qualitative. You'd start to be talking about the economies of scope and scale of this service and you're immediately back into a SAC world. In other words, it would give the argument I'm not comfortable because my costs are so different because I'm in this kind of network rather than the one you have used as your comparables test. So the adjustment for comparability that the TRB talks about I think the logic of our profession leads you very quickly back to worrying about are there kinds of scope and scale particular that are non-comparable in this service compared to whatever might be offered as comparable. So that's the logic of where the living additional arguments end takes you, damn, we're right back into SAC. Pardon my English.

MR. ELLIOTT: One other question regarding replacement costs and this just kind of hit me when we were discussing it. Has the concept of replacement costs in the revenue adequacy area ever been challenged in the courts, versus historical costs? Was the 2008 case taken up? I just don't know or have the revenue adequacy decisions that we put out every year ever been taken up?

MR. SIPE: There certainly has not been a direct court challenge focused on the use or denial of use of replacement costs that I'm aware of. I can't tell you for sure whether any of the ICC's revenue adequacy decisions that were reviewed on appeal may have tangentially raised those issues. We can take a look at that and answer the question, but I don't think there is a rich case law in that vein.

MR. HAMBERGER: We did not challenge the denial.

MR. SIPE: Oh, no. I'm sorry, no. Yes, no case.

MS. BEGEMAN: I think I'll just close by saying I didn't sit down here at 9:30 thinking I was going to talk about replacement costs. It just kind of came about, and for all of you folks in the room who are all nervous, I'm not championing the use of replacement costs, but I'm bothered by the disconnect. I'm also bothered every time I hear Mr. Kalt mention SAC. I realize that many consider it the gold standard. I also have seen it in practice and I know that not only do shippers have frustrations, I think Board members and even Board staff have frustrations in the fact that it has turned into such an enormous undertaking -- the costs, the time, the expense. Cases started before I got here that won't end before I leave. You know, I'm not good with that. And so, Deb had mentioned that she sees a lot of things connected as far as different proceedings. Well, I don't see them fully connected, but I certainly do want a process for really small shippers that is meaningful and fair. I'll just leave it at that.

MR. ELLIOTT: I guess also on that note you've really focused a lot on the SAC test, Mr. Kalt, and in that TRB report, they were pretty hard on it as far as URCS and some other economic theories and I'm not going to ever debate economics with you because I don't think I'd do very well but I assume the gentlemen that came up with these ideas are your colleagues, the kind of people that you would debate these kind of issues with and I'd just be curious to hear your thoughts on their criticisms of the SAC test.

MR. KALT: Well, I think they're very similar when you, where I read and actually talked to some of the people, very similar to what was just raised. That is that the kinds of inputs and the processes that kind of modeling and so forth are proving to be extremely expensive, extremely contentious, detailed beyond kind of all comprehension sometimes, you know, should we have one more crew man on a twenty-mile move from Toledo to, you know, and as a regulatory economist, we should always be looking for ways and I know the Board has taken up issues of simplifying SAC and so forth. What I come away with from all of that is no one's going to honestly project the idea that a free entry market will be competitive and those competitive prices are the right ones. How do you get to them? I would say at this point that, and I talked a little bit about like these technical working groups that have been used rather than a rulemaking and so forth, maybe things, the researcher in me says maybe we should be doing some serious research in a non-disputational way, non-litigatory way and looking at that challenge of okay, if IRCS is not work what's an alternative or, you know, on any of these components as Mr. Sipe mentioned, you know, things like finally reaching an agreement on the DCF approach in SAC is like a big deal. These things evolve but it takes, you know, leadership. It also takes some cool heads to focus on these in a systematic way to see how to improve a process and so I keep thinking this is right at the moment in the history of this industry is a process problem, that is how do we come to a better way of implementing both ideas like replacement costs and a SAC test.

MR. ELLIOTT: I think we're done. Thank you very much. I really appreciate your answers and your testimony. I think you've been very helpful.

MR. SIPE: Thank you very much.

MR. ELLIOTT: Why don't we have the next panel come up so we can just get situated. Okay, why don't we get started with Panel number III.

MS. BOOTH: Good afternoon. Thank you for letting us get situated. I'm Karyn Booth. I'm a partner at the law firm of Thompson Hine and I'm general counsel to the National Industrial Transportation League. It is my pleasure to appear before the Board today to address the important policy issues involving revenue adequacy. With me is Mr. Eddie Johnston, III, from the Chemours Company which is a successor company to the performance chemicals business of DuPONT. Mr. Johnston and I will split the fifteen minutes allocated to NIT League this morning or this afternoon and will be very pleased to answer your questions at the conclusion of our testimony. The League's testimony will focus on a single issue raised by the Board in its Notice of Hearing. That issue is whether railroads revenue adequacy status should impact the availability of competitive access remedies including the League's competitive switching proposal, which is the subject of the Board's Ex Parte 711 proceeding. We will address this issue based on the Board's governing statute, important policy considerations and in light of recent service issues faced by the industry as you requested. So beginning with the governing statute, it is clear that neither Staggers or the reforms subsequently adopted in the ICC Termination Act directly link competitive switching remedies to a carrier's overall financial status. These concepts appear in completely different sections of the statute and there's no direct reference or even an inference that connects the two. Mary, would you mind? I did bring with me just a few slides. Whoops. You can see it here. So just by way of example and really for the record because we don't have a lot of time, this is the reciprocal switching statute and as you can see it's, you know, just a broad public interest standard or one in which where switching would be practical or in the public interest or what's underlined here, where such agreements are necessary to provide competitive rail service. So at least in the switching statute itself there's no direct link to revenue adequacy. In contrast, other provisions of the statute such as the National Rail Transportation policy directly link revenue adequacy to rate reasonableness determinations demonstrating that Congress has made those connections where they are intended. Next slide, Mary. So here you have one of the transportation policies where we see this to be the case and again, just underlined kind of the relevant language here indicating that to maintain reasonable rates where there's an absence of effective competition and most importantly where rail rates provide revenues which exceed the amount necessary to maintain the rail system and attract capital. Additionally the statutory provision directing the Board to establish standards and procedures for determining railroad revenue adequacy has no relationship to competitive access. Next slide. I'm not going to read this. This is really just for the record but a lot of text there, but again, no connection between the two. Going beyond the clear text of the statute, there's no legislative history that otherwise shows Congress intended to restrict the Board from authorizing competitive switching if the defendant railroad's overall financial status was determined to be revenue inadequate. Now, what I'd like to do next is just turn to the last slide, Mary, and it basically touches on not just the statute but the Board's current competitive access rules. I'm sorry, what happened? Oh, okay, well, this next slide, which you can't see and it'll be submitted in the record, is a provision from the Board's current rules and it's the rule that deals with prescription of switching arrangements as well as through roots and that specific rule that exists today has expressed language which basically prevents the Board from considering revenue adequacy. It basically states here that the overall revenue inadequacy of the defendant railroad will not be a basis for the denying prescription of reciprocal switching. Thus, as a legal matter, there's no statutory provision that requires the Board to link competitive switching and railroad revenue adequacy. In fact, the Board's current rules expressly prohibit the agency from denying a switching remedy even if the defendant carrier is revenue inadequate. So there you go. Thanks. So despite the fact that there's no statutory linkage, as a policy matter the NIT League believes that the Board should not condition a switching remedy based on the revenue adequacy status of the carrier and that's because when evaluating whether to grant a competitive switching remedy the League believes that the Board should focus on the characteristics of the rail movement at issue, and particularly its captive status rather than the overall financial status of the defendant carrier. This is precisely the approach followed by the League in its competitive switching proposal filed with the Board four years ago and currently under consideration. The League CSP already limits a captive shipper's ability to obtain competitive switching by requiring that shipper to meet certain conditions. Specifically under the CSP, a shipper that can show that its rail movement is captive and subject to monopoly power is charged rates well above competitive traffic and is located near a working interchange may be eligible to obtain the competitive switching remedy even if the defendant carrier has been found to be revenue inadequate. Similarly, a shipper that cannot demonstrate an improper exercise of market power by its rail carrier may not obtain a switching remedy under the CSP even if the serving carrier is deemed to be revenue adequate. Accordingly the League CSP is narrowly tailored to address an unreasonable assertion of market power over a specific rail movement and the overall financial status of the defendant carrier should not stop the Board from solving the problem by introducing a competitive alternative as contemplated under the switching statute. Moreover, the League CSP would provide captive shippers and the Board with an alternative remedy to a rate case. This remedy would be entirely consistent with the National Rail Transportation Policy published at 49 USE 101011 which is to allow to the maximum extent possible competition and the demand for rail services to establish reasonable rates for transportation by rail. Nevertheless, in evaluating whether to move forward with the League CSP the Board should not ignore the fact that three of the nation's big 4 rail carriers have been revenue adequate under the Board's own high standards for measuring that tool and that's been the case for the past three years. Based on other financial performance measures all of the major railroads are financially strong and continuing to grow stronger. The current financial strength of the rail industry should give this Board greater comfort that adoption of the CSP will not harm this industry financially, and we will be addressing also operationally. The League has already demonstrated in the 711 proceeding that the CSP would potentially result in only a very modest increase in switching arrangements. Only 4.6 percent of carloads would be impacted and I think it's very important to note that that was really all eligible traffic and as we, you know, I think argued ad nauseam in 711 not all of those carloads would even be switched. The League has also demonstrated in 711 that the CSP would have a very small impact on railroad revenue. Only 2.6 percent, again of the big four railroads gross revenue would be impacted under that proposal. The railroad's achievement of revenue adequacy or for those carriers that haven't gotten there yet still recognizing their very strong financial condition along with the CSP's modest impacts on rail traffic and revenue demonstrate that the railroad investment would not be unreasonably curtailed if the CSP were to be adopted. We believe competition will spur investment. Thus, the League respectfully urges the Board to move forward with the rulemaking on the CSP. We would also like to make a comment on the recently released study by the Transportation Research Board already brought up here today. The League believes that overall the TRB researchers did an excellent job fulfilling the congressional mandate to DOT to provide the study on the economic regulation of the U.S. Freight Railroad Industry. The study includes a number of very interesting recommendations to help modernize rail regulation of which the League is still reviewing. However, the League would like to address one specific statement included in the report which followed a discussion of the League CSP and which offered a suggestion for implementing competitive switching today presumably under the current regulatory system.

Specifically on page 112 of the report, I'm not sure we're going to get our slide here, but I did want to put this language up so everybody could see it. This is what the suggestion was by the TRB and you'll see here that it recommends as a starting point for STB to consider reciprocal switching. It could be used as an optional remedy for rates that have already been ruled unreasonable and thereby offer an alternative to a prescribed rate. This statement seems to suggest that today competitive switching should be implemented by the Board only in the context of an unreasonable rate dispute, only as an optional remedy to rate prescriptions and only after a rate has already been found to be unreasonable. Our understanding of the TRB suggestion is that the shipper would be required to first prove market dominance and litigate and win a SAC case before a switching remedy would even be available. This approach would make the regulatory process even longer, more complex, more expensive than it is today and would only discourage shippers from even attempting to secure competition through switching. This approach would have the opposite effect of the League CSP which is designed to provide a more simplistic and cost effective approach to implementing the switching statute. Accordingly the League opposes implementation of competitive switching as an optional rate case remedy as suggested here on page 112. I would like to conclude by briefly addressing the Board's inquiry regarding the impact of recent rail service problems and the League CSP. First, the potential for the CSP itself to create additional service problems has been vastly overstated by the railroads. The railroad service concerns are premised on an incomplete study of the CSP that lacks credibility for many of the reasons that were already discussed in that proceeding and at the prior hearing. Second, the CSP itself would provide this Board with the power to deny a request for competitive switching under the CSP if the defendant railroad shows that the switch would be unfeasible, unsafe or would harm rail service. This built in protection directly addresses any service related concerns and would prevent them from ever even occurring. Third, the Board should also consider that competitive switching in some cases can actually operate as a solution to service problems by providing an alternative route if the incumbent carrier is experiencing congestion or is otherwise unable to meet the service needs of the shipper. That concludes my testimony and I'd like to turn the floor over to Mr. Johnston and I'd be happy to answer questions at the end. Thank you.

MR. JOHNSTON: Good afternoon. I'm Eddie Johnston, manager for sustainability and government affairs with the Chemours Company. Thank you for holding this Hearing on revenue adequacy and its impact on rate regulation as well as on competitive access remedies and rail service. Chemours is a publicly traded company that is a spin-off of the performance chemicals business that was previously part of E.I. DuPONT de NEMOURS & Company. Chemours is a very substantial user of rail services in the United States and in its formal corporate organization within DuPONT has been a frequent participant in proceedings before the Board. More than seventy-five percent of Chemours facilities are captive to a single railroad. Contrary to Mr. Hamberger's impassioned testimony, we do not generally face a competitive rail industry. My company does not see or experience competitive pricing or service behavior from our rail service providers. Chemours is a member of the National Industrial Transportation League and my testimony is being provided as a League member. On behalf of the League, I will address the Board's question regarding the impact of rail service issues on the League's request for the Board to increase competitive switching between rail carriers. As you know in July 2011, the League filed a petition asking this Board to open a rulemaking to revise the existing competitive access rules and specifically to permit competitive switching between rail carriers for captive rail movements that meet certain qualifications. The nation's rail carriers have opposed the League's competitive switching proposal claiming that the proposal would adversely impact rail service. Chemours believes that the League's CSP would not degrade service, but instead would offer routing alternatives that would help improve rail service. Indeed, switching arrangements under the CSP might lead to better service in situations where the incumbent's line is experiencing congestion or its route is more circuitous or less efficient. Switching arrangements occur every day during normal railroad operations. Carriers routinely work together in yards and in locations where more than one carrier has access to the tracks. We believe that rail carriers would be able to effective cooperate and manage an increase services that could occur under the CSP. Our own experience demonstrates that competitive switching does not degrade service but can improve service while providing solutions when a carrier is not able to meet a shipper's needs. Chemours currently has four facilities in Louisville, Kentucky, Pascagoula, Mississippi, Beaumont, Texas, and Strang, Texas that are open to reciprocal switching. Rail service to and from these facilities is at least equal to the rail service at our many captive plants. The availability of a second carrier provides an alternative that can be used to address service deficiencies or disruptions. Our use of the switching options at each location varies and is based on factors including price, service, and routing efficiencies. To better meet our service and delivery needs we prefer to use the alternative carrier for a substantial portion of our traffic at two of these four locations. At the other locations we use the switching arrangement only for a minority of our traffic. Also at one of these locations we prefer to use a three carrier route instead of a two carrier route to a particular destination due to superior service and favorable economics. My ability to choose an alternative routing has helped Chemours better meet the needs of valued customers. Moreover, we see no difference in the carriers' investment at our captive plants versus our competitive plants. Chemours also has two facilities in New Jersey that are effectively dual served as part of the Con-Rail shared assets area. There is an ongoing coordination between the rail carriers at the yards in those areas. In our experience service at these two facilities is generally better than at our captive locations. Accordingly we believe the nation's rail carriers are experienced and well equipped to handle additional switching arrangements and changing traffic volumes that may arise under the CSP. Let me close with one more thought for your consideration. A career in business has taught me that service can only be assessed from the perspective of the customer, yet the Board and rail carriers seem to define rail service very narrowly as transit time and system fluidity, both internal railroad measures. To rail customers like me, rail service means much more. Service includes safety and accident performance. It includes predictability of deliveries. Service involves responsiveness to my business needs including how well and how promptly my suppliers respond to concerns, problems and changing business conditions. And finally, a mark of exceptional customer service, perhaps the mark of exceptional customer service, is simply how easy it is for me to do business with you. Aren't these the very ways you and I evaluate customer service as consumers? I think so. Should we expect less from the nation's railroads? I have observed that excellent customer service thrives in a vigorously competitive environment. It falters when competition is lacking. The League's competitive switching proposal would help introduce more rail to rail competition where it is needed most. It would give me and other captive shippers a service choice just as we have with other suppliers. I, therefore, respectfully ask this Board to move forward with a rulemaking on the League's competitive switching proposal. Thank you very much.

MS. MILLER: So, Karyn, you were pretty clear but I want to go back. The NIT League's position is that we shouldn't tie the concept of revenue adequacy and competitive switching together, correct?

MS. BOOTH: That's correct. We don't see any intent for that in the statute.

MS. MILLER: Yes.

MS. BEGEMAN: Deb is right. Your testimony was very clear, actually, both of you. We appreciate that. Mr. Johnston, it was really helpful for you to kind of walk through the four plants that you have the ability to have competitive access, and then the two with the Con-Rail shared asset areas. So, six plants out of how many?

MR. JOHNSTON: Roughly twenty-six.

MS. BEGEMAN: Out of twenty-six.

MR. JOHNSTON: Yes.

MS. BEGEMAN: And could you just -- and I know from the previous hearing and proceeding this may be a repetitive question -- I don't think that it is but I know you've appeared here a few times on different matters -- but how often do you, you sort of explained that you don't actually switch a lot but it's there if you need it. But just in practical terms, how often do you switch to another carrier, the circumstance, and how quickly do you make that decision? You know we've spent the last year and a half, not just the last year and a half but the previous year, with the service issues that were going on that were a really great, serious concern to me and to the other Board members and I'm just trying to understand from your first-hand perspective about how you have gone about your use of competitive access.

MR. JOHNSTON: So the four sites that I described, they range from the use of the alternative more than ninety-five percent of the time at one of the sites to less than five percent of the time at one of the other four, and the other two fall in between obviously so it's use varies widely based on service performance, based on economics ---

MS. BEGEMAN: I mean does it change, could it change on a dime, like in a week or is it in a month or in a year? How often?

MR. JOHNSTON: So if there's a service disruption for any of a variety of reasons we have the alternatives to switch the traffic onto another carrier. Obviously that has to be worked out with the carrier in terms of how quickly that can be done but it's managed and it's done efficiently in these cases. Again, railroads pass traffic back and forth every day. This is simply another instance of their doing that. Is that responsive to your question?

MS. MILLER: Has it affected your rate, I mean, as a consequence in those facilities where you have competitive shipping, do you think you've got a more competitive rate?

MR. JOHNSTON: In some cases we have better rates, yes.

MR. ELLIOTT: Just one question. It probably goes back to a question I've already addressed, but in the reciprocal switching provision itself it requires once reciprocal switching is put in place, that the two railroads meet. How do you see that working, having the two railroads and obviously if they don't reach an agreement then they have to come to us, but does that make you nervous at all that that puts you in that position?

MS. BOOTH: Well, as you know, the statute has that requirement. The railroads certainly in the first instance are to come to their own agreement on what the switch fee should be in a given situation. If they can't agree, then of course, either one of them or a shipper could come to the Board, but look, our view is that introducing competitive switching is not likely to be introduced in every possible scenario and there may be instances, there are lots of shippers who worry about whether or not railroads will aggressively compete so there is some concern related to the switch fee, but I think from NIT League's perspective, we believe that it will work, it'll get started, folks will get comfortable with it and there'll be a process for it and it may be that there are pockets where the competition isn't vigorous enough and it may be, we hope and we believe that there'll be many other locations where it would work.

MR. ELLIOTT: Thank you.

MR. JOHNSTON: So I'm not a lawyer or an economist. I'm just a businessman and so I tend to think in just common sense kind of every day terms and so to me it's a question of having a choice versus not having a choice and more times than not it's better to have a choice and be able to exercise that choice whether I actually exercise it not than it is not to have the choice at all and so just from a common sense sort of perspective to me that's what this is about and as I say at 20 of the 26 plants I have no choice. I have no choice whatsoever and so if I could pick up a choice at even a couple of those that I might at some time be able to take advantage of for the benefit of my customers who I serve that's a good thing.

MR. ELLIOTT: Thank you very much. We really appreciate you coming here today.

MR. JOHNSTON: You're welcome.

MR. ELLIOTT: Especially someone that's not an economist or a lawyer. We appreciate that. As I said earlier, we are going to take a thirty-minute break, so why don't we get back here around 1:45 and we will proceed with Panel number IV. Thank you.

(Whereupon, the above-entitled matter went off the record at 1:16 p.m. and resumed at 1:51 p.m.)

MR. ELLIOTT: Okay, why don't we get started with Panel number IV.

MR. ELIASSON: Thank you and good afternoon, Chairman Elliott, Vice Chairman Begeman and Commissioner Miller. Thank you for the opportunity to address revenue adequacy. My name is Fredrik Eliasson and I serve as CSX's Chief Financial Officer. I have been with CSX for twenty years and as CFO I direct all of CSX's financial activities and in my prior roles in sales and marketing, led our efforts across markets that included the industrial, agricultural and construction sectors of our economy. All of this experience gives me the insight on how customers and investors value our service and business and the expectation they hold for the future that forms my basis for my discussion today. Over the next few minutes, I'll provide some insights on the way that we manage our balance sheet to meet these expectations and how we make our reinvestment decisions. But first on slide 2, we have outlined four critical elements that we believe we must have from a regulatory perspective to meet the expectations of our shareholders, of our stakeholders, our customers, investors, employees and the communities we serve. These are foundational economic pillars that are consistent with the Staggers Act that has transformed American railroads. Let me briefly touch on each. First, measure progress, don't constrain it. Any regulatory policy that employs revenue adequacy should view it as a barometer of industry health and a regulatory policy's success, not an arbitrary basis to limit pricing and investment. Second, address replacement cost imperative. I will talk more in a moment about the need to recognize returns based on replacement costs today and not the depreciated costs of the past. Third, promote differential pricing. We need the ability to price based on the marketplace value of the service we provide and not to be artificially constrained by rate caps or forced access. And, fourth, ensure free market results to foster reinvestment. As I will discuss in a moment, Staggers left intact free market incentives to promote reinvestment and the right to earn an appropriate return. U.S. railroads have progressed to where we are today through high levels of sustained investments in our infrastructure that is not only meeting today's freight demand but it is also being expanded to meet tomorrow's needs. We acknowledge that others might have different perspective on these pillars but essentially they form the underpinnings of any successful business. Absent any of the four we cannot be successful. It is our contention that any sound regulatory policy must incorporate these pillars. If you look on the left on slide 3 you see that the employees of U.S. railroads are the most efficient in the world. The visionary policy makers who drafted the Staggers Act had the foresight to carefully balance the regulatory framework against free market economic incentives so that our business are properly motivated to maximize revenues and to minimize costs. It was, of course, the salvation of the U.S. rail industry which today is the envy of the world. On the right, you see that our customers have shared in these efficiencies with on an inflation adjusted basis reduced rail rates that are less than sixty cents on a dollar versus 1981.

MR. ELIASSON: An indisputable proved point that the Staggers Act allowed free market forces to work, our customers benefitted greatly.

For CSX specifically our vision and core values referred to on slide 4 focuses on value creation providing a safe, efficient and environmentally beneficial means to move freight. CSX must offer benefits superior to those of our competitors in order to attract customers and revenue to our network and revenues which last year amounted to $12.7 billion.

As with any American household, we first pay our bills before we can think about discretionary choices for what is left over. For CSX, it comes down to three discretionary options: Reinvest in our business, pay dividends to our shareholders, buy back shares to increase the value of the stock held by our shareholders. We do all three as part of our balanced cash deployment strategy. Clearly it is important to reinvest in physical plant and equipment but it's also important for any publicly traded company to adequately reward its shareholders through dividends and share buy backs.

At CSX, like any public company, it is understood that we must earn the right to reinvest in our business. These reinvestments must increase CSX's value proposition and ultimately return a yield to shareholders that is higher than what can be achieved by distributing those earnings directly to them through dividends and sharer purchases. Only by increasing the value of our company can we compete for the capital from our investors who have a broad spectrum of investment choices.

To further clarify, slide 5 shows how our cash deployment has been allocated over the last ten years. On the left you can see that approximately sixty percent was dedicated to capital investment to both maintain and expand our network to meet the growing demand that we see. Approximately forty percent was devoted to shareholder distributions. To put this in context on the right is the same allocation for the S&P 500 over that same period. Those companies on average invest less capital and reward shareholders at a higher rate.

As the executive team member for CSX who regularly meets with institutional investors it is clear that dividends and shared purchases are critical to the valued proposition we provide our investors. Of course, their investment in turn makes it possible to keep our network and assets capable of serving our customers and America's freight transportation needs.

On slide 6, you see capital expenditures as a percentage of sales by many of our customers and our competitors. Railroads are at the near top of that list with an average of 17 cents on the dollar dedicated to capital investment. You can see that many of our competitors and customers devote fewer of their revenues to capital investment. In fact, some substantially so than railroads.

We all recognize the need to continue to upgrade and expand our transportation infrastructure. Railroads are doing so with our shareholders' capital reducing the burden on our taxpayers and publicly supported infrastructure. This year our planned capital investment is $2.5 billion, a CSX record and a continuation of our commitment to a safe reliable and expanding network.

Infrastructure and equipment maintenance account for $1.8 billion, growth and productivity investments $400 million, and positive train control and other regulatory mandates $300 million. To put this in perspective, over 80 percent of our total capital budget is already spoken for with respect to maintenance and PTC needs even before we begin to consider growth focused investments. In regard to PTC specifically, by the end of this year we will have invested $1.5 billion with essentially no measurable financial return. Of course, we recognize the safety benefits of PTC and will meet our obligation to implement it as quickly as possible but full roll-out is expected to take until 2020 as we want to accomplish PTC implementation without negatively impacting safety or customer service.

Now as you know the FRA in its final PTC rule estimated its cost to benefit ratio to be 22 to 1. We also face now the prospect of requirements of ECP bricks. All of this leaves very little capital to accommodate traffic surges such as we saw in the spring of 2014 and to generally support the growing needs of our customers.

Central to understanding this capital intensity is our ongoing dialogue about replacement costs versus book value. As this Board knows, we've been advocating for recognition of replacement costs as a more realistic way to assess economic value and appropriate return on investments. When we make decisions to allocate a certain percentage of cash to reinvestment we, like all companies, have assumed that we can earn a return on that investment, a return that is not based on the book cost of those assets when we acquired them 20 to 100 years ago, but on the economic value of that investment today. Given that reality, the current revenue adequacy methodology reliance on depreciated book value does not represent the true cost to replace those assets. As you can see on slide 8, track replacement cost is approximately three times the depreciated cost. Mind you that $1.1 million per mile was chauffeured track replacement assumes that we're replacing rails on the corridors on which we already operate without the need to rebuild bridges or acquire additional property along with associated grading costs, all of which would drive that cost higher. It also does not factor in signals or other train control electronics.

Average locomotive replacement cost is approximately four times the depreciated cost and freight car replacement cost is approximately three times the depreciated cost. It is evident that the difference between replacement cost and depreciated book value is tremendous. To assess our economic value on a depreciated cost basis does not acknowledge our investment realities. The Board's assessment of the railroad returns on assets must recognize replacement costs.

Here's another view on slide 9 of replacement costs as they pertain to major infrastructure. You may recall that in August of 2005 Hurricane Katrina unleashed a devastating strike on New Orleans and the Gulf Coast. One CSX bridge that was severely damaged was the nearly two-mile long Bay St. Louis Bridge to Mississippi which was built in 1967. In 2005, the bridge was on our books for a depreciated value of $2 million. It cost us more than $75 million to replace.

We have thousands of bridges of different lengths on our network that will require replacing and upgrading over the next decades. However, the implication of the current methodology is that we should only be allowed to earn a return on the historical cost, which is a fraction of that investment. How is that good economic or public policy?

Another project currently under construction is the replacement and expansion of the 3800 foot long Virginia Avenue tunnel just a quarter of a mile or so from here, the first phase of which opened about a 130 years ago. The tunnel is essential to the delivery of goods to businesses and consumers here in the District and up in on the east coast. The tunnel has a depreciated value today of $6 million dollars. The investment to replace it with the necessary improvements will be more than $250 million.

We are making these investments at a time when our markets are in major transition with our base load coal market continuing to erode. We have endured the loss of nearly half of our utility coal volume since 2006 while domestic intermodal volume has grown sixty-five percent. The domestic intermodal increase occurred at the same time the truck traffic on our already congested and maintenance starved highways increased only twenty percent. That makes a compelling point that rail investments intermodal are serving a public need.

As an example here on slide 11, is CSX's northwest Ohio intermodal terminal, which some of you have visited. The terminal opened in 2011 at a cost of $171 million. Northwest Ohio gives us the ability to bypass Chicago with Transcontinental intermodal shipments. It also allows for hub and spoke system that provides cost efficient service to smaller markets. It has been a great success and with the growing volume the terminal was expanded recently at a cost of $40 million. If you cap our returns investment likes these that convert highway traffic to rail and reduce the taxpayer burden of highway maintenance are much, much less likely to occur. To better illustrate this and, excuse me, Mr. Chairman, but with your permission I'd like to finish. We'll only be about two or three minutes or so. Thank you so much

To better illustrate this on slide 12, to the left you see the virtuous cycle of higher returns which generate higher cash flow resulting in higher reinvestment. This is illustrated on the right by the overall Class I Railroad Investment in infrastructure and equipment.

In contrast to the prior slide here on slide 13 we see the vicious investment framework of capped returns that would reduce cash flow and limit our reinvestment. The result would be less access to capital, less growth investment, less productivity investment, and fewer resources. Let me put this another way, how much less investment do you want CSX to make? How much less efficiency, how much less reliable service? Because those are the difficult questions that will have to be answered at a time where there's near universal agreement that more freight rail investments are needed, not less.

So, I'll wrap up by returning to the four pillars that I referenced in my opening. If the Board shares our belief that these pillars are consistent with Staggers Act and fundamental to the viability of railroads you regulate, you must support our ability to generate adequate and competitive returns. To do otherwise would equate to transfer of earnings from one industry to another and from one company to its customers putting CSX and other U.S. railroads at further market disadvantage.

All we seek is a level playing field to satisfy the public demand for reduced highway congestion, less demand on public dollars for highway maintenance and cleaner air supported by reduced emissions. Revenue adequacy should be a benchmark for railroad health and not a tool for reregulation. To apply revenue adequacy to companies in a competitive market as a rationale to cap rates is to diminish incentives to aspire to innovation, efficiency, quality service. Railroads today are healthier and benefits are flowing to customers, shareholders, employees and the communities we serve. Let's keep it that way. Thank you.

MR. ATKINS: Members of the Board, my name is Ray Atkins and it's my pleasure to appear here today on behalf of Norfolk Southern. I am joined by Professor David Sappington from the University of Florida and Professor Brad Cornell from Cal Tech. Together we are here to urge the Board to abandon the revenue adequacy constraint that was conceived thirty years ago. Three decades later regulators worldwide are abandoning this type of constraint because it deters innovation, investment, productivity and competition.

Professor Sappington has been studying this trend and this evolution and economic thinking for the better part of two decades and so he's going to start our presentation by describing his research. Professor Cornell is then going to discuss some of the significant measurement errors in how you calculate revenue adequacy on an annual basis and how even if you could correct those deficiencies a measure of system-wide revenue needs provides no guidance about the maximum rates that should be charged to an individual customer and then I'm going to wrap up by talking about how you already have a targeted revenue adequacy test but one that is narrowly focused on the portions of the network that are used by the complaining customer. Professor Sappington.

MR. SAPPINGTON: Thank you, Mr. Atkins. Good afternoon, Chairman Elliott, Vice Chairman Begeman, and Commissioner Miller. My name is David Sappington and I'm a professor of economics and Director of the Public Policy Research Center at the University of Florida and as Mr. Atkins' mentioned my academic career has been devoted to studying issues dealing with regulation, the design of sound regulatory policy, the basic underlying principles and in particular the implementation of incentive regulation.

I've also had the privilege of translating these principles into practice when I served as the chief economist for the Federal

Communications Commission in 2001 and since that time I've had the pleasure of advising and working with both regulators and industry participants on the design of regulatory policy in several industries.

I understand that the Board is considering whether to implement explicit earnings regulation to ensure that railroads earnings do not exceed what are deemed to be adequate levels and in the strongest of terms I'd like to urge the Board not to proceed down this path. The Board's current regulatory policy is highly commendable on many dimensions and has stimulated substantial improvements in the rail industry. The imposition of additional explicit earnings regulation would stifle innovation in the industry and thereby impede industry performance to the detriment of railroads and shippers alike and these conclusions reflect both basic economic principles and experience with earnings regulation in other industries around the world.

To support my recommendation this afternoon against additional earnings regulation in the freight rail industry I'd like to first identify the key principles that underline that recommendation. Then I'd like to briefly review experience with earnings regulation in other industries and then before concluding I'll discuss the fallacy of a common myth about earnings regulation and note the implications of this fallacy for the Board's current deliberations.

So to begin with the key principles of regulatory policy design, perhaps the key principle of policy design as was discussed this morning is that regulations should only be imposed where competition fails to adequately discipline industry suppliers and the reason for this principle is simple. Regulation is costly and unavoidably imperfect, so competition is the preferred source of industry governance whenever competition can adequately discipline incumbent suppliers. A related principle is that in settings were regulation is, in fact, needed to substitute for the missing competitive discipline then regulatory policy should be designed to replicate that discipline.

So in essence competition is the ideal regulator and when the ideal regulator is not available, the best substitute is one that functions much like the ideal regulator would. I believe the Board's current policy reflects both of these principles quite well. In particular the policy allows competition to discipline suppliers of rail freight services where it can do so effectively and the policy also replicates competitive discipline appropriately where regulatory intervention is deemed to be necessary. Specifically, the Board refrains from regulatory intervention when the prices set by the railroads are judged to be sufficiently close to the costs of supplying the services in question.

Regulatory intervention is also avoided when railroads and shippers successfully negotiate mutually advantageous contracts. The Board's policy also replicates competitive discipline on several important dimensions including the following two: First, the policy affords railroads and shippers substantial flexibility to fashion mutually desirable terms of trade just as buyers and sellers do in competitive markets. Second, the policy protects shippers that lack effective competition by restricting prices below the stand alone costs of an efficient supplier of the rail services in question.

This policy replicates competitive forces because in competitive markets firms are typically compelled to price at or below the level of their competitors' costs. And by considering the cost of an efficient supplier this policy can implement even more stringent challenges than a railroad would face in many industry settings. And by restricting the railroad's earnings through the stand alone cost or SAC test rather than through explicit earnings regulation, which limits the maximum earnings a railroad can achieve, the Board's policy avoids a primary drawback to such explicit earnings regulation. This drawback is that explicit earnings regulation limits a supplier's incentive to reduce its costs and the reason is quite simple. This diminished incentive arises because cost reductions will increase earnings which will trigger price reductions to eliminate these increased earnings. So consequently under explicit earnings regulation the regulated supplier receives no reward for reducing costs and so cannot reasonably be expected to focus its efforts on doing so. But this is only one of many important drawbacks to earnings regulation.

Additional drawbacks include the following three: First, explicit earnings regulation limits incentives for product innovation and other activities that shippers value highly. This is the case because once the firm has achieved adequate earnings the firm is denied the opportunity to enhance these earnings even if it develops and implements new and improved services that shippers value highly. Empirical research documents that strict earnings regulation limits innovation in many industries. The diminished innovation takes several forms but it includes reduced investment in infrastructure modernization for example.

Second, explicit earnings regulation can create incentives to operate within efficient production technologies. This can occur for instance when earnings are restricted to a specified return on capital investment. In this case if the allowed return on capital investment exceeds the regulated firm's cost of capital the firm may have an incentive to undertake excessive capital investment. But it's the alternative possibility that is of even greater concern. In particular, if the allowed return on capital investment is less than the firm's true cost of capital then the firm will be unable to secure the financing it requires to undertake important capital investment. The resulting underinvestment and critical infrastructure can lead to serious reductions in the level and quality of services delivered to shippers. Third, the implementation of earnings regulation typically is extremely time consuming and contentious. Determining a firm's cost of capital and measuring earnings both entail many subtleties particularly when some of the firm's services are subject to regulation and others are not. Thus, explicit earnings regulation can consume considerable regulatory resources, both the Board's resources and the resources of shippers and railroads alike and those resources would be better focused on the marketplace than on the hearing room.

Explicit earnings regulation is particularly pernicious when it is applied in asymmetric fashion, and this is the point that Chairman Elliott made this morning at the earlier portion of the Hearing. So when earnings regulation precludes earnings above an adequate level but entails no provisions to increase earnings that fall below this level a regulated railroad has very little incentive to undertake ventures that involve even limited risk because under asymmetric information asymmetric earnings regulation of this form a successful venture provides no financial reward whereas an unsuccessful venture imposes financial penalties on the railroad.

Consequently the railroad can only lose from risky ventures and so will naturally decline to undertake them regardless of the prospective value of these ventures to shippers. By limiting a railroad's incentive to pursue promising yet risky ventures asymmetric earnings regulation would introduce incentives that depart radically from those that prevail in a competitive market where successful innovation can deliver enormous financial rewards and indeed it is precisely the prospect of these pronounced financial rewards that drives innovation in most industries so a policy that eliminates such reward in the rail industry should, in fact, be expected to seriously retard innovation in the industry to the detriment of railroads and shippers alike.

In light of the many well-known drawbacks to explicit earnings regulation, particularly asymmetric earnings regulation, regulators in other industries have been turning away from such regulation for many years now. In the telecommunications industry, for example, many regulators have replaced explicit earnings regulation with price cap regulation and under price cap regulation a price ceiling is established that is not continually adjusted to reflect the regulated firm's operating costs.

A primary purpose of price cap regulation is to enhance the regulated firm's incentive to reduce its costs by ensuring that this price ceiling is not automatically ratcheted down whenever the firm discovers innovative ways to reduce its operating costs. Regulators in the electricity sector have been adopting various forms of what are called performance based regulation and the key feature of performance based regulation is that a firm that delivers exceptional performance in the marketplace is rewarded financially for doing do precisely as a firm would be in a competitive marketplace. What I think is particularly important for the present purpose is to note is that the Board's present rate regulation regime already encompasses the key features of these regulatory policies that in other industries are viewed as innovative. In particular the SAC test effectively imposes a price ceiling that is not linked to the railroad's own costs but rather to the cost of an efficient supplier of rail services.

The SAC test thereby in fact provides strong incentives for cost reduction just as price cap regulation can be designed to do. Furthermore, because it avoids explicit earnings regulation the Board's present policy ties a railroad's financial performance to its performance in the marketplace and in particular a railroad that delivers innovative ways to reduce its costs or to deliver increased value to shippers is permitted to benefit financially from its discoveries.

The Board's policy thereby provides incentives for the railroads to pursue promising yet risky innovative activities that can be of substantial benefit to shippers. Thus, in my opinion, the Board's present policy is reasonably viewed as being on the frontier of innovative progressive regulatory policy design but additional explicit earnings regulation would move the Board's policy away from that frontier and, in fact, in exactly the opposite direction that regulatory policy is progressing in other industries. And this movement away from explicit earnings regulation in other industries reflects a growing recognition of the fallacy of a common myth about earnings regulation and the myth is that a regulator serves consumers well by systematically precluding a regulated supplier from securing anything more than what might be judged an adequate level of earnings.

A corollary of this myth is that a regulator has failed to protect consumers adequately if the regulated firm ever secures more than adequate earnings. Fortunately there's a growing recognition that this myth and its corollary are not only false but, in fact, fundamentally misguided. In fact, all parties can gain, both regulated suppliers and their customers, when suppliers are motivated by the prospect of financial reward to discover innovative ways to operate more efficiently and to identify and serve the best interests of their customers. Healthy financial returns can be a sign of effective regulation that has induced innovation, which, in turn, has delivered highly valued benefits to consumers.

So, in conclusion, I would like to reiterate my strong recommendation to avoid additional explicit earnings regulation in the freight rail industry. Such explicit earnings regulation entails many well-known drawbacks and its implementation would stifle innovation in the freight rail industry and would thereby threaten to reverse the substantial progress the industry has experienced since the passage of the Staggers Act. The Board's present policy is an enlightened progressive policy that embodies the key principles of sound regulatory policy design and that reflects recent trends in other industries and my sincere hope is that the Board's future policy will continue to be so enlightened and that the Board will resist any pressures it may face to return to the largely discredited regulatory policies of the past. Thank you.

MR. ATKINS: Professor Cornell.

MR. CORNELL: Thank you for having me here today. My name's Bradford Cornell. I'm a professor of finance at Cal Tech and for the last thirty-five years or so I've been doing teaching, research and consulting on practical applications of finance theory such as the problem measuring revenue adequacy that you face today, and in the Cal Tec tradition, my testimony's pretty much nuts and bolts. I'm going to look at some of the details of really trying to measure this concept and not talk at quite as high a level as some of the previous people have.

So let me start with a simple example. I always like to get very practical so if we can have my first slide. This very simple example. This is a device designed to measure temperature in your garden. It's standard garden thermometer and being a bit of a weather nut, I have several of these and there're two problems with this device as a measurement tool. One is that little tube that is affixed to the plastic tends to slide up and down and now let's just assume that the tube has slid down a little bit. That means whenever you measure the temperature it's going to be wrong, so if it slides down let's say four degrees, it's always going to be four degrees too low. In statistical terms that's called systematic bias and it can be a real problem if you need to know the absolute level of temperature. But there is one benefit. If you only are concerned about a change, if it's always four degrees too low then the change from day to day or month to month is going to be okay. So systematic bias is a problem but not so much for measuring changes. That's point one with my thermometer. Point two is the device itself is not all that good. The expansion of the liquid in the tube doesn't precisely measure temperature. If any sun gets on it, it's a problem. If any water gets on it, it's a problem, so there's a lot of random variation between what that is reading and what the true temperature is and in statistics we call that random measurement error.

Now the reason I bring this up is these two types of errors determine whether or not or for what purposes you can use a tool. If you put this in your garden and you want to know if it's warmer in Washington, D.C. in July than February the tool works fine. The systematic bias cancels out and there's enough change between February and July that you will find that it's warmer in July. But if you took this to a chemist at Cal Tech and said I want to use this to measure the precise temperature at which a very specific chemical reaction takes place. The reaction would be are you crazy? That device is nowhere near accurate enough for that. And the reason I bring this up, to me it relates to revenue adequacy.

Revenue adequacy is a bit like the garden thermometer. If what you're interested in is are railroads healthier now than they were ten years ago or twenty years ago or thirty years ago, I think it's informative. As I'm going to talk in a moment, there are significant biases and there are significant measurement errors, but if you're looking at changes the systematic biases tend to cancel out and if you're looking at long enough times the measurement error is not too critical.

So if the goal is to look at the health over time of the railroad industry, this probably isn't a great measure but it's not a terrible one. But if you're attempting to use it to measure something very precise like whether a railroad is revenue adequate at the current point in time, I'm going to argue it's simply not a very good tool, in fact, it's a very bad tool.

So let me switch to revenue adequacy now and talk about some of the measurement problems that specifically arise there. And I've listed four issues here. The first one is that it fails to measure returns over the lifetime of rail assets. That is, it tends to look year by year whereas investors when you make an investment are concerned with what the returns will be over the entire life. That issue's been discussed by previous witnesses. It's going to be discussed I think by future. I'm not going to deal with it today. I just note it as a point.

The second is deferred taxes. How do you treat them? Do you take them out of the base when you measure total investment? Remember the return measure that is used to compare with the cost of capital is a measure of earnings divided by an investment base and if you take deferred taxes out of the investment base it's clearly going to affect that ratio. I'll talk about that a little bit more.

The primary issue I will focus on is revenue adequacy as currently defined compares an accounting measure, earnings divided by this investment base, with an economic measure, the cost of capital which you estimate in other ways. That comparison has all sorts of dangerous measurement errors associated with it and I'll give you a specific example. And finally it's my view, even if you could overcome the measurement problems associated with revenue adequacy, I still don't see how it's optimal to use a system-wide or a nationwide measure to deal with a specific problem, and I'll give you an example of that.

So let's go forward and the first issue is deferred taxes and for railroads deferred taxes are very significant. I think in the case of Norfolk Southern the deferred taxes are in the order of $8 billion which is about a third of their entire invested capital so if you take that out you're going to push the measure, just like the tube slipping, you're going to push the measure of return up significantly.

Now if all you want to measure is changes, that's not a problem because you take it out every year. It cancels out. But if you're asking whether a particular railroad is revenue adequate, it's a real problem, particularly if a railroad has to compete, let's say, with trucks. When Congress allowed for the use of deferred taxes, it was countrywide so that all companies could benefit from it. If the trucking industry gets the benefit of deferred taxes but the railroad industry doesn't because a return measure is computed net of deferred taxes and a cap is based on that measure, then you've in effect subsidized trucks as opposed to railroads and that's a systematic bias that is not eliminated because it's not a change. It's comparing trucks with railroads and giving the trucks a significant head start.

So let me move on to the next issue, which I've spent most of my time on, which is drilling into a little bit this measure of return that is going to be compared with the cost of capital and to do that I took the step of constructing the simplest example that I could to highlight the real principles that are at work here. So there are no taxes deferred or otherwise in this very simple example and to start there's only one asset.

And finally the cost of capital is assumed to be known and to be 10 percent, so for your hearings tomorrow you've reached the decision that it's 10 percent cost of capital. No measurement error, no in for sure. And what I've done is I've taken a 20 year logged asset and I've said, okay, if it's just going to earn its cost of capital and its going to earn a constant amount each year, what does that cash flow have to be each year so that the overall return is exactly the cost of capital of ten percent and that is column A, and the answer Excel tells me is $117.46 so if you buy this asset for $1000 and it produces cash flows of $117.46 every year until it dies the effective rate of return is ten percent, the cost of capital.

Now let's see what happens when you use the accounting method to compute the return on investment. So I've in column B applied straight line depreciations. It's a twenty-year asset, $1000, $50 a year. Then deduct the $50 from the revenue and I get a net of depreciation accounting income of $67.46. Then the final column, column D is the book value of the asset and it comes down $50 each year. The first year, it's a full value of $1000, then $950, $900 and so forth. So now I've got the two numbers I need. I have the net income, I have the book value, I can compute the ratio, which is this return on investment, and notice it is never ten percent. It starts well below ten percent at 6.75 and then as the asset gets depreciated in an accounting fashion, the return on investment ratchets up until the final year it's up to 134 percent, which is indicative of what Professor Kalt was talking about. When you keep depreciating things the return goes up even though that doesn't seem to make economic sense because we know what the economic answer is here. We know it's ten percent. I constructed it that way.

So let's go to exhibit 1B, which is exactly the same except I've now used the formula for computing economic depreciation and that's the depreciation due to the fact that as the asset ages it doesn't have as many years to produce income and it would trade for less in a secondary market. So the economic depreciation is now shown in column B. If I subtract that from the cash flows, I get the net income. And if I take the starting purchase price of $1000 and subtract the economic depreciation I get the replacement costs and I want to define the word replacement costs carefully here because it's been used a lot today but maybe not defined as precisely as it should be. There's a notion of replacement costs new which is, for example, if I have a five-year-old car, you could ask what it costs me to go out and buy a new car of the same type. That would be replacement costs new, but that's not what replacement costs means in this example and I don't think in the railroad examples. It really means what would it cost to go out and buy another five-year-old car. So if my car was totaled, what would it cost me to replace it with another five-year-old car. That's what this new book value net of economic depreciation is and notice when you use economic depreciation things work out right. It's ten percent return on investment every year. So the distinction between economic depreciation based on replacement costs and book depreciation based on arbitrary rules is really important for computing the return on investment.

Now you may say, well, hold on here, Professor Cornell, this is weird example because you have one asset that starts new and then ages off the books to zero. That's not like a railroad. Railroads are always turning over their assets. They're constantly replacing them. They're not just letting one wear out. So what I do on exhibit 2 if we go to that is I complicate the example just a little bit. I assume that rather than one asset there are twenty of them. One's brand new, one's one-year-old, one's two years old, all the way up to one that's nineteen years old. So the railroad now has twenty of these assets and at the end of the year, the oldest one rolls over and is replaced with a new one and everybody moves down. So what that means is if I were looking at the entire railroad I'd have to add up the cash flows and the net income for all of them and if you look at my exhibit, I think that's the easiest thing.

Look at column C. There's now 20 assets. I add the net income of all of them up and I get $1349.20. And then I add up the depreciated value and I get $10,500. So now I'm adding it up over twenty assets and this would be the same every year because the railroad is in effect static because at the end of the year the old one goes, new one comes in and it looks exactly the same as it did at the beginning of the previous year. I compute the return on investment, 12.85 percent, so something that looks like it wouldn't introduce a significant bias, namely this use of accounting depreciation, in fact, does.

This hypothetical railroad here looks like its earning significantly in excess of its cost of capital though we know it isn't because I've constructed it mathematically to just earn the 10 percent. So if we go to 2B, 2B does exactly the same calculation I did in 1B. It substitutes for accounting depreciation, economic depreciation and for book value based on accounting, book value based on economic depreciation which is effectively replacement costs, not replacement costs new but replacement costs. I add the numbers up and now I get exactly a return on investment of ten percent.

MS. MILLER: Dr. Cornell, you would say that exhibit 2B is based on the concept of replacement costs?

MR. CORNELL: Yes. Absolutely. So my view here is to kind of summarize where I am with respect to the revenue adequacy measure, if your goal is to use it as a tool to just assess the health of the railroad industry over time I wouldn't change anything because it has been pointed out that it would be more difficult to compute replacement costs for example than read an accounting statement and take off book value and if you're not going to use it for a very precise task, don't do it. Save your money, save your time.

However, if you were to say we want to use this as a thermometer to measure the chemical experiment. We're going to regulate rates based on this measure, then I think you've really got to dig into the measure and deal with the measurement errors, deal with the use of the book accounting which is inappropriate, deal with the deferred taxes and there are probably other minor details as well and the question that I ask the folks at the railroad is why do that because ultimately my final point is what you're concerned with are individual shippers who are captive shippers who may have a problem because they don't have competitive outlet.

I thought of real estate examples. For instance suppose you were concerned with rents being charged to people in the south side of Chicago and you felt that landlords in that area were exercising undue power and charging unfair rents. Okay, why would you really care on a national average whether rents were fair? Because the nation is so big relative to the south side of Chicago, rents could be fair or unfair on a national basis and have nothing to do with whether its fair or unfair in the south side of Chicago so it seems to me that the bottom line here is that as it stands using a revenue adequacy measure for rate setting is a bit like trying to use a saw for brain surgery.

The tool is full of measurement error which would be difficult and expensive to correct but would have to be corrected if you wanted to use it to actually measure specifically whether railroads were revenue adequate and even if you could get there and have this more accurate measure it's really not the right measure to use anyway, so it seems to me that the appropriate step would be to continue to use revenue adequacy in the way you've used as a general tool for assessing the health of railroads and focus your energies on a specific measure for giving the appropriate relief in the cases where that appears to be necessary.

MR. ATKINS: So if I can recap, a system-wide revenue adequacy constraint is fraught with perils. Hard lessons from other industries tell us that it can stifle innovation and attempts to improve service and the logic is very simple. Once a company hits a system-wide revenue constraint, it loses the profit motive to innovate, to improve productivity or to compete for new lines of business. Any increased earnings would be returned to customers through the revenue adequacy constraint and those perils are made exponentially worse if given the serious measurement errors identified by Professor Cornell.

So if you take a discredited approach and use measurements with serious flaws, the results are going to be predictable and somewhat tragic. You don't need to travel down this path. The Board already has a targeted revenue adequacy test that is sufficient to protect shippers from the unreasonable exercise of market power. It's the SAC and the simplified SAC tests. And the SAC test is the gold standard. It's been judicially affirmed on numerous occasions. It's been codified in the statute and the courts themselves have recognized on several occasions that SAC is the preferred approach. And several years ago, this Board said that the full SAC test, which is designed for larger disputes, and the simplified SAC test, which is designed for smaller disputes, together provide a "critical restraint" on the pricing or the exercise of market power but without deterring railroads from making the needed investment to meet the demand for rail transportation and it's clear that SAC is a targeted revenue adequacy test.

As the Board explained in the Excel case the very purpose of the test is to determine how much money a railroad needs to charge to be revenue adequate but only on the portion of the network that is used by the complaining shipper. Now in that case the railroad challenged that characterization of the SAC test to the D.C. Circuit and they lost. The D.C. Circuit said the Board was on solid ground in characterizing the SAC test as a targeted form of a revenue adequacy test, one that implicitly takes into consideration the revenue needs of the defendant railroad. But what the reviewing court said next really cuts to the heart of this hearing. In that appeal the railroad observed that its RCM figure was approximately 316 percent yet the Board had prescribed a rate well below that level and the railroad argued to the D.C. Circuit that it simply had to be able to charge Excel a rate equal to or greater than that measure of its system-wide revenue needs in order to have any prospect of being revenue adequate.

But the D.C. Circuit agreed with the Board that a measurement of system-wide revenue need provides "no guidance" about what a particular customer like Excel should be charged for the particular services and facilities that it uses. "No guidance." And you can see why it really provides no guidance if you look at the extraordinary scope of the Norfolk Southern network.

This is a map depicting their network. Norfolk Southern operates nearly 20,000 route miles through twenty-two different states. It is a truly huge network and each part of that network has unique character and unique operating characteristics. So Norfolk Southern's overall financial health really does provide you no guidance about what the rates should be for a coal movement or a chemical movement or a grain shipper or any other commodity that goes over that network.

But in contrast, if a shipper comes in and complains about the reasonableness of their rate, the SAC test and the simplified SAC test both will examine just the portion of the network that is being used by the complaining shipper. So let me give you the illustration from the SunBelt case and I'm not here to debate the merits of the case. I simply want to use it as an illustration about how the SAC test is already a targeted form of a revenue adequacy test.

In this case, the parties submitted evidence about how much money Norfolk Southern would need to earn to be revenue adequate but just on the 580 miles of the network that was used by the SunBelt. Another illustration would be the Duke case which was about a decade earlier and in that case the complaining movements came from a bunch of coal mines in the central Appalachian mountain region and so the SAC analysis was properly focused on what did Norfolk Southern need to earn to earn adequate revenues on the coal network that was used to serve Duke.

Now the DuPont case, my last illustration, that was a very big SAC case. It examined over one hundred OD pairs, but what it shows you is that the SAC analysis is flexible enough to accommodate the need to look at a larger portion of the network. Now I can appreciate that it may have been a bit daunting for the parties to submit this evidence and for staff and the Board to process it, but what that effort showed you was that the rates were reasonable if you look at the replacement costs of the assets deployed to serve DuPont. Now we can stay on this slide for one moment longer because it also demonstrates how deeply flawed your annual calculation of revenue adequacy is.

If Norfolk Southern were truly approaching revenue adequacy on a system-wide basis then this SAC analysis, which included a huge swath of the Norfolk Southern network, that analysis should have shown when you look at this core network that the rate of return was approaching their cost of capital but that's not what it showed. There is a huge disconnect between what your annual calculations show Norfolk Southern needs on a system-wide basis and what your SAC analysis demonstrated when you looked at the core part of their network. How can that be?

Well, I don't think it's going to surprise anybody that the discrepancy that disconnect flowed from measurement errors identified by Professor Cornell. Your historic, your annual calculations are based on historic depreciated book value of assets, many of which have been on the books for decades and if that weren't bad enough the Board then reduces that historic book value by roughly one third or $8 billion to deprive Norfolk Southern of any return on investment from investments made from deferred taxes and those measurement errors explain the disconnect.

So give the serious measurement errors in your annual calculation and the known perils of rate of return style regulation and the fact that a system-wide measure provides you "no guidance" about the reasonableness of a particular rate, how do shippers justify imposing this constraint on the railroad industry?

Well, first they dismissed concerns about the incentive problems discussed by Professor Sappington, the known problems that plague rate of return style regulation. For example, NIT League and the American Chemistry Council tell you we're just trying to frighten the Board. So they boldly declare that "no one is arguing that to the extent that increased financial returns to the railroad industry result from increased returns in competitive markets that those returns should be taken from the railroads." Hogwash. That is exactly what is being proposed. NIT League and ACC are advocating a rebate approach and under that rebate approach excess revenues would be returned to so called captive customers, those paying differentially higher rates.

So say Norfolk Southern found a way to earn additional $100 million from competitive traffic but they were already over their revenue adequacy constraint, well then under this rebate approach that additional $100 million would have to be rebated back to that small subset of shippers, those earning differentially higher rates and so just as Professor Sappington warns, that rebate approach Norfolk Southern would lose the incentive to compete for new lines of business.

Or take another illustration, what if Norfolk Southern found a way to squeeze more productivity out of its existing assets and again it might be able to earn another $100 million. Again NIT League and ACC under their rebate approach would have you rebate those increased earnings back to a small subset of shippers, those paying differentially higher rates and, again, just as Professor Sappington cautions, the railroad would lose the incentive to find new ways to become more productive.

Now I'm sure when NIT League and ACC take the stand tomorrow, they're going to try to characterize their approach as some kind of enlightened progressive light-handed form of rate regulation. Nothing could be further from the truth. If you have a bird that walks like a duck and it swims like a duck and it quacks like a duck, then we should just go ahead and call that bird a duck. NIT League's rebate approach is classic rate of return style regulation with all the pitfalls and all the perils.

Now Western Coal Traffic League makes a similar point to NIT League that you heard this morning about how the railroads are dramatically exaggerating the incentive problems and to give Western Coal Traffic League some credit they're the only customers who are not in here actually advocating some kind of rebate approach, but they're advocating instead a system-wide rate freeze on all captive traffic above a certain threshold once you become revenue adequate. But that has its own kinds of ugly incentive problems and Professor Kalt already cautioned you about the problems associated with rate freezes and with the quote from Milton Friedman, but what I'd like to do is focus on a hidden feature of their proposal that I want to make sure that you're aware of.

Western Coal Traffic League wants to make sure that their approach applies to contract traffic so when they say that when a movement comes off contract this rate freeze should still apply and that is going to sharply discourage anyone from entering into contracts once you hit a system-wide revenue adequacy and you're subject to that constraint because why would a railroad agree to provide a lower rate maybe in exchange for some consideration from the customer if they know when it comes off contract they're not going to be able to return it to the previous level.

You know, these contracts are in place sometimes for decades and the prospect that there would be a rate freeze on contract traffic just because of their overall system-wide performance is really going to discourage contracting which is at the heart of many of the Board's statements about what it wants to encourage. Now the other thing that parties do is they dismiss any reservations about internal cross subsidies. So if you impose a rate cap on Norfolk Southern you're going to create a web of cross subsidies all over their network. Shippers located on light density lines are going to be subsidized by other customers. Shippers located in corridors that are complicated to operate or over difficult terrain like the central Appalachian region are going to be cross subsidized. Chairman Elliott, I notice my time's expired. Do you mind, it may take me a few moments longer to get through my. Thank you.

Now most just ignore these problems. But Western Coal Traffic League goes further and asks you to set aside the prohibition against cross subsidies once a railroad is revenue adequate on a system-wide basis. But the principle that a customer should pay for the facilities it uses and not try to shift those costs to another customer is sound, whether or not the railroad is revenue adequate on a system-wide basis. And third, shippers dismiss the need to use current replacement costs as discussed by Professor Cornell and as Professor Kalt spoke about with his apartment complex illustration.

Now according to Western Coal Traffic League the proper comparison should be to rent control policies so in their pleadings they are urging you to forego current market values in favor of historic book values so their members can enjoy subsidized rail service. Rent control policies cannot possibly be the right analogy. The right public policy is clearly set forth by a remarkable group of 50 leading economists including two Nobel laureates who all urged the ICC to use replacement costs. I hope, Commissioner Miller, that you'll offer us a chance to answer some Q&A about why there were so many luminaries including Professor Schmalensee from MIT who signed that statement in support of using replacement costs.

Finally, shippers complain that SAC is broken and I can appreciate that you have reservations about the full SAC test. It's expensive, it's complicated but it's well suited when you have millions of dollars in dispute. Norfolk Southern is worried, however, that you're being urged to adopt or embrace simple solutions over the right solution. They want you to embrace simplicity but sacrifice economic soundness and precision. Where there's a clear market failure Congress entrusted you with a very challenging task. In those circumstances this small agency is supposed to override the marketplace and dictate the maximum lawful rate that a carrier can charge. That is not an easy problem and there is no easy solution.

Moreover, when you're being asked to

transfer millions of dollars from a customer to the railroad we think it's important that you get it right. But what about the simplified SAC model? It's fast, it's simple and over the railroad's objections you imposed most of the data burden on the railroads and now provide unlimited relief. Because when you think about it the heart of everyone's criticisms about the full SAC is the need to construct a hypothetical railroad and honestly that's a difficult concept to explain to lay people that why would they need to construct a hypothetical railroad but under the simplified SAC analysis they don't need to do that.

There's no need for them to do hire experts to develop an operating plan. They don't need to figure out if they need hump yards. They don't need to figure out how to wrestle with the complexities of a diverse gathering network. They don't need to fight about how many computers their hypothetical railroad's going to need for their fictional IT department or how many executives they're going to have to hire and at what compensation. But if I were a genie and I could rub a magic lamp, and I could deliver for you a model that perfectly and painlessly simulated the rate that would exist in a perfectly contestable marketplace, one without any barriers to entry, the shippers would still object that those are not the reasonable rates that they're looking for. Instead, they're asking you to harken back to the bad old days and impose on the industry a discredited form of rate regulation.

Norfolk Southern urges the Board to resist those requests. Rate of return style regulation is discredited because it stifles innovation, productivity, and investment. You already have a targeted revenue adequacy test in the simplified SAC and SAC models that targets just the portion of the network used by the shipper. You have serious measurement flaws in your annual calculation that will be difficult to fix and even if you somehow correct them as the

D.C. Circuit correctly noted a measurement of system-wide needs provides you "no guidance" about the reasonableness of a particular rate so no matter how difficult or politically unpalatable it may seem, Norfolk Southern strongly urges you to abandon the concept of a system-wide revenue adequacy constraint that rests on the historic depreciated book value of assets. Thank you.

MR. ELLIOTT: Thank you very much. Deb?

MS. MILLER: So, Mr. Atkins, one of the things that's been emphasized today both from the economists and from yourself is that you can't use this system-wide average of revenue adequacy to set rates and certainly from the shipper groups, they've recommended multiple approaches, but I guess my question is can you use system-wide revenue adequacy to create a trigger? Is it not appropriate for the Board to look at system-wide revenue adequacy and when railroads reach that trigger then to look at whether or not you regulate rates for captive shippers in a different way? Not set them based on that revenue adequacy but use a different process once they've reached that point?

MR. ATKINS: Right. Well, clearly we don't think it's appropriate to use it to regulate, so the question is, is really should you use it as a target to change the rate regime that you've had in place for the last thirty years and I'll tell you the analogy that comes to mind.

The answer is, is no, we don't think it's sufficiently precise and frankly we don't see why you should be concerned that a railroad is earning in excess of its cost to capital given that eighty percent of traffic is competitive so that's going to be the portion of their network that is driving those improved earnings but I'll give you my simple analogy and if it works, it works and if it doesn't, it doesn't, is, if you go into a doctor and you have a patient who is in poor health, the doctor will tell that patient to eat well and exercise and you know what will happen over the course of time is that patient will rebound. Their health will improve.

But, if you go back into the doctor and the doctor takes some measurements and says look, your blood pressure's back to normal. We think you've achieved this state of real genuine health, they don't then use that as a trigger to say, well stop eating well and stop exercising. If you have in place solid regulatory policies that are ground that are based on the principals that Professor Sappington has spoken to, then using it as a trigger to change those policies does not make a great deal of sense.

MR. SAPPINGTON: If I might just follow-up on the point. I think your question is an excellent one and it isn't totally apparent but it's a critical point that if you use overall revenue adequacy as a target to start changing rates on just the captive shippers, for example, you really are doing system side rate of return regulation. You're saying to the railroads, if you earn a substantial amount of profit or perform well financially on your unregulated services, we're going to punish you for that and make you charge less on your other regulated services. So use it as a trigger or use it explicitly to set rates, either way, you're giving the wrong signals to the railroads by telling them if you succeed, you're going to be punished for your success and that's not what you want to do in order to motivate good performance in the industry.

MS. MILLER: Well perhaps there is something here I'm not fully understanding and that very possibly we're talking about economics and finance but it seems, as I've been trying to understand these issues, that one, when you look at the concept of revenue adequacy and whether it does or doesn't create a trigger, you're not doing that to say railroads can't earn more than their rate of return across their system. You're doing it to say when they've reached that point, do we need to look differently at how they are charging their captive shippers who have no competitive options.

Throughout the course of the hearings today, I've heard a lot of things that would clearly convince me one has to be very careful about broadly regulating an industry or using rate of return to set a cap and I get all of that and completely agree but what I keep coming back to is using it as a way to, in a much more surgical way, look at a very small piece of the industry that is still under our regulation and particularly for those of you who are in academia I would just really like to understand these issues a little bit better and it feels sometimes like the answers are broad brush. They apply to the whole broad concept of regulation, not to an appropriate level of regulation to a very small section of the industry.

MR. CORNELL: Let me just give one specific thing and then I'll turn it over to Dave, if you do want to use this measure as a trigger, then you really do have to approve the measure. You can't, you have to really examine deferred taxes and make a real effort to replace accounting depreciation with some measure of economic depreciation.

MS. MILLER: Excuse me, and I was glad because in the earlier panel, deferred taxes came up and I meant to go back to it because I would just tell you, I do not understand that issue, so I would be interested in your saying a bit more about deferred taxes.

MR. CORNELL: Well, the way the income measure works is remember, when you're taking a measure of earnings and you're dividing it by a measure, the amount invested. So let's say I'm earning ten dollars and I've invested a hundred, then my rate of return is ten percent, which I'm going to compare with the cost of capital. Now the question is how much have I invested? What is the hundred dollars? And the way it's currently done is you add up all the investments the railroad has made but then you deduct out the amount of deferred taxes they have on their books for complicated argumentative reasons. Now, since the deferred tax numbers that it cancels out, if you're comparing two points in time, I haven't focused on it but if you're going to use that measure as a trigger, then you've really got to think deeply about whether it's appropriate to deduct out those deferred taxes because it pushes the measure of return way up by reducing the denominator. And one of the points about deferred taxes that was, that really went back and forth when the ICC was considering it is you think about why did Congress put this program in place? They were trying to encourage investment in a broad swath of industries. Not just the railroad industry but a group of other ones. By denying the railroads the ability to earn a return on investments that they make from those deferred taxes, you're basically cutting in half the benefits. They still get the immediate tax benefits of deferred taxes. They're not going to relinquish them. I sure that sends a shudder through the heart of the CFO.

So they will take the immediate benefits but you've deprived them of the long-term benefits and what the reviewing court at the time was very concerned about was, are you really frustrating what Congress intended to do with this deferred tax program? But ultimately they deferred to the discretion of the agency and what we would say is it really fundamentally does not make a great deal of sense for you to tell Norfolk Southern that you're going to lower down their investment base because the money came from deferred taxes. They should get a return on all of their investment regardless of the source of funds, which is also a point that was made by the luminaries when they were encouraging the board to look at replacement costs. They said it should be replacement costs regardless of the source of the funds, whether it's from deferred taxes or from shippers or from debt or from others. You should be measuring it based on the replacement costs.

MR. SAPPINGTON: If I could just go

back to your original questions which I think is, again, an excellent one. My view on that is that you've already got an excellent earnings regulation regime in place. Very principal based upon sound economic analysis, which says how are we going to regulate the earnings in this regulated sector? Not industry wide but just on the shippers who need protection from the Board. Well you've got in place a wonderful system which is really rate of return type regulation but done right, not done improperly.

MS. MILLER: But is that wonderful system, is that SAC?

MR. SAPPINGTON: Yes, it is. Because what it's really saying is that what are the costs of an efficient supplier of these services. That's essentially the competitive standard and that's what regulation should be designed to do.

MS. MILLER: I have to say, I do understand why from a philosophical standpoint one would look at SAC and say really it's a perfect approach but when you implement SAC, nothing about it feels like a gold standard or like a perfect approach. I mean, it strikes me that it's a pretty difficult way to figure out what anybody's rate needs to be and the threshold for getting in is so high, the cost of using it is so high, it really discourages people who have concerns about their rate from bringing concerns to the Board.

MR. SAPPINGTON: Sure. I certainly understand that but I think you've already got one remedy in place and I think Professor Kalt suggested another one this morning which I endorse entirely. First, as Mr. Atkins talked about, you've got the simplified SAC test, which I think again, it's not the gold standard but I'll let him characterize it but I would see it perhaps as a silver standard. It still does an adequate job, not perfect, but when you ...

MS. MILLER: Tin, it's the tin standard.

MS. BEGEMAN: But it's never been used so we really don't know.

MR. SAPPINGTON: Okay. But it seems to be in principal and again Mr. Atkins can speak to this more than I can, this seems to be a reasonable alternative to consider if again, you believe that the SAC standard is the appropriate standard, which I do, but if that's too costly to implement perfectly you look for ways to do it reasonably well, if not perfectly.

The alternative is to, I think, maybe I'm being too optimistic here, but from my experience in the telecommunications industry, they faced a similar problem when the Federal Communications Commission had to implement prices. People said well what are the reasons. Trying to replicate the prices that would prevail in a competitive market and there was controversy about exactly how you do that. But the industry as well as people from the Federal Communications Commission got together and worked on a model which then everyone could use in the regulatory hearings and again, it didn't answer all the questions but it created a framework for which you could have a reasonable discussion about what's reasonable and what's unreasonable, making your job as the final adjudicators much easier.

MR. ATKINS: Commissioner Miller, I have another thing just to keep in mind and I know this may not be sort of small comfort for you but you're experiences with the SAC analysis unfortunately started with the DuPont case.

MS. MILLER: Uh-huh, yes. I was going to say when you showed that and said that this shows how you can use the SAC case to cost out the system I thought hmmm.

MR. ATKINS: It was a complicated case and I just, as a bit of history and one of the things that the Board has always, the SAC analysis has always been this slowly evolving process where every couple of years some sort of really complicated question comes to the Board as it gets litigated by the parties and over time with sometimes some nudging from the Board, you get a breakthrough and you settle on the approach and then they move on and then something new will come along. There is a lot of examples. The best one is given the complexities of the operating plan is our operating plans. So in the 90's, the shippers were really struggling to put in a case that made any sense whatsoever even for a simple coal only network. Because they kept using this silly string program as their operating plan. And so, as a result, we had cases where, well the Board would have cases, my apologies, that came in where you would have trains colliding.

You'd have flat railroads because they just couldn't get the operating model to work and eventually the Board wrote a decision that said stop using this model. Start using the RTC model because it's actually a much better approach and that nudge and that helped the process evolve a little bit. Right now, you're in a process of a bit of evolution where you're seeing these, this one particular large case come in with a merchandise system. With some time, with some guidance from the agencies, that too will start to simplify itself out and you'll be able, either the parties will be able to prevail or not but at least the process will continue to evolve and continue to provide guidance to the parties and with that guidance, the disputes tend to fall away. New disputes come back on the table but old disputes are no longer really a part of the process.

MS. BEGEMAN: If I could ask a question, and maybe it's to Mr. Atkins. We'll start with you but others should feel free to chime in. One of the things I'm struggling with, and I will sound like I'm a different person maybe than I was during an earlier panel, but I can certainly understand the hesitation of the unknown from the industry's perspective as far as what a revenue adequacy constraint would actually be, and how it would impact industry and their ability to earn adequate revenues, etc. And we also keep hearing about SAC, and every time I hear about SAC, I kind of have a Pavlovian negative response, I will admit.

But SAC was part of Coal Rate Guidelines and constrained market pricing principals and along with SAC was revenue adequacy and something called management efficiency and they also had some kind of phasing constraint. So, it wasn't that it is only SAC, it's just, as I understand, that SAC is the one that ultimately was pursued by the parties. I think Western Coal Traffic League had a lot to do with helping figure out how the process came about.

I do wonder is it just that we haven't gone down the revenue adequacy constraint path far enough to figure out what that methodology should be? It's hard to say that we shouldn't or can't do it when it's been talked about since 1985. So while I appreciate the message from the industry saying don't go there, long before any of us got here, a previous agency decision said it was a constraint. So if you could just comment on how you would now just ignore it.

MR. ATKINS: We're not asking you to

ignore what was in place in 1985. What we're saying is that worldwide regulators are discarding this type of approach and so I don't know what was going through the head of the ICC in 1985. There is a lot of information on the record about how even in the notice of proposed rulemaking, it doesn't look anything like the revenue IRC constraint that you're hearing talked about today.

But let's put aside what was or was not on the minds of the Agency in 1985. The economic theory has evolved. Professor Sappington spoke to you about there was this myth that regulators really believed that you were serving the public interest by putting a hard constraint on the overall revenues that a regulated entity could earn but what they experienced, the empirical evidence and the experience in other industries was it has really bad side effects. It discourages innovation, it discourages competition, it discourages productivity and so they moved away from that approach to more progressive approaches that look a lot like the SAC model or the simplified SAC model.

So, we're here today urging you to abandon it not because of what was said in 1985 but because of the lessons that other industries learned who were put under that type of constraint and we don't want to wait, have you place the constraint on the industry and then wait to see the negative consequences rear their ugly heads and then come to the Agency and say now it's time to get rid of it. We feel that you should learn from those prior mistakes and the evolution and the thinking and get rid of it now.

MR. SAPPINGTON: As I mentioned in my testimony, just to supplement what Mr. Atkins had to say, is that around the 1980 period in the telecommunications industry, for example, all 50 states they have their own state regulators of telecommunication services. In all fifty states, they employed rate of return regulation and today, almost none use rate of return regulation so there has been this fundamental shift in understanding of how regulation works and how it should be designed and so just as Mr. Atkins said, it's hard to understand exactly what the rationale was for those statements back in the Staggers Act but certainly academic thinking, the principals of regulation have changed dramatically since then and so perhaps what they had, even if they did intend to think about rate of return type regulation in this industry, that thought is no longer what would be well received by students of regulatory policy.

MS. BEGEMAN: But the statute hasn't changed to keep up with --

MR. ATKINS: Well the statute hasn't changed but there is nothing in the statute that directed you to, the agency to impose a system-wide constraint.

MS. BEGEMAN: No, but with respect to the concept of differential pricing.

MR. ATKINS: Right. The statute hasn't, clearly the statute hasn't changed but we do think that you should avoid going down a path and using a discredited approach and you know, it bears mentioning again, using a discredited approach that rests on these flawed measurement errors just compounding the two together just doesn't seem like the right policy. If you have reservations about the SAC model, then focus our attentions on trying to grapple with those. I understand you've already done some, had some outside experts come in and try to help you improve the internal processes. Nobody is suggesting that there isn't room to improve upon it but what they want is for you to stay on solid economic foundation and not go back to using approaches that we already know what the consequences of imposing those on the industry are going to be.

MS. MILLER: Can I, you just used the term a system wide constraint.

MR. ATKINS: Yes.

MS. MILLER: And why do you call it a system wide constraint?

MR. ATKINS: Okay. So, from my perspective, I see two categories of proposals that are before you today. You haven't actually heard the worst one yet that the Western Coal Traffic League started. The worst ones are the rebate proposals. So it's NIT League's proposal and it's the ACC's proposal where they are going to rebate to the twenty percent based on the overall financial health of the industry. That's an overall constraint that the revenues that are generated from the eighty percent are going to affect how much rebate you give back to the twenty percent.

The fact that you're only giving back the twenty percent or ten percent or five percent, it doesn't matter how small the number of shippers are that you are returning the money to, you're trying directly the performance of the railroad in this competitive marketplace to what you will let them charge their so called captive traffic, that's a system wide constraint. That's a different approach than what Western Traffic

League, you heard about first thing in the morning.

They said up front they are not putting an overall constraint on the railroads. That approach has a whole different set of incentive problems. We can talk about them some more if you'd like to but that's not the one that we're referring to when we say you're going to impose a system wide rate cap on the industry.

MR. SAPPINGTON: So even if you're not regulating the prices in the competitive sector, you are regulating earnings there so in that sense you are regulating the entire industry rather just focusing it on the captive shippers.

MS. MILLER: But why do you say you're regulating earnings because you're not restricting earnings.

MR. SAPPINGTON: Well you would be, as I understand the proposal that's been made to rebate the earnings above adequate levels to reduce the prices in the regulated sector. That is, in my view, regulating earnings in the entire sector which in my view, I think is a real recipe for disaster because you've got, at a minimum, eighty percent of the system functioning very well by essentially deregulating the industry which has led to these wonderful gains and now to think about going back and either directly or indirectly regulating all elements of the industry would just be a real disaster.

MR. ELLIOTT: A question for Mr. Eliasson. With respect to, I guess this is more of a railroad issue, the railroads constantly point to their ability to invest and their concern about that. Are the railroads, or I guess we'll use CSX as the example, capable of getting the money that they need to make the investments that they need to run the railroad now the way they want it? Are they able to do that and go out and get that money?

MR. ELIASSON: We are, and the reason we are is because of the fact that if you look at our ability to earn a good return on the incremental spending that we do right now so the two and a half billion dollars that we are spending this year, we have the ability to earn a return above our costs of capital of that.

If you change that paradigm, if you say that you can only earn X+1 then that will change and as a result, as we think about our capital budget and we look at that growth portion specifically to begin with, that growth portion that we are spending to improve our customer service and improve the customer access to our network. At that point, we have to see what that return is and if that return that you're subscribing would be less than what our other options would be which would be dividends or share of purchases, we then would be forced by our shareholders because they want to invest in where the highest return is to rethink that proposition which is why we say that it's a vicious cycle that you get into if it starts capping the returns on the railroad, because incentives are no longer there to do what we've done as you saw on the slide earlier where the rates today are sixty cents on the dollar versus 1980.

And the irony is that the three customer groups that generally are here to complain the most about what we do as an industry have raised the rate three times as much as we have and yet we're here trying to find an avenue to transfer earnings from us to them partly because there is an outlet for that discussion that otherwise wouldn't exist. So yes, if you cap the returns on incremental investments, we would go to a bad place. We're not there today and our investors are looking at the prospect of continuing to improve our returns and that's why we get the access to capital. If that changes, things will change in terms of the investment decisions that we're making.

MS. BEGEMAN: Do you mind if I ask a question?

MS. MILLER: Go ahead.

MS. BEGEMAN: For the Board's annual determination of revenue adequacy, which CSX has not been on that list to be revenue adequate based on the Board's determination, does that mean anything to you when you read the Board's annual determination? Do you just glance at it or does it have any true meaning whether or not you're revenue adequate according to us?

MR. ELIASSON: In terms of the capital decisions that we make today within the framework that exists today, that is not as relevant. But the threat of actually having something happen, if we become it, does enter into our mind as we make investment decisions that are long-term in nature. But right now, we focus on, if I go out for 2016 and we allocate a capital budget of let's say 2.5 billion dollars, if we think that that return is not going to be there, we can't with good conscious, put as much money into the capital but specific to the revenues, right now, the way that we understand the rules of the game, it is not something that is in the forefront as we focus on, as we decide our investment choices.

MS. BEGEMAN: Thank you.

MR. ELLIOTT: I've asked this question before or it's been asked, but with respect to the TRB report and this is probably for the economists, there is a lot of strong criticism that we heard about the SAC test. There was another proposal with respect to rate comparison and I just wanted to hear your thoughts on their suggestions in that, what was a neutral study.

MR. ELIASSON: Maybe I can just first take kind of an

MR. ELLIOTT: Sure, I didn't mean to leave you out.

MR. ELIASSON: Well, I feel neglected. But, and I'm not an expert on it but I've heard this come up earlier today about comparison so maybe that's a way to address it. Having been in sales and marketing and having had DuPont and other people as my customers, being Vice President of Chemicals for a period of time, that makes me very, very concerned because we constantly try to get traffic off the highway system. We constantly try to grow our business by taking our competitor's traffic. Okay?

Now, when we do that, if I go after a business that let's say has a $1500 revenue per carload, because that is the rate that is required to get it onto my system, and that I have traffic over here that I'm charging $2500 because of efficiencies or because of the fact that the network is only populated by one customer, in that comparative analysis I'm going to be penalized for going after that $1500 carload and we are going to have incentives that then are perverse for us and from a public policy, an economic policy perspective, you're going to go down a path that I don't think we want to go down because I'd rather only keep fewer profitable customers and continue to shrink the way we've done in the previous 25 years because that's the only way I can get close to continuing to earn improved returns.

MS. MILLER: I don't see why necessarily, if I'm following the TRB proposal, that would happen. I mean, what they were really recommending is that one, what you want are market based rates so this is another way to try to get an understanding of what a market based rate would be when you don't have a market, when you don't have a competitive market to set it and you don't come out and say this will be your rate.

What you do is say this rate appears to not meet a modeled rate out of the competitive market and then it opens up the opportunity for both sides to come in and talk about their rates. So it doesn't necessarily say what you'd end up with is the rate that came out of the model or a comparison but it would be what would trigger looking at that rate in more detail.

MR. ELIASSON: Differential pricing is fundamental to everything that we do. Each and every customer is located differently, has different cost characteristics too.

MS. MILLER: Sure.

MR. ELIASSON: So I'm trying to just say that if you are allowing, if you are going down a path of comparative rates, which to some degree frankly is the reason why you have the CSX case in front of you that you have today which tell in our minds, market dominance should never have been assessed there because there are hundreds and thousands of trucks leaving that facility on a daily basis but because you do a rate comparison that said, that indicated that this is, warrants your further investigation. But if I go after traffic that has a lower cost profile to it and you compare that to my existing traffic, I am going to be at a disadvantage.

MR. ATKINS: I'm going to let my economist speak first and then I'll give you one or two thoughts.

MR. CORNELL: What Professor Schmalensee probably has in mind is that you could build a statistical model that looked at all of the competitive routes and then picked out characteristics.

MS. MILLER: Right. That's the way I understood it.

MR. CORNELL: And then you'd be able to predict by using those characteristics what this non-competitive route would have. My answer to that would be a bit like my answer to the issue with revenue adequacy. The proof is really in the pudding. He's kind of sketched this idea out.

MS. MILLER: Sure.

MR. CORNELL: What I would think you would have to do is ask him or some of his colleagues or maybe the Board and its staff if you were interested in that approach and maybe with help from the industry to see if it works, to really try to delve into it. Because at this level, the issue is going to be the one that Professor called and the CSX people talked about. Does the model really effectively tell you what this unique line should be priced at? Is it sufficiently comparable? That's a hard determination to make particularly when there's been no specific work done yet.

MR. SAPPINGTON: I think Professor

Cornell's characterization is exactly right that the proof would really be in the pudding here. In theory, this benchmarking idea makes perfect sense. But in theory so does the SAC test. In fact, I think SAC has more attributes than the benchmarking approach. And also the benchmarking approach has been tried in other industries, in the water industry in particular.

Again, people thought well look, we'll just see how one water supplier of public water systems, how one system is performing as compared to another one. We also have geographic monopolies because of the transport costs and water. So we'd say how costly it is for this firm to produce rather than the other and if we see one firm has higher costs, that must mean they are inefficient and so we shouldn't, we should punish them. But then you get into the hearing room and you get into very complex detailed discussions of exactly why one firm has higher costs than the other because of the characteristics of the environment in which they are operating.

So I think it just changes the nature of the discussion but you really, getting at the same point, you're trying to replicate what prices would be charged in a competitive market. You just have two possible benchmarks, both of which have, in theory, potential attributes but I think in practice they are both going to be very difficult to implement perfectly.

MR. ATKINS: Commissioner Miller, if I could just offer you a couple of my observations about that report. I'm not sure if we're seeing it quite the same way or not but I think we might be. You can break that report into three components. The majority of the report talks about how there are better ways to assess whether or not you should even be able to get into the Board, then using 180 percent of ERCs.

MS. MILLER: Right.

MR. ATKINS: Okay? I'd characterize that as about 80 percent of their report where they talk about how ERCs has got serious problems, 180 is an arbitrary number. I don't think there is a person in the room that would disagree with you. That was a Congressional compromise in 1980 and it's really not much that you can do about it. But it's an interesting part of their analysis where they would do this benchmark look to see how far out in the tail are you. There is also a part of it that says that you shouldn't do revenue adequacy, which obviously we don't disagree with.

MS. MILLER: Uh-huh, that's true.

MR. ATKINS: The middle part of it --

MS. MILLER: So you have to take the good with the bad, right?

MR. ATKINS: No, I'm sorry. I'm not just going to do that because the middle part of it is bare and the middle part of it is well okay, once I've decided, I've got a better way of you coming in the door. How are we going to resolve this? I'm going to put basically you in a room with an arbitrator. Both sides make arguments and the arbitrator just picks a number. That's not a meaningful way to decide how, whether the rate is reasonable or not.

You have to have a standard. Whatever the standard is, you can't just say arbitration is the standard. Arbitration is a process. It's a simplified process. It's not the standard that you apply. What would you tell the arbitrator? If the arbitrator is sitting in a room, you say okay, the parties get to submit evidence about what the reasonable rate is. How does he pick, or her? It's just lacking the one, the heart of it. And if you look at their criticism of SAC, to be honest, that's also lacking.

It's remarkable that that report doesn't even mention any of the literature about the SAC test. It doesn't discuss Bombles (phonetic) work or Panzer's work or Willig's (phonetic) work. When you look at up front who they spoke to, they didn't speak to a single railroad or a single railroad expert. Now, and I think unfortunately when you don't talk to, I think you can appreciate this, when you don't talk to everybody and you don't listen to everybody about a particular issue, you're likely to end up maybe going in the wrong direction and I just found that aspect of their report thin, lacking, and it just didn't seem to justify setting aside SAC which so many economists have said over the years is a robust way of trying to determine the maximum lawful rate.

MR. SAPPINGTON: I would agree entirely. I do believe they pointed out some potential flaws in, or problems in using the SAC test but they didn't, in my view, seem to fully appreciate the sound principles on which the SAC test is based. And again, in my view, the basic principal that you need to keep in mind when designing good regulatory policy, is that you're trying to replicate the discipline of a competitive market and that's precisely what the SAC test does. So, just because it is hard to implement or because it has some minor flaws, doesn't mean you throw it out. It means you try to work with it and improve it but again, I think that is giving you overriding correct principal in which to base your regulatory policy.

MR. ATKINS: And Commissioner Miller, I know that they didn't propose a benchmark approach but all of the points that Fredrik made about how appallingly bad it would be and the disincentives it creates, keep those in mind as you listen today because one of the proposals from NIT league and ACC is once you're revenue adequate, they would propose a benchmark approach. So they would try to gauge the reasonableness of the rate based on the deal that CSXT cut in order to keep another traffic on the system and that guts demand based differential pricing.

If there is anything fundamental about the railroad industry, it's the need for them to engage in demand based differential pricing. You can't gauge the reasonableness of the rate for somebody who's got competitive alternatives and say that's the rate that you need to charge everybody. Then you have no more demand-based differential pricing and there is no recovery of the fixed and common costs needed to support the network which is, I think, the basic point that CSXT was making.

So it doesn't necessarily apply to the TRB report because I don't think they were advocating a standard and that's the problem with it, there wasn't one. But keep it in mind as you hear about a benchmarking approach with some of your future panelists.

MR. ELLIOTT: Thank you very much.

MR. ATKINS: Thank you.

MR. ELLIOTT: Okay. Why don't we get started with the next panel?

MR. VON SALZEN: Okay, thank you. Good afternoon Chairman Elliott, Vice Chairman Begeman, Ms. Miller. I'm Eric Von Salzen, outside counsel for Arkansas Electric Cooperative Corporation or AECC. I'm going to be discussing the legal context for evaluating the policy changes required to reflect the attainment of revenue adequacy by the Class 1 railroad industry. The legal authority supporting that discussion are cited in AECC's previous written submissions. With me is Michael Nelson, AECC's Transportation Consultant, who will then discuss the economic context for the specific policies and practices the Board should adopt to recognize this new reality in the railroad industry.

As you know, and as the remarks you've heard today certainly demonstrate, there is a sharp division between the railroads on the one side and their customers on the other about the importance of the industries attainment of revenue adequacy. We think this is a big deal that calls for the Board to change its focus from helping the railroad industry to achieve financial health to pursuing other policy goals set by Congress. The railroads, in contrast, argue that there is no reason for the Board to change anything in response to their attainment of revenue adequacy and that you should continue with business as usual.

The railroads are wrong. In the Staggers Act, Congress directed the ICC and later this Board, to make adequate and continuing effort to assist rail carriers in attaining revenue adequacy. That's what you and before you, the ICC, have been doing for three and a half decades and you have succeeded. As a result of that success, the Board no longer has a mandate to support further increases in rail earnings. However, it does continue to have responsibility for many other policy goals and statutory requirements.

One of these that has become very important very rapidly in recent years stems from the accrual of earnings by the Class 1 railroads in excess of the revenue adequacy level. Earnings for the Class 1 industry as a whole have been over the revenue adequacy level since 2011 and the amount of excess earnings has increased each year. Cumulative total for the period from 2011 through 2014 is over $6 billion, which 2.5 billion accrued in 2014 alone.

The rail transportation policy makes clear that under circumstances like this, the Board is expected to take remedial action when revenues exceed the revenue adequacy level. That it is, as the rail transportation policy says, the policy of the United States government to maintain reasonable rates where there is an absence of effective competition and where rail rates provide revenues which exceed the amount necessary to maintain the rail system and to attract capital. That's exactly where we are today. Thus, the Board's job as prescribed as the rail transportation policy is to rectify that situation.

Your predecessor, the ICC, considered the situation that would arise when the rail industry earnings surpassed the revenue adequacy level as they now have. The commission interpreted the statute to require changes in regulatory policy and practice once revenue adequacy was attained. The ICC said carriers do not need greater than adequate revenues and in a regulated setting, they are not entitled to any higher revenues.

The ICC's interpretation of the Staggers Act was affirmed by the Federal Court and it was ratified by Congress when Congress passed the ICC Termination Act of 1995. The principal of ratification means that when Congress reenacts a statute, it accrues and implicitly incorporates into the statute authoritative agency and judicial interpretations of it. Thus Congress has ratified the ICC's interpretation that what the Staggers Act requires is that when the railroads attain revenue adequacy, there is no longer any justification for further increases in differential pricing that would yield revenues above the revenue adequacy level.

Now the railroads and some of their economists claim that the statute, as it has been authoritative interpreted and ratified, is outmoded and fails to reflect the latest thinking in regulatory theory. We think they are wrong but this isn't the forum for parties to argue about whether the statue is outmoded. The Board applies the statute. It doesn't change it. If the railroads really think that the statute is outmoded and should be changed, they need to make their case to Congress. Raising this claim here is simply dilatory. Notice of this hearing, the Board identified several issues for discussion related to the coal rate guidelines.

What I've just said relates to the issue near the top of page 3 of your notes. By way of clarification, I want to stress that the ICC's language that you quoted about railroads seeking to obtain returns in excess of the cost of capital is from a footnote in the coal rate guidelines that addresses what the ICC apparently regarded as a possible exception to the general rule. But the general rule stated in the text of the guidelines is that carriers do not need revenues greater than the standard revenue adequacy and we believe that in a regulated setting they are not entitled to any higher revenues. The ICC didn't explain why it dropped that footnote in about what a railroad would need to have to show to get revenues above the adequacy level after just having said the railroad isn't entitled to higher revenues than revenue adequacy. Perhaps the Commission just wanted to warn that if a railroad did seek to earn returns above the cost of capital would have a very heavy burden to bear to justify that. But the general rule is clear that a railroad is not entitled to revenues above the revenue adequacy level.

AECC has provided the board with a roster of specific actions to address the achievement of revenue adequacy and the rapid growth of excessive earnings including rate case reforms, enhanced availability of competitive access and a revenue adequacy constraint that would refund the shippers excess rail revenues. I want to stress that all of AECC's proposals are consistent with the ICC's recognition that railroads must be allowed to earn revenues that provide a rate of return on net investment equal to the current cost of capital so that it fairly rewards the companies investors and ensures shippers that the carrier will be able to meet their service needs for the long term. AECC's proposals would not in any way threaten the ability of the railroad industry to attract and retain needed capital.

You've heard a lot of harsh rhetoric from the railroads today about how shippers want to turn the clock back to the 1970's, just want to pursue their own selfish interests and so forth. Our proposals are supported by the principals adopted by the ICC over thirty years ago, affirmed by the federal appellate court and ratified by Congress. We are proposing that the Board take appropriate and measured steps to reduce the harms to the public interest being caused by rail rates in excess of what the railroads need to attain adequate revenues. Mr. Nelson will now discuss the economic and public interest considerations that accompany the legal issues that I've just been discussing.

MR. NELSON: Thank you, Eric. Good afternoon and welcome back Chairman Elliott. Good afternoon Vice Chairman Begeman and Commissioner Miller. This proceeding is of great personal and professional interest to me because, as I think I mentioned the last time I was here, as a graduate student in the late 1970's I took a lot of coursework in regulatory economics with Professor Ann Friedlaender of MIT. Her work was central to the economic theories and analyses upon which the Staggers Act reforms originally were based and in June of 1983, she was one of the signatories of the verified statements submitted by the group of economists that reviewed and endorsed the ICC's original plans for implementing CMP in the coal rate guidelines proceeding.

During the formative years of the Staggers Act reforms, I was well immersed in the economic theories and principals upon which those reforms were based and over the years I periodically have described the economic and public interest considerations that have arisen in specific work proceedings. From that basis, I've had some thoughts as I was sitting back there about how to reconcile different things that have been said here today sort of through the lens of CMP and I've tried to incorporate some of them kind of on the fly in my prepared remarks. If I'm unsuccessful in that, I would welcome questions at the end and I specifically have a few thoughts related to the Vice Chairman's questions related to SAC. So we'll see if I run out of time first.

Thirty-five years after the Staggers Act, the economic theories and principles upon which it was originally based continued to provide a useful framework and guidance for regulatory actions and this shouldn't come as a surprise as neither the statutes nor the relevant economic considerations have changed much in the interim. We've heard a lot about the benefits of competition from previous speakers today so I'm not going to spend a lot of time on that.

In a competitive marketplace there are few worries about excessive earnings or poor service or long-term industry financial health because those issues tend to be addressed by the natural actions of market forces. It is important to note that competing firms typically face ongoing incentives to innovate in ways that enable them to offer more attractive products and services at lower costs. In the longer term, pushing down costs produces financial health and resiliency by broadening the markets the firm can profitably serve and its ability to generate profits even under adverse market conditions. Although the cost structure of railroads necessitates some amount of differential pricing, market forces can provide a very effective tool for ensuring quality service, reasonable rates and innovation that supports long-term industry health.

When listening to Mr. Hamberger's remarks earlier today, it seemed like he was pretty much making the same point but it did contrast with remarks I recall from a few years ago where a Class 1 railroad executive testifying before the Board dismissed shipper expectations of substantial carrier investment, reduced rates and improved service as being an impossible combination to achieve. While his position made some intuitive sense, the railroads actually delivered that combination of positive features for the first fifteen years or so of operation under the Staggers Act, an accomplishment enabled by robust productivity improvement in that more competitive environment.

AECC has discussed in several filings and I believe it was corroborated in some data that Union Pacific submitted in this proceeding, that the break point between the strong early performance under the Staggers Act and the more recent pattern of adverse cost changes, productivity stagnation, large scale service problems and inflation adjusted rate increases, came with the reductions in market forces stemming from the consummation of the large 3 to 2 merges in the east and west and the implementation of the bottleneck rule. Efficiency and productivity improvements driven by market forces are important to the long-term health and performance of the industry and should not be overlooked. The economic benefits of market forces were at the heart of the Staggers Act reforms and have not changed in the interim.

From an economic perspective, the Staggers Act anticipated that the rail industry, its customers and the economy as a whole would rely on such market forces to the greatest extent feasible. The main limitation on such reliance was the recognition of the difficult financial condition of at least portions of the rail industry and the resulting need for the ICC and SDB to give weight to improving the ability of the industry to attract and retain capital as needed to maintain, modernize and expand. This is reflected in Section 1070482. With all due respect to the economic arguments advanced by the railroad parties, those arguments ask us to believe that the freedoms provided by the Staggers Act and thirty-five years to exercise them, have not been sufficient to enable the railroads to now attract and retain needed capital. I don't believe that is the case and the Board should not either. The Board has abundant evidence that proves the Staggers Act has not failed and that, if anything, the industry for a while has been ripe for the types of changes the Board is now considering. AECC has gone over this evidence in detail and this and other proceedings and here, I'll just touch on some of the major points.

The industry has vigorously exercised the freedoms provided in the act merging down to seven Class 1 railroads, abandoning or spinning off extensive trackage and implementing dramatically force reductions. The Board's own consultant, Christiensen Associates, found the Class 1 railroads all have been able to attract and retain optimal amounts of capital at least since 1995. Christiensen also found that even with the adverse costs and productivity impacts that resulted from the duopolies and the bottleneck rule, the Class 1 industry has been revenue adequate since 2001 under the Cap-M standard.

By the AAR's numbers, the railroads have invested 575 billion in their networks between 1980 and 2014 with the typical current annual build and maintain expenditure over 20 billion per year and well over half of that representing capital spending on track and equipment.

Also, there are the massive premiums above the current market value of tangible assets that have been paid in recent merger and acquisition transactions. World-class investors like Warren Buffett, not to mention the large railroads themselves like NS and CSX have paid the large premiums that demonstrate the ability of the railroads to attract abundant capital.

Last, but certainly not least, are the

results of the Board's own methodology for determining revenue adequacy. To illustrate this, I've updated the chart I presented at the public hearing in Ex Parte 711. Is my chart here somewhere? It's pretty much a line going up so I don't think people need to see the details too much. The Board now has found that the Class 1 industry as a whole was revenue adequate in 2011, 2012 and 2013 and that the level of earnings in excess of the revenue adequacy level has increased each year.

Available information for 2014 indicates that this pattern has continued with excess earnings exceeding two and a half billion as I think Eric mentioned and for reasons discussed in our recent reply filing in Docket No. EP558, even that number may be low. In any event, the excess earnings of the Class 1 railroads and large, growing rapidly and show no sign of returning to the revenue adequacy level on their own. The cumulative excess earnings are now so large that AECC believes they provide an answer to the Board's question regarding the proper duration of the measurement period for assessing revenue adequacy.

The large excess earnings in recent years mean that for almost any period of time the Board realistically might consider, the cumulative excess earnings will be positive. It's true, if you go back the four years that was mentioned earlier, six years which is a little more than I think NBER would say is the length of an average business cycle, or even nine years which is the entire time that data is available since the original DCF method was set aside by the Board.

So the short answer is that it's kind of a moot point that no matter the number of years, the result is still likely to show excess earnings and the need for the Board to be prepared to undertake remedial action. ACC agrees generally with the idea that revenue adequacy is a long-term concept, but mainly in the sense that it is supposed to reflect the ability of firms in the industry to attract and retain needed amounts of capital and ability that is not determined by a single accounting period.

AECC recognizes the administrative convenience of some amount of smoothing but that doesn't seem particularly relevant when the pattern is one of a sustained upward trend as we have here. AECC is also concerned that some of the longer periods under consideration may inhibit the Board in the exercise of its responsibilities under Sections 1070482 and 10101, Section 6. If something really bad happened tomorrow and industry earnings went below the revenue adequacy level, it could take years before the Board, if it adopted a longer evaluation period, it could be years before the Board would have a basis for acting pursuant to Section 1070482 because the longer evaluation period would still show excess earnings.

So I guess our point that we're trying to make is that to the extent practical, the Board should be trying to push up to help the industry when things are bad and push down to protect the economy from the substantial harms of excessive earnings when things are good for the railroads but too much averaging could undermine both of those roles.

Aside from the proper duration of the revenue adequacy measurement period, AECC believes it is important that the Board give careful consideration to the possible role of industry and regional level measurements of revenue adequacy. As discussed further in our opening comments, in a duopoly you are basically always going to have one carrier doing better than the other at any given point in time as a result of its management decisions.

Relying on regional or industry level measurements would have the effect of preserving the incentives for the individual carriers to still compete against the average and would address the incentive problems that several of the railroad parties have mentioned today that potentially could arise from attempting to cap the earnings of individual carriers at their individual revenue adequacy level.

Regarding the Board's question about limitations on differential pricing for all captive shippers versus a subset most subject to market power, AECC has explained how the theory underlying CMP means generally the reductions in differential pricing should be concentrated in the shipments most likely to be subject to the exercise of rail market power and here I'd like to jump in with a little bit of sort of spontaneous CMP description that I think will address some of the economic discussion that has taken place already today.

We heard from the AAR panel references to regulation should be based on a competitive market standard and it should seek to minimize distortions. CMP does that but it doesn't use the standard that they seem to have in mind for the frame of reference for the distortions that they seem to have in mind. CMP starts with the textbook competitive market standard that price is going to equal marginal costs and that is infeasible in the rail industry to actually achieve that and I think it was actually mentioned some in the prior panel that you have to have some amount of differential pricing if you're going to be able to pay all the bills in the fixed cost and earn a return on the capital because marginal cost pricing doesn't work due to the cost structure of the industry.

But the amount of deviation from marginal cost pricing that is allowed under the theory is permitted following Ramsey pricing principals. Ramsey pricing principals here refers to you try to have the largest variation from your ideal standard of a marginal cost price. You have the largest variation born by the traffic that is least elastic and least susceptible to changing the pattern of movement that would occur if the ideal marginal cost pricing occurred.

But the whole idea of Ramsey pricing and Ramsey pricing principals is to minimize the disturbance of the pattern of resource allocation that you get from the competitive pricing standard. So the same principal that allows differential pricing to occur in the first place basically requires that as you compress differential pricing, because you only are supposed to allow the amount needed to enable the industry to reach a revenue adequate level and this goes back to the consensus statement of the economists.

If you read that, I think it's explicit in there that the sixteen of them signed their name to a document that said allowing earnings above the adequacy level would constitute abuse of market power. So, I believe that it appeared in the coal rate guidelines because that's what the CMP theory says and the economists all agreed on it. So, the compression through the rate structure would be applied generally at the higher end of the differential pricing that is in place and I know there has also been consternation or concern about the role of non, prospectively competitive traffic in generation contribution that would then turn into supercompetitive earnings and be subject to some of the proposals including AECC's but the fact that that traffic would contribute to, potentially contribute to what we call supercompetitive or excess earnings and generate a need to apply downward pressure on the upper levels of differential pricing, that was something that was in the Christensen study so its, it may sound bad but it is what the theory says and it's the theory that allows differential pricing in the first place.

I think the railroads have tried to use as a frame of reference that they've gotten used to the idea of differential pricing and they've kind of gotten away from the idea that's very evident in the original theory that the amount of differential pricing is supposed to be minimized. It's not supposed to be business as usual. It's supposed to be only as much as is needed to accomplish that end.

On the Board's question regarding the connection between revenue adequacy and availability of competitive access remedies, AECC agrees with NIT League's presentation earlier basically that all of the forms of competitive access authorized by the statute have been available to the Board with or without the achievement of revenue adequacy.

From AECC's view, the Board has historically applied a policy toward competitive access that is so restrictive that basically no awards have of competitive access have been made within the past 30 years and to the extent that that policy reflects the Board's past support for the attainment of revenue adequacy, it may be a nexus for a policy change regarding competitive access that isn't specifically statutory but it's in the policy.

In consider competitive access, the Board should also take account that although competitive access may produce downward pressure on rates in some circumstances, it also promotes increases in efficiency that tend to decrease costs particularly for train load and unit train traffic so then that effect on rail earnings may not be as large as some may fear. An illustration of this is provided in a study of the bottleneck rule presented to the Board by AECC which found the operating cost savings that potentially could be achieved by rescinding the bottleneck rule for trainload and unit train movements were comparable in magnitude to the rail industries claims regarding potential lost revenue.

Congress recognized that competitive access can be very beneficial to the industry and the public interest by promoting greater efficiency and lower cost operations. Congress also recognized that the adequacy of rail service may result not only from a carrier's financial health but also from market forces released by competitive access that can motivate carriers to deploy the resources needed to provide adequate service. The attainment of revenue adequacy provides an opportunity for the Board to finally take steps to exercise its competitive access powers to realize the service and other benefits of market forces that have been largely held in abeyance for the past 35 years.

In removing or considering the removal or restrictions on competitive access, the Board would need to address the concerns expressed by some rail shippers including WCTL this morning, that the actual or hypothetical availability of competitive access could undermine rate case protections.

Mr. Van Salzen tells me it would be inconsistent with the statute if relaxed restrictions on competitive access made on the basis of the achievement of revenue adequacy nevertheless created opportunities for increased differential pricing by undermining the market dominance determination. The Board, therefore, should ensure that competition prospectively introduced by a competitive access is sufficiently effective in the meaning of Section

10707 that it will not permit rate increases if the rate case protections are removed.

Toward this end, AECC has been working on a specific proposal that potentially could be useful if the Board elects to pursue this issue. With the achievement of revenue adequacy, the Board should now be actively embracing, relying on and applying competitive market standards. This doesn't mean open access, rather it means things like acting decisively to curb excess earnings, removing artificial constraints on competitive access and forcing efficient management standards and accountability and things like that.

In the end, this is what remains in the statute after revenue adequacy is attained. It also is the path that addresses the legitimate needs of shippers in a competitive economy, protects the economy as a whole against the harmful effects of excess earnings, provides the Board with meaningful leverage over chronic rail service problems and ultimately is beneficial to the cost structure and the long-term health of the railroads themselves. The red light is on so I don't want to go into my SAC stuff.

MR. ELLIOTT: Thank you. Mr. Cutler.

MR. WHITESIDE: Mr. Whiteside.

MR. ELLIOTT: Mr. Whiteside. I apologize.

MR. WHITESIDE: I am Terry Whiteside. I want to thank the Board, Chairman, Vice Chair and Commissioner Miller for inviting me out here for the cultural experience of the humongous heat and humidity. I come from a part of the country where we rarely wear deodorant and I assured Lucy Marvin this morning that I was wearing deodorant.

Thank you for the opportunity to appear here today on behalf of ARC's, seriously. And for the fifteen groups representing the shippers and producers of agricultural commodities mostly in the west. ARC's membership includes captive shippers and producers of agriculture commodities and other commodities including coal, sand and other minerals. Since

1987, ARC has been active in STB proceedings and focused primarily on the fairness of captive rail customers. We hope the day is coming when we will see a better balance between the railroad's revenue needs and effective regulatory recourse for captive shippers and farm producers.

The railroads argue that if status quo isn't broken, don't fix it. These arguments are understandable but they are false. Regulatory policy adopted when the railroad industry was fragmented and financially weak are no longer appropriate when the industry today is very concentrated and enjoying record revenues and profits. The railroads have surely benefited from the ICC and the STB policies that were first adopted in the past. Let's face it, that was the goal of those policies and they worked well for Class 1 railroads.

Now, however, it's time for a change. You don't keep giving blood transfusions after the patient has regained health. The captive shippers whose high rates restored the railroads to financial strength need some relief. Simply stated, captive rail shippers and farm producers need more reasonable rates and should have less revenue extracted by the market dominant railroads that no longer need to collect excessive revenues from regulated freight.

Out west, the northern tier states, we have whole areas, whole industries and whole states that are completely captive. The ag shippers and the producers we speak for are particularly poor served by the regulatory status quo. SAC and simplified SAC are prohibitively expensive and the three benchmark rule is designed to help only the isolated shippers whose rates are out of line with those of nearby competitors in states where they are all out of line.

In addition, rail rates on wheat are generally paid by local grain elevators but borne by the farm producers and we've talked about that before. The farm producers bear it and the grain elevators pay it and the real question is sometimes the very first thing that happens when we file a case is the railroads will say you don't have standing to even file even though you pay the freight. The three benchmark rule is designed really only to help those isolated shippers as I said. In addition, rail rates on wheat are generally paid by the local elevators. The elevators may be captive but they may not suffer from high rates.

I was up in Saskatchewan this week and one of the things that they were talking about was how they have just come to the conclusion that the elevators only care about the cross county differential. They don't care about what the rates are. Well that's the same things in the States. In addition, few farm producers and small elevators have the time or resources to fight the major railroads particularly under STB policies. They are generally seeing, I have McCarty Farms in mind, to favor the railroads. They're small businesses and they must focus on all the other requirements of earning a living leaving little time for complex regulatory proceedings. That's why ARC has long supported arbitration. Final offer arbitration works well in Canada. We were pleased to see the support for final offer arbitration in recent TRB reports. The one modernizing freight rail regulation.

We'd also like to see further work done on arbitration through programs like NGFA but remember that NGFA's program, while the railroads have indicated they were coming there, really only affect the grain companies, not the farm producers who actually pay the freight. Arbitration under STB regulation and contrast has not been helpful. Railroads decline to arbitrate because it's voluntarily. Over rates, they prefer litigation, which they see and I think correctly, as favoring them. And even if the railroads agree to arbitrate, require an arbitrator to apply SAC or simplified SAC or three benchmark on an accelerated schedule would not really improve the shipper's prospects or save them any money.

What does all of this mean? It all adds up to no effective regulatory recourse for captive shippers and producers and no bargaining leverage for those who would prefer a negotiated solution. Every captive shipper and producer would prefer to negotiate a mutually exclusive compromise of disputes over rail rates and rail increases. Sounds like an impasse and it is an impasse. However, this proceeding could be a game changer. The Board can and should implement the revenue adequacy and management efficiency constraints promised 35 years ago when CMP was adopted.

For us, the most important result of the revenue adequacy constraint would probably be to reduce the size and frequency of rail rate increases on captive traffic. For grain shippers and producers and other shippers who are only able to ship under tariff rates, rail rate increases are a significant problem. Contracts are not an option because the railroads don't offer them.

In the future, captive shippers and producers asked to pay differentially higher rate increases than their non-captive counterparts. That would have to be a basis for resisting railroad pricing that threatened to exasperate the rates exceeding the competitive levels that the railroads say they support. Such shippers should also be able to negotiate compromise solutions. Something they rarely do today and they can't do.

This would be a major improvement for the small captive shippers. Particularly shippers and producers of ag commodities but we have a number of small shipments that are still captive. They may be big shippers but they are small shipments. There would be no significant reduction in revenues for revenue adequate railroads. Restricting future rate increases and STB rate complaint proceedings by allowing differentially higher increases only where there is a long-term revenue adequate railroad provides justification which would not affect base rates that are differentially higher due to past pricing of captive and non-captive traffic.

To address this problem, ARC has proposed a two benchmark rule approach for revenue adequate railroads and have expanded the revenue VC comp benchmark for rate challenges involving railroads not yet found to be revenue adequate. Railroads criticize calls for any effective limits on differential pricing or captive traffic as inconsistent with their need to invest and is likely to produce more service meltdowns of the type experience in the west in recent years. In effect, they seek to be rewarded for poor performance by being assured that attainment of revenue adequacy will never affect their ability to price captive traffic the way they do today with little or no exposure to regulatory remedies.

This makes no sense to me. The revenue adequacy constraint would affect only captive traffic. Far less than half of the rail customers probably in the five percent range would apply only in rate cases after market dominance was established and contract shippers could not invoke the constraint. Exempt shippers could do so only with such difficulty as to make the challenge unlikely and even shippers with potentially meritorious complaints rarely seek relief as shown by the small number of rate challenges filed at the Board.

For reasons discussed in our prior comments in this proceeding and several others, there is really no reason to expect a flood of complaints or any significant impact on revenues. Rather, after thirty-five years, captive shippers and producers would enjoy a well-deserved increase in the likelihood that rates on the captive traffic will be increased no more than need be for the railroads to attract necessary capital.

So, I thank you and I'll turn the microphone over to Mr. Cutler.

MR. CUTLER: Thank you, Terry. You

can hear me okay? Thirty-five years ago the ICC adopted constrained market pricing with its four constraints, SAC, revenue adequacy, management efficiency and phasing. Since then, CMP has been cited consistently by the ICC, the STB and the courts as the basis for regulation of maximum rail rates, reasonable rail rates. In 1996, pursuant to a congressional mandate, the Board attempted to address the fact that only one of the CMP constraints, SAC, was operative by leaving the vast majority of rail rates effectively unregulated. However, simplified SAC and three benchmarks, which were adopted to fill this regulatory gap, have proved to be of little use to captive rail customers unable to afford SAC.

I agree with Ray Atkins, there have been ups and downs in SAC but I think five million is still a pretty safe estimate of the cost of litigating a SAC case. I believe the railroads often spent more. I don't remember the most recent figure for simplified SAC but I think it was at least a million dollars, maybe half a million for three benchmark cases.

Moreover, simplified SAC necessarily produces higher rates than SAC even though SAC rates should never be exceeded and with three benchmark in U.S. Magnesium, the "winning shipper" got relief only to the extent that rates could not exceed 350 percent of variable costs. That's not really much of a relief mechanism.

If there is a silver lining, it's that the barriers to regulatory recourse that made shipper protections more apparent than real and serve the railroads very well. They consolidated abandoned trackage, reduced work forces, made shippers absorb costs and burdens and raised rates with rates increasing more on captive than on non-captive traffic. As the recent TRB report found during the period of 2002 to 2013, rail rates on grain and oil seeds went up eighty percent for smaller shipments of less than eighty cars and seventy percent for larger shipments. More than for any other commodity except coal.

TRB also found that by 2013, rates where smaller volumes of grain were some thirty-five percent higher than for larger volumes of fifty cars or more. It should come as no surprise that the result is increasingly frequent findings that railroads are meeting and exceeding revenue adequacy even under the Board's extremely conservative standards.

To date, ICC and STB rail rate regulation has served the goal of increasing the major railroads financial strength very well. This is the good news of the last thirty-five years though the railroads are still not satisfied. Despite glowing reports to shareholders of their extraordinary profitability, they will not acknowledge that they have achieved revenue adequacy and demand that the Board adopt replacement cost accounting. Even that would not, in their view, provide any basis for any reduction in differential pricing of any captive traffic unless the shipper wins a SAC case.

As the beneficiaries of thirty-five years of preferential treatment under CMP, the railroads can't now claim with any legitimacy that CMP should be rewritten to eliminate the two constraints, revenue adequacy and management efficiency constraints that hold the most promise of helping all captive customers, not just those who can afford to bring a SAC case. None of the railroad's arguments for major surgery on CMP like this have merit.

Let's look first at the argument that it would be unlawful for the Board to implement the revenue adequacy constraint, i.e., that CMP is inconsistent with the Board's governing statute. This was not the railroad's position in the original judicial review of CMP. In Consolidated Rail Corp v. United States, 812 F 2nd 1444, the third circuit concluded, "we are convinced that the ICC's basic approach on revenue adequacy is consistent with the 4R and Staggers Acts". In so holding, the court was agreeing with the position of the railroads which would raise questions on appeal about implementation of SAC and management efficiency that the court found premature.

In 2001 when the DC circuit reviewed the STB's only application of the revenue adequacy constraint, the court rejected three arguments relevant to this proceeding. Those arguments were that the Board could not apply the revenue adequacy constraint, that it should have applied the SAC test and that it was required to use replacement cost accounting. This is the CF Industries v. STB decision by the DC circuit, 255 F 3rd 816. The fact that the carrier was a pipeline rather than a railroad does not affect the court's holding of statutory compliance.

Mr. Sipe attempts to brush CF industries aside because the pipeline was raising rates across the board. Number one, that has nothing to do with the question of statutory compliance of CMP and the revenue adequacy constraint applied in that case. Number two, in the grain business, rate increases across the board are very common. Exactly the kind of thing that the pipeline did in the CF Industries decision. In addition, I don't mean to suggest that the statute and case law don't include other guidance. The railroads say the statute doesn't support revenue adequacy but you have been directed to 10704 and to the rail transportation policy.

There is another factor that has not been mentioned earlier so far today and that is this, for thirty years now in proceeding like this after proceeding like this, not to mention in individual rate cases, but also the rulemaking proceedings that determine how these cases are litigated, a consistent refrain by the railroad industry is don't do what the shippers want because that will keep us from attaining revenue adequacy. Now, they can't have it both ways. They can't say that for thirty-five years every regulatory decision, in every regulatory decision, the benefit of the doubt has to go their way because of the Congress congressional mandate that this Board promote the attainment of revenue adequacy and then say when we get there, oh, well, that was just a thermometer to check trends and it has nothing to do with regulation of the rates of captive traffic. The revenue adequacy constraint does not violate 49-10707 D2, which prohibits presumptions of market dominance or rate unreasonableness when RVC ratios are above 180. That's not what we're talking about here. We're talking about revenue adequacy not exceeding 180. And Section 10701 does not preclude requiring revenue adequate railroads to justify continued differentially higher rate increases on captive traffic.

In any event, the initial burden would be on the shipper to establish captivity, invoke the revenue adequacy constraint and show that the defendant railroad was violating it. They in defense of a challenged differentially higher rate increase, the railroad would have to show why the challenged increase should be permitted. It would make no sense to require a shipper to bear the burden of showing with particularity, I'm quoting from that footnote in coal rate guidelines here, it would make no sense to require a shipper to bear the burden of showing with particularity a defendant railroad's need for differentially higher revenues, the harm it would suffer, if it could not collect them and why the captive shipper should provide them. Obviously the railroad needs to be the party that shows those things and if those are not the tests, how could a captive shipper challenge differentially higher rate increases?

SAC, SSAC and three benchmark were not designed for this task. In an analogous situation, the ICC decided in 1985, the same year it decided coal rate guidelines that in market dominance determinations shippers would have the burden of proof as to inter and intramodal competition and railroads would have the burden of proof as to product and geographic competition. That's product and geographic competition to ICC's second one. The Board clearly has legal authority to implement the revenue adequacy constraint.

The real question is how the constraint should work. ARC can agree with WCTL that a four-year period is enough for revenue adequacy to be adjudged long-term. Parenthetically, we also support WCTL on the Cap-M issue that's going to be discussed more tomorrow. And as AECC points out, the 2010 Caves Christensen report found no problems with access by major railroads to adequate capital going back many years.

I also agree with Mr. Nelson's point that this problem will probably take care of itself. It's unlikely that long-term revenue adequacy determinations will be made, that any railroad will be adjudged by the Board to be long-term revenue adequate within the sense that we're talking about now this year or the next because there is no proposal on the table in this proceeding. There will have to be further proceedings, the Board will have to decide what to do based on the comments we are discussing today. Probably another NPR will have to come out, probably more comments.

We're talking a couple of years at a minimum, I think, to implement any revenue adequacy constraint. During that time, we'll have more data and apparently we have three years of data showing a lot of railroads revenue adequate now. We'll have more Ex Parte 552 series proceedings determinations come out parallel with your consideration of what to do about the revenue adequacy constraint. In our view, those future Ex Parte 552 series revenue adequacy determinations will just continue to show more good news about railroads attaining and exceeding revenue adequacy.

A more serious concern will be whether railroads might anticipate the implementation of a revenue adequacy constraint and respond by attempting to gain the Board's revenue adequacy calculations or possibly attempting to raise as many captive shippers rates as possible, as high as possible prior to the time when differentially higher rate increases for captive customers might be constrained.

The Board should be vigilant in addressing any such actions. The question of how to implement the revenue adequacy constraint needs to be considered in two parts. The first part involves constraining future rate increases by revenue adequate railroads by disallowing differentially higher rate increases on captive traffic than on non-captive traffic absent exceptional circumstances. ARC, et al, and other shipper parties strongly support such a constraint consistent with the discussion in coal rate guidelines, 1 ICC 2nd 520, 534-36 and footnote 36. This is the WCTL version of a revenue adequacy constraint that's been discussed already today.

The revenue adequate railroad whose differentially higher rate increases is challenged by a captive shipper is violating this constraint should bear a heavy burden in attempting to justify any exception. In most cases, the rule should be no more differentially higher increases in captive customer's rate once a railroad is long-term revenue adequate. The railroads can't seriously contend that this aspect of revenue adequacy constraint so long anticipated will significantly affect their revenues or their ability to invest in necessarily infrastructure improvements.

As for suggestions of service problems, if the revenue adequacy constraint finally becomes applicable, can anyone really imagine any justification if a railroad were required to impose non-differential rate increases on captive and non-captive shippers and attempted to retaliate against the captive shipper with service cut-backs? Such conduct would seem to invite an unreasonable practice complaint or other vigorous regulatory responses.

Revenue adequate railroads should be more likely, not less likely, to provide good service even if revenue adequacy doesn't guarantee honest, economical and efficient management. Unregulated monopolies can be guilty of service failures and may be more likely to fall short of meeting customer needs given the absence of disincentives.

It's not clear how the management efficiency constraint would apply to revenue adequate railroads. That constraint has been interpreted to serve only to offset the amount by which a railroad falls short of revenue adequacy. In other words, under certain interpretations, the management efficiency constraint would go away once revenue adequacy were attained. Maybe there could be a use for it in situations like the one I'm talking about or like the situation with the recent service problems out west. However, the Board has other tools available to address poor service and more differential pricing of captive traffic should rarely, if ever, be seen as an appropriate remedy for that.

It must also be remembered that revenue adequacy based constraint on future differential rate increases would affect relatively little traffic. It wouldn't apply to rate increases on captive traffic that match increases on non-captive traffic. Many railroads claim that they engage in such pricing. Only long-term revenue adequate railroads would be subject to the constraint. Most of their customers couldn't invoke it. According to the most recent STB data, only 40 percent of railroad revenues came from shippers paying rates exceeding 180 percent of variable costs. This has been discussed earlier. I won't go into all the details again.

One other point, many shippers pay rates at or only slightly above one hundred eighty percent of variable costs or they ship in low volumes. For these shippers, rate litigation is uneconomical especially since rates cannot be ordered below 180 percent of variable cost. Other shippers wouldn't be able to show qualitative market dominance or wouldn't want to shoulder the necessary litigation burdens despite having grounds for relief. Accordingly, railroad claims being driven below railroad adequacy due to rate cases seeking to limit future differential rate increases are not credible. This is especially true in light of evidence by railroads of their increasing ability, which comes as no surprise to captive shippers to raise rates on non-regulated traffic.

AAR witness accounts say revenues from regulated shipments have been flat while revenues from competitive traffic, I'm quoting here, "have generated an additional 2.5 billion in contribution of the variable costs". Half of the overall increase from 2008 to 2012. Remarkably, some railroads argue that this is a bad thing as if captive customers should make disproportionally high contributions to railroad revenues forever. But in its October 30, 2006 decision in Ex Parte 657 sub 1, major issues in rail rate cases, which was affirmed by the DC circuit, the Board cited that "important principal that a railroad should recover as much of its cost as possible from each shipper before charging differentially higher rates to captive customers", STB decision 12.

At a minimum then, the Board should implement a revenue adequacy constraint that protects captive shippers against unjustifiable differentially higher rate increases by long-term revenue rail adequate railroads. There is, however, more to the issue. Specially, the revenue adequacy constraint should also constrain continued differential pricing of captive traffic that occurs through means other than differentially higher rate increases.

In coal rate guidelines, the revenue adequacy constraint was characterized as follows, in other words, captive shippers should not be required to continue to pay differentially higher rates than other shippers when some or all of that differential is no longer necessary to ensure a financially sound carrier capable of meeting its current and future service needs.

Now, a constraint like a western coal

traffic league constraint, which we also support, would prevent only future differentially higher rate increases which would prevent only future differentially higher rate increases on captive traffic by revenue adequate railroads, would help prevent further differential pricing of captive traffic from exacerbating the current competitive disadvantages born by captive customers vis-a-vis non-captive customers. However, it wouldn't remedy those current competitive disadvantages. Those are built into the base rates.

Put another way, captive customers would continue to pay differentially higher base rates than other shippers even after the attainment of long-term revenue adequacy made some or all of that differential unnecessary for the railroad. To this extent, a limited revenue adequacy constraint affecting only future rate increases would fall short of constraining rail rates as called for in coal rate guidelines. The railroads may argue that the Board should not risk driving railroads below revenue adequacy.

Many shippers would agree but too many rate cases and too many prescriptions of reductions in rail rates on captive traffic are hardly a pressing concern today. Over regulation of rail rates hasn't been a problem since the 1970's. Why should the Board refuse to allow challenges to differentially higher base rates on captive traffic if the railroad could eliminate the differentials, charge similar rates to similarly situated captive and non-captive customers and still earn revenues well above levels found adequate by the Board. Earlier today, Mr. Hamberger said that price controls are universally objected to by economists because the introduce marketplace distortions. Well differential pricing also introduces marketplace distortions. Something needs to be done about excessive differential pricing of rail rates and it's a lot easier to grapple with the issue of how to deal with those after a railroad attains long-term revenue adequacy.

The railroads have argued that the

goal of STB rate regulation should be rates on captive traffic that mimic rates charged in the competitive marketplace. Professor Kalt said, I believe I'm quoting here, "the goal is to push prices to levels they would have if there were competition". A revenue adequacy constraint that only applies to reduce most differentially higher future increases in rates on captive traffic cannot achieve this goal. To achieve this goal, we need revenue adequacy constraint that goes father and also enables captive shippers bringing rate challenges to seek reductions and differentially higher base rates when some or all of the differential is no longer needed because a railroad's revenues significant exceed long-term revenue adequacy.

Now, a lot of the discussion this morning seems to assume that revenue adequacy meant the railroad was barely at revenue adequacy and was therefore in danger with any loss of revenues of dropping below that line. That's not the reality. The reality more and more is that railroads are significantly above revenue adequacy and the question becomes whether, to what extent the Board should continue to promote the, well the statute talks about the attainment of revenue adequacy. The statute doesn't say it's the responsibility of the Board to promote railroads achieving more than revenue adequacy.

Now, let's assume there needs to be some wiggle room here to be on the safe side. At some point, the amount by which railroad revenues exceed revenue adequacy calls for some action and that's the point, I think, at which this second aspect of the revenue adequacy constraint deserves your attention. There would still be a bias in the railroad's favor. As noted above, relatively few captive shippers are able to seek relief and many who could file rate cases with some hope of success will never take that step.

In addition, the jurisdictional threshold of one hundred eighty percent of variable costs means that significant differential pricing for railroads is built in and will always be beyond the reach of regulatory remedies. However, this fact is not a reason to avoid fuller implementation of the revenue adequacy constraint. On the contrary, it's a reason to discount the railroad's alarmist claims of financial disaster if there is any change in the status quo.

Various shipper groups have put forward various ways of implementing the revenue adequacy constraint. In the rail transportation of grain rate regulation review proceeding, Arcadell (phonetic) made proposals to deal with these issues which we reiterated in our comments in this proceeding. Basically we recommended a two benchmark approach that eliminates the problematic RBC comp benchmark. As we ready it, the RBC comp benchmark is designed to preserve demand based differential pricing. We're not sure that that makes a lot of sense once railroads have achieved long-term revenue adequacy. The other problem we have with the RBC comp benchmark is it seems to be a way of preserving, protecting from regulation entire rate structures where the same rates are being charged, for example, to wheat shippers across Montana. But, having spoken to those issues at the Board's recent hearing on June 10th, I don't want to spend a lot of time repeating ourselves at this hearing. I would say that, I like Vice Chairman Begeman's point that the how of this part of the revenue adequacy constraint might need to be developed over time as SAC was. One way to allow that to happen would be to, for the Board to say that the second part of the revenue adequacy constraint, the idea of constraining base rates, now the variables have said that, have called this a rebate. Their idea is that you would take every dollar they make in the future and give it to captive customers.

That's actually not what we have in mind. What we having in mind is getting at the differential between captive and non-captive shippers so that those rates are, there is less of a competitive disadvantage for the captive customers. To the extent that that differential is gone, the railroads are free to keep every dollar they can make and God bless them. We want the railroads to succeed and make lots of money. We just think the time has come for them to give the captive shippers who for 35 years have been helping them achieve revenue adequacy, a little relief.

It may take a while for the way, the means of doing that to work itself out but if it were, if shippers were allowed to bring those cases, those issues could be worked out case by case as shippers develop approaches to dealing with a base rate, the differential pricing in past base rates issue. You also have limitations issues that would preserve much of the differential pricing the railroads have enjoyed over the years. The Board can and should pursue a revenue adequacy constraint that does two things. First, writing in future rate increases and second, offering the possibility of challenges to excessive differential pricing and base rates by railroads whose rates are now and will continue to be above revenue adequacy over the long term. SSAC and three benchmark, due too little to restrict differential pricing by revenue adequate railroads for the vast majority of captive shippers.

Finally, the Board asked whether this problem might be alleviated through expanded competitive access remedies. The answer is yes but only if expanded access through switching or otherwise actually produces effective competition as opposed to the appearance of competition. If that happens, no rate case would be filed. The railroads would have the Board believe that a shipper with access to two railroads should never be able to show qualitative market dominance no matter how high its rates. The statute in case law show why such claims are false.

At CF Industries decision upholding the Board's application of the revenue adequacy constraint, the DC circuit listed a number of agency and court decisions holding that for rates above 180 percent of variable cost, the statutory test of captivity is the absence of effective competition. Effective competition doesn't mean having access to two railroads. Effective competition is competition that keeps rates reasonable. ARC, et al, supports action in EP-711 to improve access remedies that have long been provided in the statute. However, such remedies, even if made available will not obviate the need for other regulatory remedies including rate remedies under CMP. Many captive shippers are simply too far from any second railroad, especially in Montana and other large western states for excess remedies to produce effective competition. Even if a second railroad were able to provide alternative service subject to a reasonable access fee, the result would not be effective competition if the two railroads elected not to compete on price or if they both charged excessive rates.

Railroads like to cite contestable market theory under which the possibility of a new entrant might keep an incumbent from charging too much. Like access remedies, contestable market principals can work. But they can also be used in an attempt to shield abuses of market power from regulatory remedies. In EP-705, competition of the railroad industry, we learned of situations in which a shipper captive to one railroad built out to another at great expense only to find that the second railroad was unwilling to compete with the first.

The balance between STB promotion of railroad revenue adequacy and protection against excessive rates for captive shippers needs to be adjusted to meet the changing realities. While new access remedies are a step in the right direction, they are not a substitute for implementation of an effective revenue adequacy constraint.

I see my red light is on Mr. Chairman. I have three sentences if I could add before we go to the questions? First, there was some talk of S-808 and the importance of railroads being able to invest in infrastructure. We support that. We need railroads to invest in their infrastructure and we agree with the importance of railroads being revenue adequate. No one is arguing about that. We are not trying to put a hard cap on revenues, we're just looking to help captive shippers a little bit. But I'd also like to say that I believe, through legislative history of S-808, says that Congress does not intend to change how revenue adequacy works at the STB. So I don't think that legislative effort should be grounds for not going forward with this proceeding.

In addition, Professor Kalt said that there shouldn't be regulation of railroads as monopolies because the activity to public interests that gives rise to that need for regulation is withholding service as a way to drive up costs. And he says the railroads don't do that. Well, okay, to the extent that they don't, assuming they don't, I don't buy the principal. Comcast doesn't withhold service from people, Pepco doesn't withhold service from people.

That can't be the only test of whether the, that's not the only way in which rates get driven up. Withholding service to drive up rates isn't the only way for a monopoly to drive up rates. They could do it directly. When people have no choice but to buy whatever is on offer and to pay whatever is being demanded, that's the easy way to drive up rates. Withholding service doesn't have to be part of the analysis.

Third, the cult apartment building analogy, I don't think we're looking to reinstitute a version of rent control for the railroad industry. On the other hand, we all know that developers all over America are being asked to build in their high priced apartment buildings a handful of units that teachers and cops and nurses can afford to buy. I think if you want to look for an analogy in the apartment world, the analogy would be the railroads being able to charge whatever they like for the mass of their customers who are non-captive shippers but having some constraints on their ability to continue differentially pricing the small amount of traffic they have that's captive. Thank you and we'll try to answer your questions.

MR. ELLIOTT: Thank you.

MS. BEGEMAN: Mr. Nelson, I'll give you an option of when you would like to answer this question, but I know that you said that you had given some thought to some comments that I made about SAC or it sparked some ideas that you wanted to share. The hour is getting late and we do have another panel, and I know you're on tomorrow morning's panel so if you would like to wait and tell me then, but I don't want you to not have the opportunity.

MR. NELSON: If the Board would prefer that I wait, that's fine or I can try to make a quick hit at it right now, either way.

MS. BEGEMAN: Why don't you try to make it quick.

MR. NELSON: At the time SAC was

created, it's important to remember that the industry had had a lengthy period of not being able to attract and retain needed capital so that frequently you would have a case where the incumbent carrier in a rate challenge arguably did not have a physical plant that was anywhere near optimal for the actual mix of traffic that was being moved. SAC was not

MS. MILLER: Mr. Nelson, could you get closer to the mic?

MR. NELSON: Oh, sorry. SAC originally was not intended to be an overall earnings test but rather a test of cross subsidy so that when there was a revenue inadequate railroad, it would still provide a place to draw a line where you'd stop the differential pricing but it would be on cross subsidy grounds, not on overall earnings grounds.

It's not an earnings test. It has an earnings test in it but the earnings test is applied to the hypothetical new entrant that would serve only the part of the system that's needed to move the issued traffic and I think it involved an assumption that a new plant and equipment would be needed because of the presence of the actual plant wasn't optimal or anywhere near optimal.

There were impaired assets that wouldn't be economical to ever replace. So, it was conceived as a way to deal realistically with the situation that existed with the capital stock at the time so that the shipper could get the benefit of the efficiencies that the railroad eventually would implement as the railroads became better able to attract and retain capital.

One of our proposals in rate cases is, with the attainment of revenue adequacy, the Board should consider sort of going the opposite direction from what the railroads are talking about because now if they are revenue adequate, it's reasonable to assume that they are making the optimal decisions on the physical plant so that the mix that they have of new and depreciated, used equipment is approximately what a shipper would want to be able to rely on in a challenge and there is no reason to presume, as there was back at the time SAC was created, there is no reason to presume that the plant that is there is not reasonably efficient to handle the traffic. Does that sort of get at what you were asking?

MS. BEGEMAN: No. And I don't know that I was asking, I was really just sort of commenting about some of my frustrations with the process and I may not have been as articulate as I could or should be, or maybe I really shouldn't be articulate about the matter. As Deb described, we understand on one level why SAC is considered the gold standard, and approved by the courts. The economists think highly of it. But to see it in practice, not even so much from the two parties perspective but internally, I just feel that there is more subjectivity to the calls than I would like to see, and if there were a way to --

MR. NELSON: And I think --

MS. BEGEMAN: -- and I think, I know that the Chairman contracted with folks to try to look at the process. Maybe there is a way that we can improve it. I'm going to remain hopeful. SAC isn't going to go away any time soon.

MR. NELSON: I think from ...

MS. MILLER: Mr. Nelson, could I ask you a follow-up question?

MR. NELSON: Sure.

MS. MILLER: So, when you were describing then saying that SAC at that time originally the railroads didn't really have a physical plant adequate to serve the shippers needs, are you saying that that drove a lot of the development of the SAC process and that SAC was appropriate under that circumstance but not appropriate today?

MR. NELSON: No. I'm saying the reliance of SAC on sort of replacement costs or an assumption that all new capital stock would be ...

MS. MILLER: Oh, that's where that

concept came from.

MR. NELSON: Yes, I believe that's where that came from and why that may no longer even be necessarily an appropriate assumption going forward and I think the rail parties, at least from my perspective they've kind of overstated the transfer ability of SAC as a cross subsidy test to make it into an overall earnings test that has to rely on replacement costs. That just seems like a reach to me.

MS. BEGEMAN: Mr. Cutler, one of the things that you said towards the end jumped out at me. You said you're really just trying to help the captive shippers a little bit.

MR. CUTLER: Right.

MS. BEGEMAN: So that comment contrasts with what the rail industry witnesses are saying about what the shippers are seeking. It's night and day.

MR. CUTLER: I know. I think some of it may be talking past each other. I think that's a lot of that going on in this proceeding.

Some of it is, I mentioned at the grain rate hearing that it was remarkable to see the TRB study talk about fairness to shippers. I don't usually see economists talk about fairness. It's just, nothing against economists but it's just not to be quantifiable or on their radar screens. But, the captive shippers have had a lot to do with the railroads getting where they are today.

Now, the railroads are charging more compensatory prices to non-captive shippers as well but let's face it, those differentials between captive rate and non-captive rates have been substantial and persistent, have persisted for many years. My question, which is that of many other shippers is to what extent is it still justifiable to have similarly situated shippers, one of which has truck competition and the other which doesn't who may be competing with each other and have the poor schmo with no truck competition, no access to trucks for his freight, paying substantially higher rates than all the more fortunately situated shippers of the same commodity who have truck transportation.

Isn't it time, once the railroads are making not just revenue adequacy but more than revenue adequacy, more than they need to invest, to expand, to do all the things that they want to do and that we want them to do. Isn't the ideal, we keep hearing this from the railroads, if the ideal is to push the rates to what they would be if there were competition, doesn't that mean weaning the railroads off of differentially pricing captive freight. Not to just give captive shippers free transportation or cheap transportation but to give them the same kind of rates that the rest of the industry therein gets by virtue of having more competition available to them. That's what I'm getting at. And if you can accomplish that result without hurting the ability of the railroads to invest, or keep their shareholders happy or expand, and I think the railroad's future is extremely bright, the trucking industry is their principal competitor and the trucking industry has got all sorts of problems with driver shortages, regulatory issues and so forth.

I think the railroads are going to continue to grow. I think they are going to continue make money. They are going to continue to have plenty of money to invest. Why, in such a future, where the railroad is just not at but well above revenue adequacy, what's the rationale for preserving these competitive disadvantages on shippers who have less, have fewer competitive options.

Now, the railroads are right, the idea of going into this new territory raises difficult questions of implementation. It will take a lot of time to figure out how to do this well but if the railroads really are consistently well above, and some of them are, out west particularly, BNSF and UP particularly, if they are consistently fourteen, fifteen plus percent with the cost of capital at ten percent or more, why not, if the ideal is push the rates to where they would be if there were competition. Why not do that? Why settle for only not making things worse through the WCTL approach to revenue adequacy that's limited only to not letting differential pricing get more differential in the future once a railroad becomes revenue adequate. Why not proceed to the second aspect of that issue. Now, when I first started working this proceeding, I kind of was where WCTL is but the more I read coal rate guidelines and the more I focused on those principals that we quoted, the more I thought well wait a minute, of course, we should have WCTL type revenue adequacy constraint. Everybody should be able to agree on that one but don't these words suggest the need for more than that and doesn't fairness suggest the need for more than that? That's what led to sort of the second phase of revenue adequacy, of our approach to revenue adequacy constraints.

MS. BEGEMAN: Thank you.

MS. MILLER: So I'm curious if any of you would like to comment on this issue of replacement costs, what the impact of that would be, what your interpretation or definition is of the term replacement costs?

MR. CUTLER: Not us Commissioner Miller. We haven't done the analysis to be able to speak intelligently to that one, I'm sorry.

MS. MILLER: Okay.

MR. NELSON: I'm hoping to touch on that tomorrow if that's all right.

MS. MILLER: Sure, that's fine. And then Mr. Cutler, you've said several times that the railroads are significantly above revenue adequacy. Are you basing that conclusion on the figures published by the Board?

MR. CUTLER: Yes. And I'm anticipating that the trend line is going to continue. Obviously if things change, if there is some sort of disaster and those numbers change.

MS. MILLER: Even looking at coal, you're still that bullish?

MR. CUTLER: Well, in the west, yes. In the west I am. Now BNSF is hauling a lot of coal, export coal, Terry could you?

MR. WHITESIDE: Not yet, but they're working on it. I will say this that the farm producers when I've sat down and explained replacement costs to them have decided that that would be a great revenue model for the farms.

MR. CUTLER: Of course the other thing that's happening out west is sand and oil. That's a dramatically growing business and intermodal. I go back long enough to when intermodal rail was a lost leader and shipper counsel like me were complaining that these rates weren't even at variable cost and there should be an adjustment, a regulatory adjustment to reflect that fact. But intermodal is growing by leaps and bounds and a lot of the intermodalist Asian freight, carried by UP and BNSF from the west coast. So I continue to think the future is very bright for the railroad industry.

MS. MILLER: And then finally, would any of you want to comment, you certainly addressed this but I'm wondering if you would want to comment. What we heard from the railroad representatives that testified today is that the concept of railroads obtaining revenue adequacy doesn't mean anything should change about the regulatory structure.

MR. CUTLER: Oh yes, well, two things. We disagree with that for reasons I just explained, I think, in the discussion with Vice Chairman Begeman. I guess Ray Atkins put the question the most baldly is that he effectively admits the revenue adequacy constraint is there. He doesn't really go into the history or the fact that the railroads have been talking about the importance of revenue adequacy for 30 years and have been getting the benefit of the doubt in STB proceedings for thirty years but he just comes right out and says yes, it's there but thinking, the economic thinking has changed and people like him say it's a bad idea. So you should abandon the railroad-adequacy constraint. That leaves SAC, that leaves SAC, simplified SAC and three benchmark, and those are not working. We need something, I mean one of you said it would be nice if there were a black box that does what SAC is supposed to do and does it fairly and in a way everybody can accept as sound. Now, once again I go back to the days when SAC case after SAC when the shipper won, and these were Utility Coal cases came in at less than one hundred eighty percent of variable cost. The most recent SAC case didn't come in at one hundred eighty percent of cost or one hundred eighty percent of variable cost or less. I think it was two hundred forty or something with Western Fuels case, but let's think about the final offer arbitration that Canada has. Terry tells me that grain rates in Canada are below one hundred eighty percent earned cost.

When the Staggers Act was initially enacted, that one hundred percent compromise was actually, I think it was one hundred sixty percent, and then one hundred sixty-five and it gradually grew over several years to one hundred eighty and then stayed at one hundred eighty.

That builds in a lot of differential pricing. At that time the analysis by Congress was that if every shipment could produce one hundred fifty percent of variable cost the railroads would be revenue adequate, and frankly, I hadn't thought about it before, but that aspect of the legislative history of the Staggers Act may be relevant to this proceeding.

MR. VON SALZEN: If I could just add, and I agree with all of that, but, you know, there are hard questions in this proceeding. I'm awfully glad that I don't sit up where you are and have to decide them. All I have to do is make arguments about one side or the other. But there's one question that's very easy and that's the question of whether the railroads are right, that now you should just continue to do what you've always done. Now look, the statute required you, and before you the ICC, to make an adequate and continuing effort to assist the rail carriers in attaining revenue adequacy. That was one of the things that you were required to do.

I don't think the railroads have been in here over the last thirty-five years complaining that you weren't doing that, so I have to exercise the assumption that that's what you've been doing. And if that's what you've been doing and now you've succeeded, you're like the builder who's got a contract to build a ten-story office building or an apartment if we want to go back to that analogy. When he gets to the tenth floor he stops. He doesn't keep building. In your case, it's not that you're going to stop with the railroad industry, but you're going to stop helping them attain revenue adequacy because you've already done that. And then the heart --- and exceeded. Right. So then the hard question is where do you go from here? We've tried to, more in our written presentations, I think that we've been able to do orally here, we've tried to suggest courses of action that you could take that would improve that situation. And I think all of the shipper parties that have been in this proceeding today and probably the ones who will come in tomorrow, whether you agree with their proposals or not they've been making good-faith proposals to deal with a real issue. And it's the railroad and their officers and their economists who have been coming in here and saying you don't have to do anything, business as usual, don't change anything. Ignore the fact that after 35 years we've achieved revenue adequacy, and that's a statutory goal that's been achieved. That's the thing that I would urge you to reject in your deliberations about this matter.

MR. ELLIOTT: Mr. Whiteside, I had a question. I was here for the last hearing but I wasn't sitting up here. As far as the farmers, I've talked to you many times about their concerns. If they have brought a case that we could make simple enough that would work for them, what kind of money are we talking about here for the kind of farmers that you're looking out for? Are we talking millions? Are we talking hundreds of thousands, and if so, what do we need to do to simplify the cases so that they can actually bring them?

MR. WHITESIDE: Per farm? Is that what you're asking?

MR. ELLIOTT: Yeah.

MR. WHITESIDE: Farms vary in size.

MR. ELLIOTT: Sure.

MR. WHITESIDE: And we have large, very large farms in parts of the Northern Plains. They get smaller but more productive as you go south down into Kansas and Nebraska. But I think the ones that we've been dealing with in Montana and Idaho, we'd be talking about somewhere, if we could bring the rates down probably not 180, maybe 200, 220, they'd be talking about 40 or 50,000 a farm, maybe 80,000. I say that and then I'm going to have them call me and say, no, it will be 120,000, but I think generally the farm production is such that if they had reasonable freight rates by today's standards we'd be talking about 80 or 90,000 a farm.

MS. MILLER: Annual number?

MR. WHITESIDE: Per year, per year, yes, ma'am.

MR. ELLIOTT: And then if the rates are relatively similar across the board for these farmers, I take it that it would be much easier for them to group together to bring a case?

MR. WHITESIDE: Yes, very much. I would almost require that.

MR. ELLIOTT: Okay.

MR. WHITESIDE: Whether we did it through an AG or whether we did it through an association, we've really talked very little about that, but there has been talk of the AG might want to bring it.

MR. ELLIOTT: Okay.

MR. WHITESIDE: And then Montana, what Idaho would do we don't know yet. So it would be one of those kind of things if we could get a reasonable chance and be able to combine them that would be heaven sent for them. And, you know, we're not talking about constant litigation. What we're talking about is the possibility of maybe working with them to negotiate some more practical rates. The one thing I will say about the Burlington Northern and I said it in the last hearing, is they have been much more open since the process that you all started with data. They've been much more open with the shippers trying to work with them. And I think it was kind of a wake-up call for them. By the way I was up in Saskatchewan yesterday or two days ago when -- they have the same problems up there that we were having down here with that Canadian Railroad just not being responsive to anything that the government wanted them to do. So it was interesting when I found that out. Not that you probably needed to hear that.

MR. ELLIOTT: Any further questions?

MR. WHITESIDE: Thank you very much.

MR. VON SALZEN: Thank you.

MR. CUTLER: Thank you.

MR. ELLIOTT: We can have the next panel come up. It's going to be a couple of minutes.

OFF THE RECORD

ON THE RECORD

MR. ELLIOTT: Okay. Why don't we finish up with Panel VI?

MR. MCINTOSH: Mr. Chairman and members of the Transportation Board, I am pleased to be here this afternoon to represent Olin Corporation and to provide comments as you explore the Board's methodology and questions around determining railroad revenue adequacy. And the revenue adequacy component used in judging the reasonableness of rail freight rates.

I have served as a corporate officer for Olin for sixteen years, and have nearly forty years of experience in the chemical industry. Olin Corporation is located in Clayton, Missouri, and consists today of three business segments. Winchester Ammunition, a leader in small caliber ammunition, providing ammunition to both the state and federal law enforcement to the U.S. military. The Chlor Alkali Products business, a leading producer of bulk chlorine caustic bleach and other commodity chemicals in North America. MKA Steel, a distribution company. One of the largest distribution companies which is engaged solely in distributing products that are made by the typical chloric lime manufacturing process.

Olin is a publicly-traded company that has been listed on the stock exchange since 1917. Today I am testifying on behalf of the Chlor Alkali Products business, which is headquartered in Cleveland, Tennessee, and is one of the two chemical businesses that I have P&L responsibility for. That business has ten different manufacturing locations in North America, including locations in New York, Georgia, Tennessee, Alabama, Nevada, Louisiana, California, Washington state and Quebec. We were one of the first commercial suppliers of chlorine in the United States, and we've been involved in that industry for over a hundred years.

Olin has always shipped the vast majority of its commodity chemical products via rail from the manufacturing sites that I previously mentioned. So rail transportation is essential to the success and viability of our business. The ability to obtain reasonable freight rates is vital, a vital component of that and so Olin sincerely appreciates the Board's effort to address revenue adequacy and rate reasonableness in today's hearing, and hopes changes will be made to the Board's current methodology. As I get through my comments I hope to provide you some sense of why that's so important to us.

As Olin has previously expressed in its comments to the Board in this matter, there is a clear disconnect between current methodology and determining revenue adequacy in the current financial state of the rail industry. And I know you've heard that before. It's been noted by the Senate Committee on commerce and science in reports and assessments of the industry dating back to November of 2013. In that report it said that the performance of the Class I railroads is at its strongest since the passage of the Staggers Act. A simple review of stock prices and corporate activity clearly supports the undeniable financial success of the rail industry. However, despite this profitability the four Class I railroads have chosen to use the revenue to pay dollars to shareholders, to pay dividends and to invest in their system.

As part of a public company I don't dispute the necessity of investing and paying dividends and rewarding shareholders. I am just pointing out what we perceive to be an imbalance in the actual results that they report and some of the commentary that is made in hearings such as this, and also in one-on-one negotiating sessions with the railroads. In spite of those successes the Board's methodologies for determining the achievement of revenue adequacy and the reasonableness of rail rates has not changed. In essence, while the railroads have enjoyed that success, the enemy is for captive shippers like Olin to challenge the reasonableness of freight rates remain unchanged.

Every one of the locations that I have mentioned that are a part of our chemical business is, in fact, a captive location, subject to the total lack of competition in all outbound rail shipments. As noted by the Board, all large rate-reasonable cases to date, nearly all, have relied upon the stand-alone cost constraint. Olin has availed themselves of that, and I'll discuss our results and why they are particularly, I think, germane to these issues of this hearing in just a minute.

Unfortunately, for captive shippers like Olin the stand-alone cost constraint on rail rates has proven completely ineffective. For us, our experience is that's due to the expanse, the time requirements and the complexity associated with using the stand-alone rate case to try to achieve, you know, a rate relief in our current business environment. The inefficiencies of the stand-alone cost process have made rate cases almost completely inaccessible to shippers. In all of the years that Olin has been a rail shipper, we have availed ourselves of a rate case one time. And I said, I'll mention that in more details in a minute. The result of this is that captive shippers like Olin, and as a point of reference, 85 percent of all chemicals manufacturing locations in North America, are captive to one rail supplier. So the result of this that captive shippers lack any meaningful counter-balance to the railroad's strong pricing.

So as a result, we, really, as a shipper, only have two alternatives, and neither one of them are good. We have the alternative of accepting the tariff premium that the railroads force upon us, or we can challenge freight rates under the stand-alone cost constraint system. Recognizing the cost and expense of challenging it, as I mentioned, Olin and other shippers have just avoided going to that route for challenge because it requires such a significant commitment with such extremely uncertain outcomes. Despite all of the risks associated with it, even when you take on an action to try to achieve some relief, shippers really have a very limited up-side. If you win then your reward is that you get to pay reasonable freight rates for some period of time in the future. Railroads on the other hand have no down-side consequence to losing a rate case as all they're doing is returning money to the shipper that they were never actually entitled to in the first place. And considering that in order to have standing to come to the STB, shippers must pay a tariff price throughout a rate case proceeding, which can last years. The railroads are actually incentivized to prolong rate cases as long as possible.

Given this set of facts, it's not surprising that railroads and railroad groups oppose suggested changes to the stand-alone cost system. Let me stop here and mention briefly our experience with the stand-alone rate case. As I mentioned we've only done this once in our hundred plus years, or in the years in which the opportunity or the ability to do so in front of the STB has existed.

We initiated in July a rate case on a single rate after we had seen a seven hundred percent escalation in that rate over the prior fifteen-year period, and at the time that we filed, pre the tariff rate that we have been paying since, the R/VC for that rate and for that route was over four hundred fifty percent. To date after four plus years we have spent twenty-five million dollars trying to secure reasonable rates. Nearly twenty of that twenty-five has been the incremental tariff rate that we have paid in order to have standing, to prosecute or file a rate case and follow it through to its conclusion.

The balance of that five to six million dollars has been the cost associated with the true rate case. From our perspective it's not fair. It's not simple, and it's not viable for the intent that we believe that the Board wants it to have. If it's not changed, if there's no other viable alternative, quite frankly, I don't believe we'll file another rate case, because I don't believe I will be able to explain to our corporation that there is a reason to go through that process again.

In addition to the inefficiencies of the stand-alone cost system or cost constraint, we believe that there's no economic justification for the approach, especially as the railroads now are enjoying what we believe to be revenue adequacy. There have been, and the information that we have provided is part of our comments to papers, been several analyses of failures of the stand-alone cost constraint on the basis of economic theory. Dr. Gerald Faulhaber was quoted in the concerned shipper filings in September. Dr. Faulhaber was one of the original developers of the stand-alone cost constraint. He clearly argues that in today's environment there's no justification for it.

In addressing the shortcomings of the application of the stand-alone cost constraint and rate reasonableness cases, all the stresses we hope the Board will avoid as it looks towards options, something that isn't simple. We believe that the complexity that the current process requires you to force creates so much opportunity or so little opportunity to prevail. And we would hope to see, if there is any change in the opportunities to try to prove rate reasonableness position that the Board would avoid creating what we have heard described as a full employment bill for economists. I can say that because it's late in the day and none of them are here --- that the stand-alone cost constraint has done.

We've also quoted works of Dr. Pittman of the Department of Justice, and we have consistently supported revenue to variable cost as a alternative to the current stand-alone cost constraint system. In our comments Olin cited a number of past filings and sources from others that have accepted or advocated for this approach. So it's not a new concept. Again, we believe the simplicity of it would provide a much more practical means of protecting captive shippers. We believe that it would incentivize both the shipper and the railroad to fix problems before they became so significant and extreme that it required, you know, the Board's intervention or participation in the resolution. And we believe that it would provide a more fair and more equitable opportunity for a shipper to be heard and to have a vehicle to get a more reasonable rate.

The Board has undertaken this proceeding, we believe wisely to examine the revenue adequacy constraint on Ramsey pricing in rate cases, which was adopted by the ICC. Because this revenue to variable cost ceiling could be implemented or may be implemented as a result of this proceeding, we would suggest that we believe it's not necessary for the Board to implement a formal rule-making proceeding. We believe that the 722 proceeding could provide clarity to this process of enforcing a new revenue adequacy constraint, and we strongly request the Board implement a R/VC ceiling-based process. Again, we believe the profits of the railroads show that they have demonstrated and exceeded revenue adequacy, and we believe as a result of that there is a need to change the methodologies for captive shippers like Olin to be able to enforce some revenue adequacy constraint when matched up against the rail rates that we currently pay. Thank you for the opportunity to speak.

MS. FASELER: Hi. Good afternoon. I'm Jacqueline Faseler, DOW's Global Director of Supply Chain Sustainability, and I want to first of all thank the Board for initiating this very timely and important proceeding. I am here today to encourage the Board to develop a clear set of standards for applying a revenue-adequacy constraint in a timely and cost-effective manner. This proceeding, along with the Board's Ex Parte 711 proceeding on competitive switching is critical to the global competitiveness of American manufacturing. DOW's appearance at public hearings in both proceedings is a testament to their importance to the American chemical industry, which employs nearly 800,000 Americans.

For every one of those jobs an additional six jobs are created in the U.S. economy. The American chemical industry is highly dependent upon reliable and economic rail transportation to maintain its own competitiveness on the global stage. Both EP 711 and this proceeding can further this goal by enhancing competition among rail carriers, and offering meaningful remedies to protect captive shippers from unreasonable rail rates.

DOW operates a fleet of more than 20,000 rail cars for the transport of over 110,000 rail shipments annually. DOW's largest plants at Freeport, Texas, Plaquemine, Louisiana and Taft, Louisiana represent over 58 percent of DOWs origin rail shipments and are captive to the same railroad. In addition, 80 percent of DOWs shipments are captive at the destination. Because the American chemical industry pays rail rates at captive locations that are twenty to thirty percent higher than at competitive locations, the level of captivity is a very important factor in its overall competitiveness. DOW previously testified in the EP 711 proceeding based on its Canadian Rail inter-switching experience that competitive switching effectively enhances rail competition to achieve commercial negotiations that improve service, routing options and rates, but even the most liberal application of the competitive-switching proposal on EP 711 will benefit only two of DOWs large captive Gulf Coast facilities.

DOWs largest and most significant growth facility in Freeport, Texas, would remain captive, even after the adoption of competitive switching, and would continue to depend upon the Board's rate regulation procedures to ensure reasonable rail rates. The Board's existing stand-alone cost or SAC procedures for determining rate reasonableness are uneconomical and ineffective for the vast majority of carload shippers like DOW. Those procedures which were designed originally for unit-trained coal shipments require a shipper to commit several million dollars over three to five years of litigation, which does not even account for the millions of additional dollars spent on high tariff rates.

Unlike coal shippers, who have an enormous concentration of volume between a single origin and destination, carload shippers have hundreds of origin-destination pairs, and the only way a carload shipper like DOW can justify a SAC case economically is to combine scores of lanes into a single case of even greater magnitude and complexity than a coal case. This greater complexity increases the cost of a carload SAC case to a much higher level. This proceeding offers the prospect of a meaningful alternative to SAC to determine reasonable rail rates. The economic principle underlying rail rate regulation for the past thirty years has been that railroads must be able to charge captive shippers differentially higher rates than competitive shippers in order to recover total cost. The regulatory problem to be solved has been how much more captive shippers should pay than competitive shippers?

In the same decision that adopted SAC, this agent's predecessor, the ICC, identified revenue adequacy as the logical first constraint on a carrier's pricing, and declared that a captive shipper should not be required to pay more than is necessary for the carriers involved to earn adequate revenues. But the ICC never specified a set of standards for applying the revenue-adequacy constraint because no rail carrier was even close to earning its cost of capital at that time. Thirty years later that time has come. UP and NS have been earning their cost of capital, and Berkshire Hathaway's acquisition of BNSF means that it has access to capital. CSX is close to earning its cost of capital for the first time.

I conclude my testimony by strongly

urging the Board to use this proceeding to provide clear guidelines to all stakeholders on the standards and procedures that it will apply to determine reasonable rates under the revenue-adequacy constraint. I also renew DOW's previous entreaties that the Board adopt new competitive-switching rules. Competitive switching would enable DOW to rely upon competition as its preferred remedy was available, while the revenue-adequacy constraint could provide meaningful regulatory protections against unreasonable rates where DOW remains captive. Thank you.

MR. JOHNSTON: Good afternoon. I'm Eddie Johnston with the Chemours Company, an independent, publicly-traded company that was spun off recently from DuPont. Thank you again for holding this hearing. I'm appearing now to emphasize the importance of this proceeding based upon my company's experience with the rate regulatory process. As you are aware, DuPont filed a rate case against Norfolk Southern in

2010. Most of the traffic covered by that complaint is now part of Chemours, who was recently substituted for DuPont in the case.

My remarks today do not concern the substance of that case, which is still pending before the Board on petitions for reconsideration. At the time we filed the rate complaint the Board had determined NS to be revenue adequate in five of the preceding six years. More recently the Board has determined NS to be revenue adequate for eight out of 10 years, from 2004 to 2013. NS's prolonged period of revenue adequacy, even in 2010, prompted us to give serious consideration to challenging the NS rates under the revenue-adequacy constraint. We were aware of the significant time and cost associated with the SAC case. Would revenue adequacy prove any different?

We finally rejected the revenue-adequacy approach because it was a step into the unknown. The principle was clearly there, but without an accepted, practical way to apply it the costs and the risks were unknowable and they still are. In the absence of accepted standards and procedures we would have to develop our own and then defend them against a relentless attack from NS, not to mention their opposition to the very concept of a revenue-adequacy constraint that they've articulated to you this afternoon.

We even considered challenging the NS rates under both the SAC and revenue-adequacy constraints, but ultimately chose the familiar standards and procedures of the SAC. Designing a SAC case around 138 movements has proven to be a Herculean task, even more challenging, more costly and more complex than expected. Even though the Board ultimately concluded that NS possessed market dominance over one hundred thirty-two of the one hundred thirty-eight movements, and despite an average revenue-to-variable cost ratio for those movements of five hundred twenty-nine percent, with ratios ranging as high as eight hundred ninety-eight percent, the Board still determined that these rates published by a carrier that has earned its cost of capital for eight of the past ten years were not unreasonable. Indeed the SAC analysis would not have found DuPont's rates to be unreasonable until their R/VC ratios exceeded 6,105 percent. SAC simply does not work for shippers like Chemours.

I understand why the railroads regard SAC as the gold standard. It puts gold in their coffers at the expense of captive shippers, but such a result cannot be reconciled with this agency's declaration and coal rate guidelines that rates not be designed to earn greater revenues than needed to achieve and maintain revenue adequacy. DuPont could not challenge the NS rates under this revenue-adequacy constraint because there was no way to do it. Unless and until this agency adopts a clear set of standards and procedures neither Chemours nor any other similarly situated shipper will be able to use the promised revenue-adequacy constraint.

The uncertainty of applying this

revenue-adequacy constraint creates unpredictability in rate case outcomes, which in turn hinders negotiated solutions. Since all Class I railroads have approached or attained revenue-adequate status it is imperative that the Board develop standards and procedures for applying the revenue-adequacy constraint.

In summary, SAC does not work for most shippers, the nation's manufacturers and farmers alike. A revenue-adequacy constraint could work better, but without an accepted, practical way to apply the constraint the promise of coal rate guidelines continues to go unfulfilled. Therefore, I urge you to use this proceeding to fulfill this need as expeditiously as you can. Thank you.

MS. BEGEMAN: Thank you all for your testimony this late in the day. You mentioned you have one plant, I think, in Quebec?

MR. MCINTOSH: Yes, ma'am.

MS. BEGEMAN: Do you utilize the switching ability in Canada?

MR. MCINTOSH: No. We don't. No. We don't. We don't have an inter-change point or a switching point with a competitor close enough, or that makes sense for us based on the ultimate destination.

MS. BEGEMAN: All right. You don't have any experience there that you can share?

MR. MCINTOSH: No. We don't have any experience, but we have commented that we would be very supportive of something, because as we look at our United States footprint and our locations in North America we would be able to use that as, you know, at least an attempt to gain some competitive position or some competitive improvement from where we are today.

MS. BEGEMAN: And Mr. Johnston, and my memory may be too fuzzy on this, but I certainly can appreciate your comments that the unknown of what the revenue-adequacy constraint has meant, at least until now, even still now, but this has made you hesitant to actually bring a case under that constraint.

MR. JOHNSTON: Yes.

MS. BEGEMAN: Although I thought a few years ago you did bring a case that was settled.

MR. JOHNSTON: We did bring a case that was settled, but that would have proceeded as a SAC case had the case been settled.

MS. BEGEMAN: Oh, it was a SAC case. It wasn't a revenue-adequacy case?

MR. JOHNSTON: No.

MS. BEGEMAN: Thank you for correcting my impression.

MS. MILLER: So Mr. Johnston, did you say that after your case against Norfolk Southern was unsuccessful, the, you know, in doing analysis, that the R/VC ratio for you to have been successful would have had to have been over 6,000?

MR. JOHNSTON: There was actually a range. Six thousand was the low end of that range. The upper end of the range was I believe 25,000 percent.

MS. MILLER: Wow.

MR. JOHNSTON: Wow. Yes.

MS. MILLER: And Mr. McIntosh, you said that you estimate that to bring the SAC case it costs twenty-five million, twenty million of it really converting to the tariff. So can one conclude that the difference in what you paid under your contract rate and what you paid under a tariff rate was twenty million dollars?

MR. MCINTOSH: Yes, ma'am. That's correct.

MS. MILLER: And then over what period of time?

MR. MCINTOSH: Well it's been four years, a little over four years.

MS. MILLER: And so is that informative in terms of the sort of differences one ends up paying if you're captive and if you're unable to negotiate a contract, or did you have a sense about that?

MR. MCINTOSH: Two comments in that regard. We struggled to find a rate case that we could actually bring under SAC, bring forward under SAC, because most of our contracts are bundled contracts. The railroads take position when you say, I'm going to challenge this rate, they say, well then you're going to tariff across this whole portfolio of routes that are part of this bundled contract. This happened to one that we did bring forward. It happened to be a stand-alone route that wasn't subject to, you know, the additional burden of having other routes ---

MS. MILLER: It wasn't bundled.

MR. MCINTOSH: -- moved to tariff. That's correct. But I would say yes, this is indicative of the kind of tariff premium that we would pay. In our portfolio of, you know, freight relationships with the various Class I's we deal with, this would be indicative of what the tariff premium would be for us.

MS. MILLER: And would any of you, do you have anything to say about this issue of replacement cost? Is that anything you have either opinions or observations about?

MR. MCINTOSH: No, ma'am. I don't.

We have not analyzed it from that perspective.

MS. MILLER: Okay.

MS. FASELER: Yeah. DOWs a member of ACC, and tomorrow they're coming forward with the Concerned Shippers Association and they'll be talking more about that.

MS. MILLER: Okay.

MR. MCINTOSH: I think that's a question for the economists, and as I told you earlier, I'm not one.

MS. MILLER: They've all gone home.

MR. ELLIOTT: One question, I don't know if this panel is the appropriate panel. First of all I'd like to thank you very much for just coming and giving your real world experience. It's very helpful, and obviously we can hear the frustration in your voices. One of the frustrating things that you mentioned, Mr. McIntosh, was the twenty million dollars that you pay while this case is proceeding, and this may be more of a question for a lawyer, but I do see a lawyer nearby. Is there a way that the Board can eliminate that premium that you're aware of? I know that there are some legal arguments that that may not be possible, but maybe Mr. Moreno should answer it unless --- I know that it's a hard thing for you. And I've heard that many times.

MR. MORENO: I'm not sure statutorily that there is a way, because the statute gives the railroads the pricing discretion unless and until you declare the rate to be unreasonable.

MR. ELLIOTT: Sure.

MR. MORENO: But it does emphasize the need for a more expeditious decision, because the quicker the decision comes out, the shorter time frame we're paying this rate premium.

MR. ELLIOTT: Thank you. That was my understanding.

MS. MILLER: Are you still having to pay the tariff rate, I mean, you know, now that you've sort of gotten into this position, can you get back into your contract rate or are you ---

MR. MCINTOSH: We have, we're

still paying tariff rate. You know, we have, the case is still under petition for reconsideration, and at the point in time at which it's finally decided, then, you know, we will be in a position of having unsuccessfully tried to file a rate case, having paid a tariff premium for four years, and quite frankly, when we go back to negotiate with the railroads I'm not sure from which position of strength we're going to have any ability to reduce the current rate we're paying for that, and I'll leave it at that.

MR. ELLIOTT: Thank you very much for coming today. Thank you all for participating today. We will be adjourned until tomorrow. We will reconvene at 9:30, so looking forward to the testimony tomorrow. Thank you very much.

A

J

K

C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Railroad Revenue Adequacy

Before: Surface Transportation Board

Date: 07-22-15

Place: Washington, DC

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R Gross

Court Reporter

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July 22, 2015
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Public Record

BEFORE THE
SURFACE TRANSPORTATION BOARD

DOCKET NO. EP 722
RAILROAD REVENUE ADEQUACY

DOCKET NO. EP 664 (Sub-No. 2)

PETITION OF THE WESTERN COAL TRAFFIC LEAGUE TO INSTITUTE A RULEMAKING PROCEEDING TO ABOLISH THE USE OF THE MULTI-STAGE DISCOUNTED CASH FLOW MODEL IN DETERMINING THE RAILROAD INDUSTRY'S COST OF EQUITY CAPITAL

CONSUMERS UNITED FOR RAIL EQUITY WRITTEN SUBMISSION FOR PUBLIC HEARING

CURE
PROMOTING RAIL COMPETITION

David Sauer
President
Consumers United for Rail Equity
4301 Wilson Blvd, #1114
Arlington, VA 22203
202-465-8716
www.railcure.org

Dated: July 21, 2015

Pursuant to the Surface Transportation Board's (STB) notice served May 8, 2015, Consumers United for Rail Equity (CURE) respectfully submits the following written statement for consideration in conjunction with the public hearing scheduled for July 22-23, 2015 in STB Docket Nos. EP 722 and EP 664 (Sub-No. 2).

CURE is a coalition of freight rail shippers. Through a growing coalition of industries and associations, CURE is working to educate the public on the impacts to consumers from railroad practices.

CURE is committed in helping to promote rail competition. To that end, CURE is particularly concerned that the promotion of effective rail competition and implementation of effective rate regulation has been impeded by the unfounded perception that the railroad industry has not achieved revenue adequacy on a long-term basis.

One of the goals of the ***Staggers Rail Act of 1980*** (P.L. 96-448) was to restore financial stability to the U.S. rail system. By all accounts, this goal has been achieved, as demonstrated by the industry's continued high levels of capital investment and shareholder returns including dividends, buybacks, and stock appreciation. In passing the ***Staggers Act*** 35 years ago, Congress recognized that when the rail industry achieved revenue adequacy, a more careful and thorough review of railroad rates would be appropriate.

CURE has long been concerned that the STB's annual determinations of the "revenue adequacy" for Class I carriers does not reflect the true health of the industry and its members. Further, CURE believes that the carriers' falsely perceived lack of adequate revenues has served to shield the railroads' exercise of their monopoly pricing power from STB scrutiny and prevented shippers from obtaining appropriate relief. For that reason, CURE continues to support elimination of the statutory requirement for the annual determinations.

As long as the annual requirement remains, however, the determinations should be accurate and reflect the true state of the industry. At a minimum, this should include use of an accurate cost of capital. Other evidence of financial health should be reviewed, and a comparison of return on net investment to the overall cost of capital should not preclude the consideration of additional evidence that shows that the industry and its members meet the other criteria specified in the statute for measuring revenue adequacy.

CURE strongly believes that there should be a meaningful revenue adequacy constraint on rates for captive shippers, especially for small shippers that otherwise do not have an effective path to rate relief. The Stand-Alone Cost test works only for the largest shippers, apparently only those with unit-train movements, and is very expensive to pursue. The Simplified Stand-Alone Cost test is also very expensive, offers reduced rate relief, and has been invoked only once. The Three-Benchmark approach offers limited rate relief, is not inexpensive by any means, may be ratcheted up by comparison to inflated rates paid by other shippers, faces considerable uncertainty, and has not attracted significant shipper interest.

For most shippers, the STB simply has not provided an effective means to prevent rate abuse. This should change, especially as the carriers have achieved revenue adequacy.

CURE strongly opposes railroad efforts to evaluate revenue adequacy on the basis of replacement costs. Replacement costing is inconsistent with the statutory definition of revenue adequacy in 49 USC 10704(a)(2) and the requirement for the STB to conform to generally accepted accounting principles to the maximum extent practicable in 49 USC 11141 and 11161. The use of net book value to review the adequacy of revenues is consistent with these provisions, whereas the use of replacement costs is not.

Net book value is the norm in rate regulation, and replacement costing is seldom, if ever, utilized, and for good reason, including the following: (1) replacement costing is inherently difficult to administer since values are likely to fluctuate; (2) brand new assets have higher productivity and lower operating costs, which would need to be offset against the higher capital costs; (3) ongoing renewal of assets eliminates the basis for including depreciation and also reduces the firm's risk profile; and (4) a substantial portion of the assets would not need to be replaced because replacement assets could be configured more efficiently and/or significant volumes would exit the system because the rates would not cover the costs.

In contrast, the use of standard, generally accepted accounting principles and the inclusion of capital expenditures within the asset base, at such time as the expenditures are actually made, gives the railroads ample incentives to maintain and expand capacity. Railroads are allowed to recover investments **WHEN** they are made. Railroad assets are long-lived, and there is no basis for allowing a railroad to recover costs in the years or the decades **BEFORE** investments are made – especially when there is no requirement or certainty that the funds will be invested, rather than used for dividends, buybacks, or executive compensation.

If replacement costs were utilized, it would be necessary to utilize real cost of capital to avoid a double count of inflation.

The replacement cost issue has been examined repeatedly, including by the Railroad Accounting Principles Board, and the use of replacement cost methodologies has always soundly been rejected. Given the financial strength of the railroads today, including publicly available information indicating that the railroad industry is revenue adequate, there is no plausible basis for the STB to adopt a replacement cost approach to evaluate revenue adequacy or limit the availability of rate relief.

Respectfully submitted,

David Sauer

David Sauer

President

CURE

Testimony of Roger Brinner

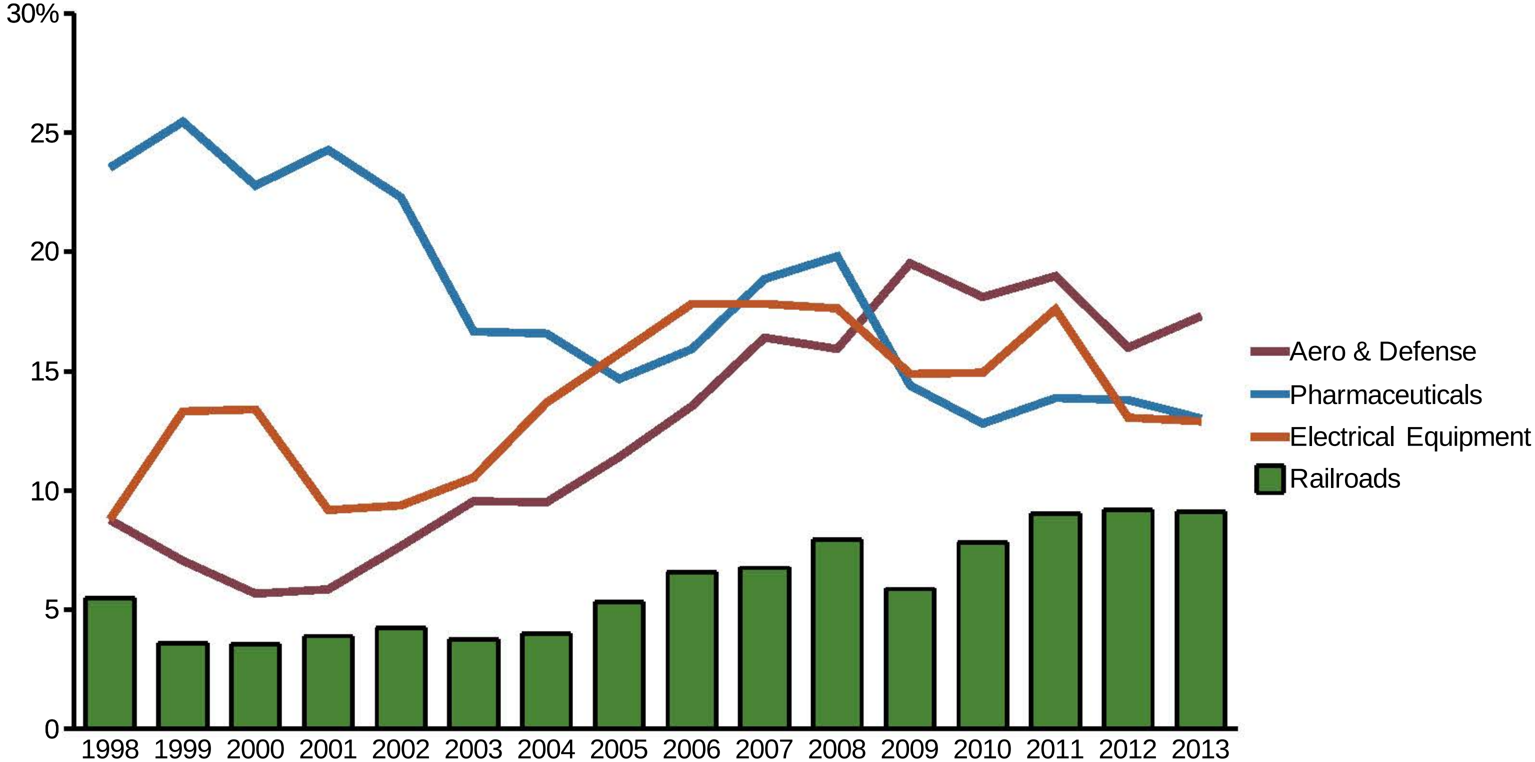
On Behalf of the Association of American Railroads

EP 722 – Railroad Revenue Adequacy

July 22, 2015

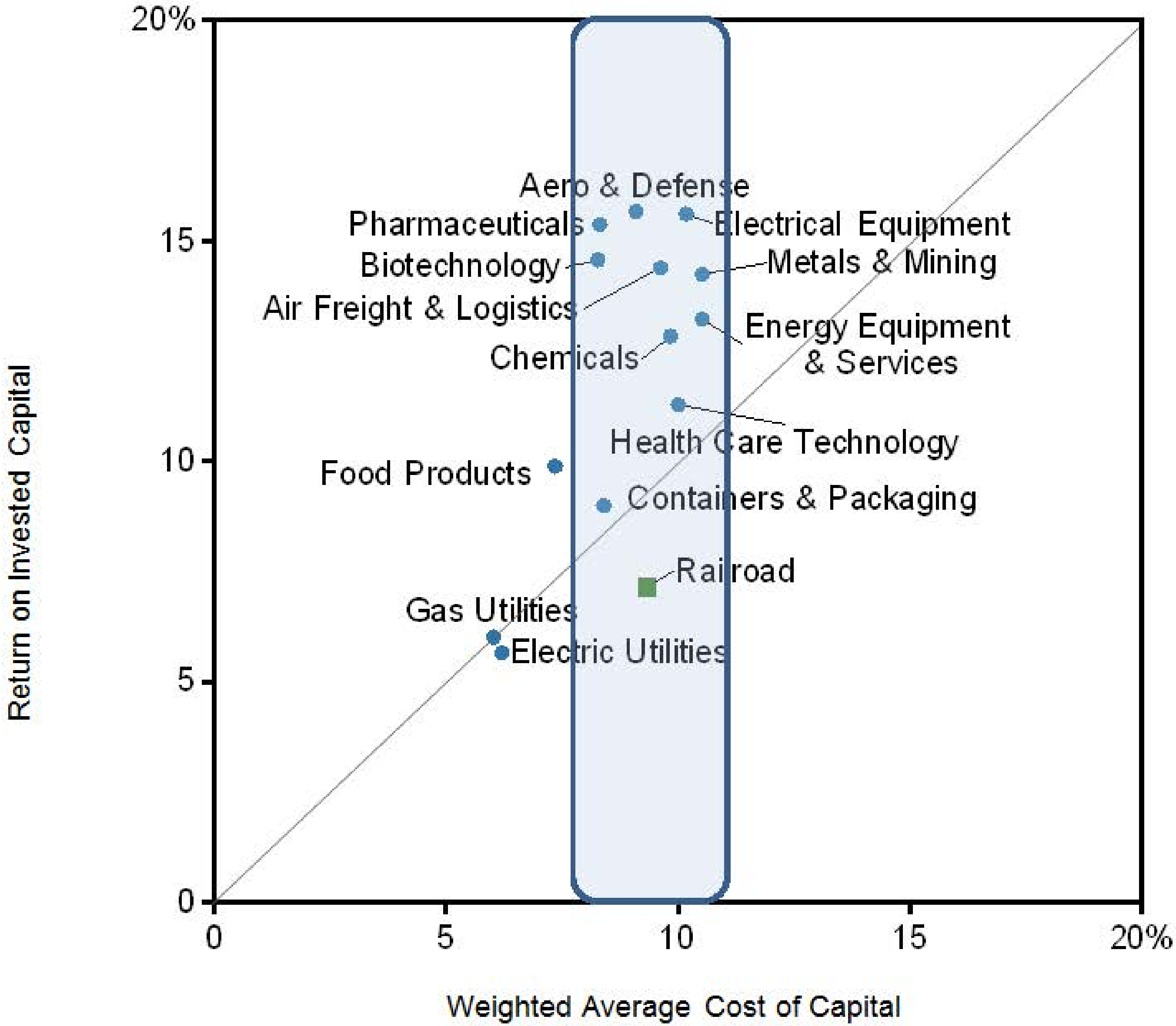
7

ROIC by Industry, 1998-2013,
Bloomberg Calculations Assembled by Parthenon



Source: Parthenon using Bloomberg data

Weighted Average Cost of Capital and ROIC by Industry, 10 Year Average (2004-2013), Bloomberg calculations assembled by Parthenon



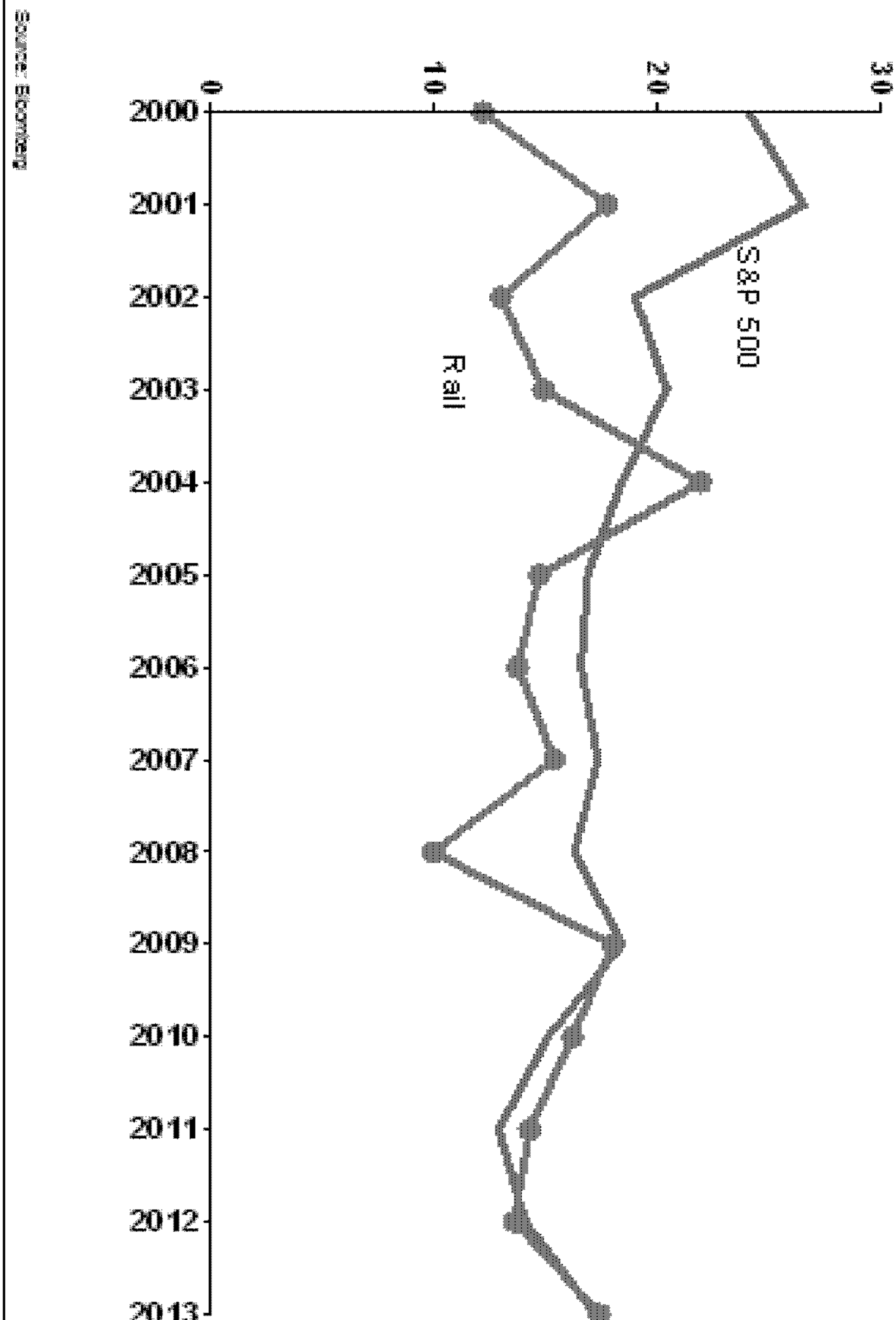
Note: Bloomberg calculations are a total annual invested capital weighted average of S&P 500 companies within the industry during 2014
Source: Parthenon using Bloomberg data

CEO/CFO's Potential Project Investments
(Hypothetical Data)

Project ROIC Rank	Project Investment ($M)	Project ROIC	Cumulative Investment ($M)	Cumulative ROIC
1	$0.70	23%	$0.70	23%
2	$0.50	21%	$1.20	22%
3	$1.00	19%	$2.20	21%
4	$0.40	16%	$2.60	20%
5	$0.80	14%	$3.40	19%
6	$0.60	11%	$4.00	17%
7	$1.10	8%	$5.10	15%
8	$0.20	6%	$5.30	15%
9	$0.70	3%	$6.00	14%
10	$0.80	2%	$6.80	12%

CEO/CFO Hurdle Rate (equal to or exceeds corporate WACC) = 11%

Price / Earnings Ratios



CSX
HOW TOMORROW MOVES

Fredrik Eliasson, EVP CFO
Ex Parte 722
July 22, 2015

238893

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Public Record

Four pillars of any revenue adequacy policy:

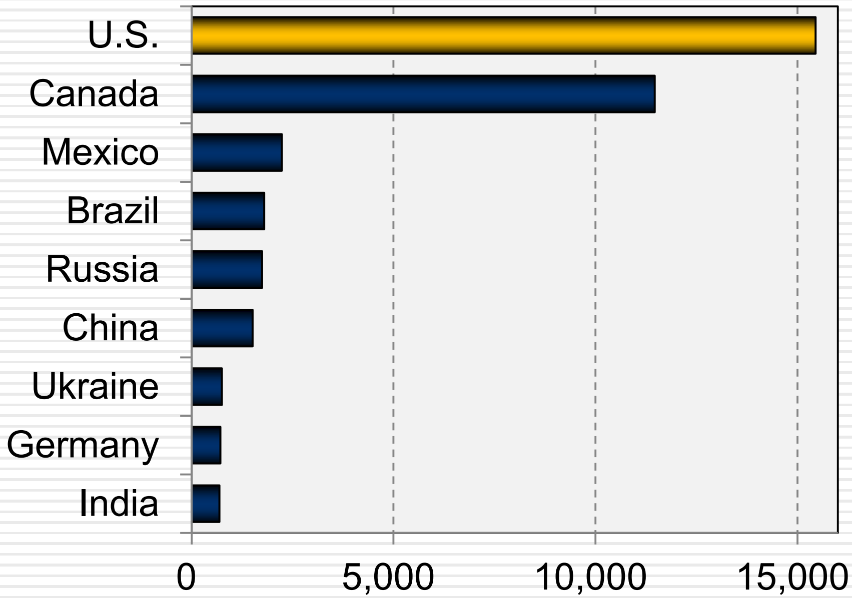
- Measure Progress – Don’t Constrain it
- Address Replacement Cost Imperative
- Promote Differential Pricing
- Ensure Free Market Results to Foster Investment

These pillars are essential to sound regulatory policy

Success of the Staggers Act since 1980

Global Railroad Employee Productivity[2]

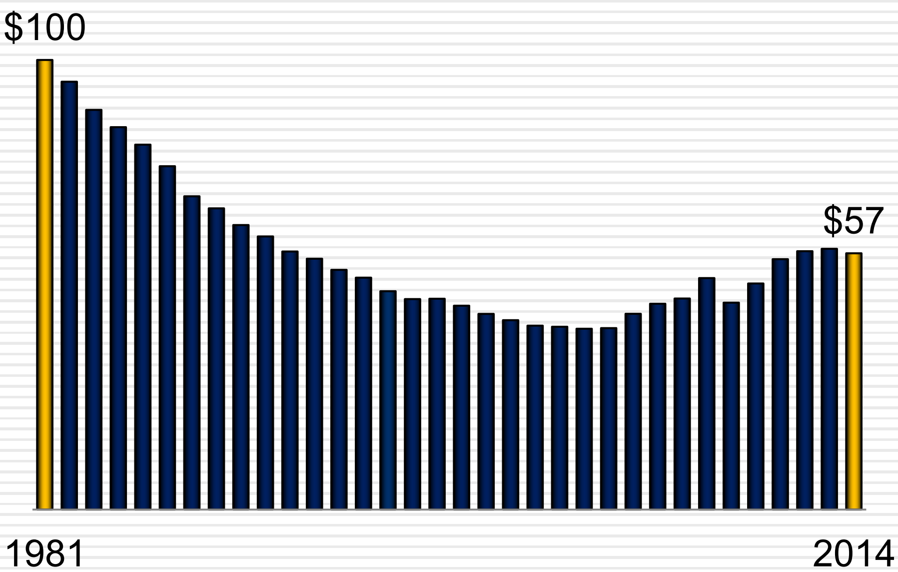
Tkm+Pkm per Employee



Globally, U.S. rails are most efficient

U.S. Freight Railroad Inflation-Adjusted Rates[1]

Indexed: 1981 = $100



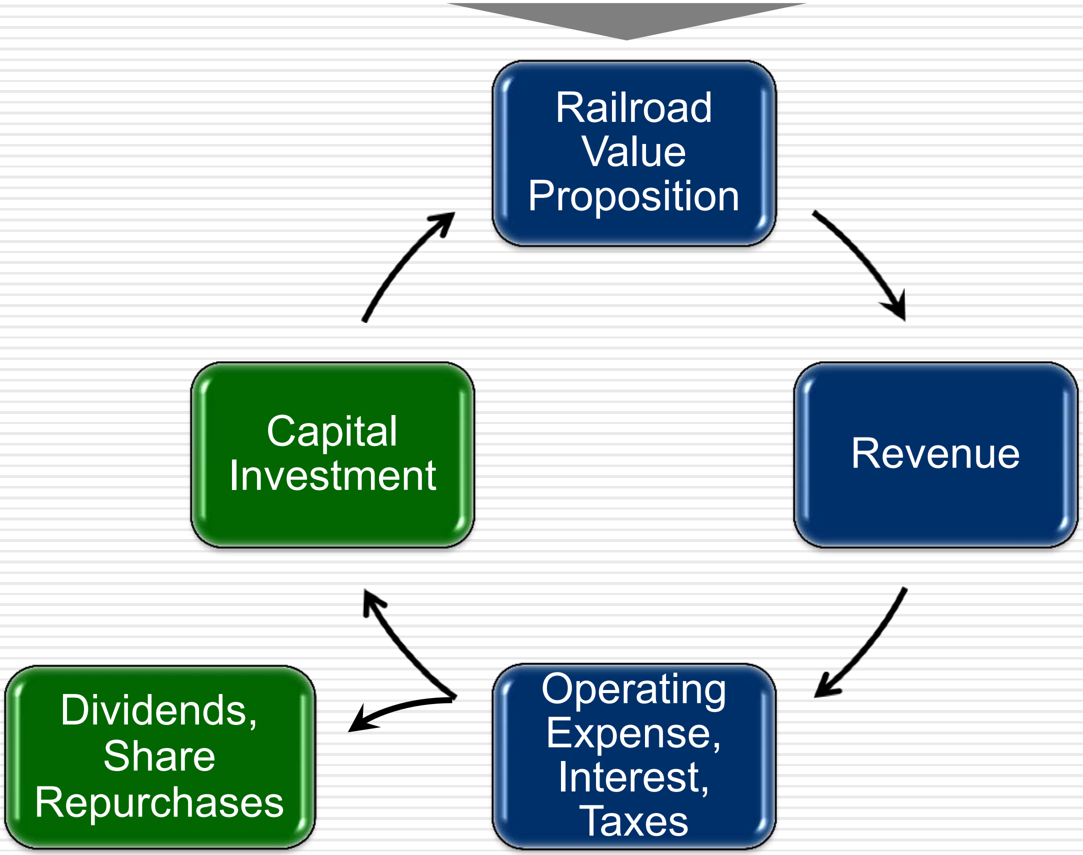
2014 rail rates 43% lower than 1981

(1) Source: Association of American Railroads, 2015
(2) Source: World Bank Railways Database, 2007
Tkm = Ton-km, refers to freight; Pkm = Passenger km, refers to passenger rail

Value creation for shareholders and U.S. economy

CSX Vision

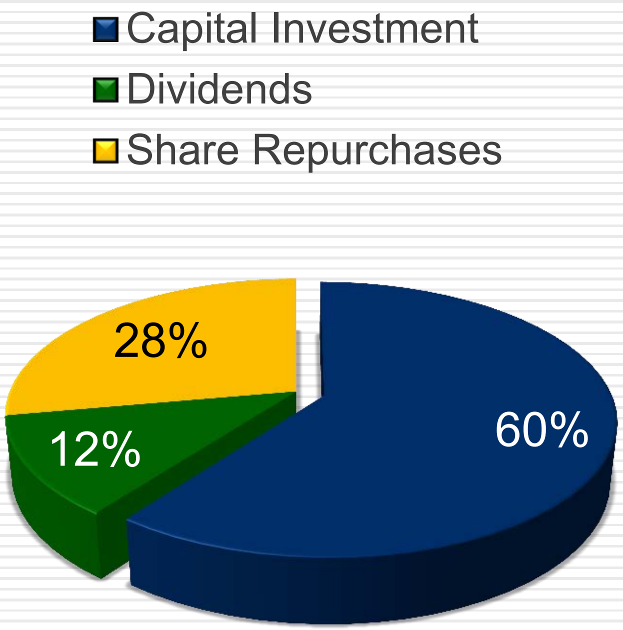
To be the safest, most progressive North American railroad, relentless in the pursuit of customer and employee excellence



Balanced approach to cash deployment

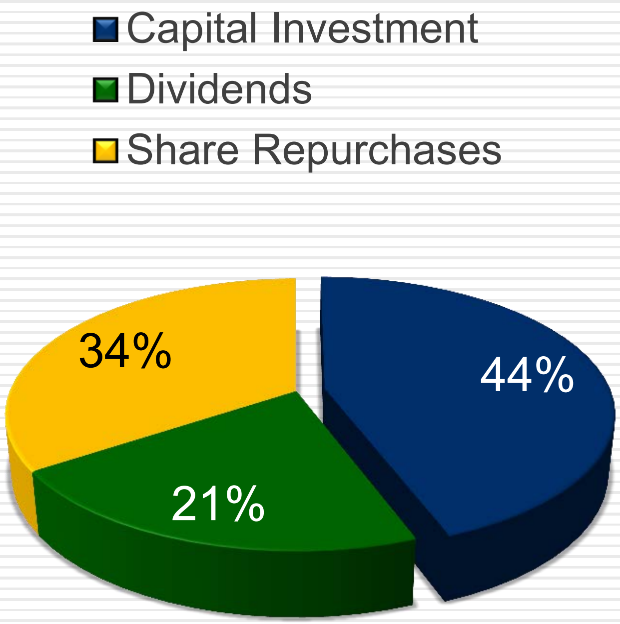
CSX Cash Deployment

2005-14 Average



S&P 500 Cash Deployment[1]

2005-14 Average



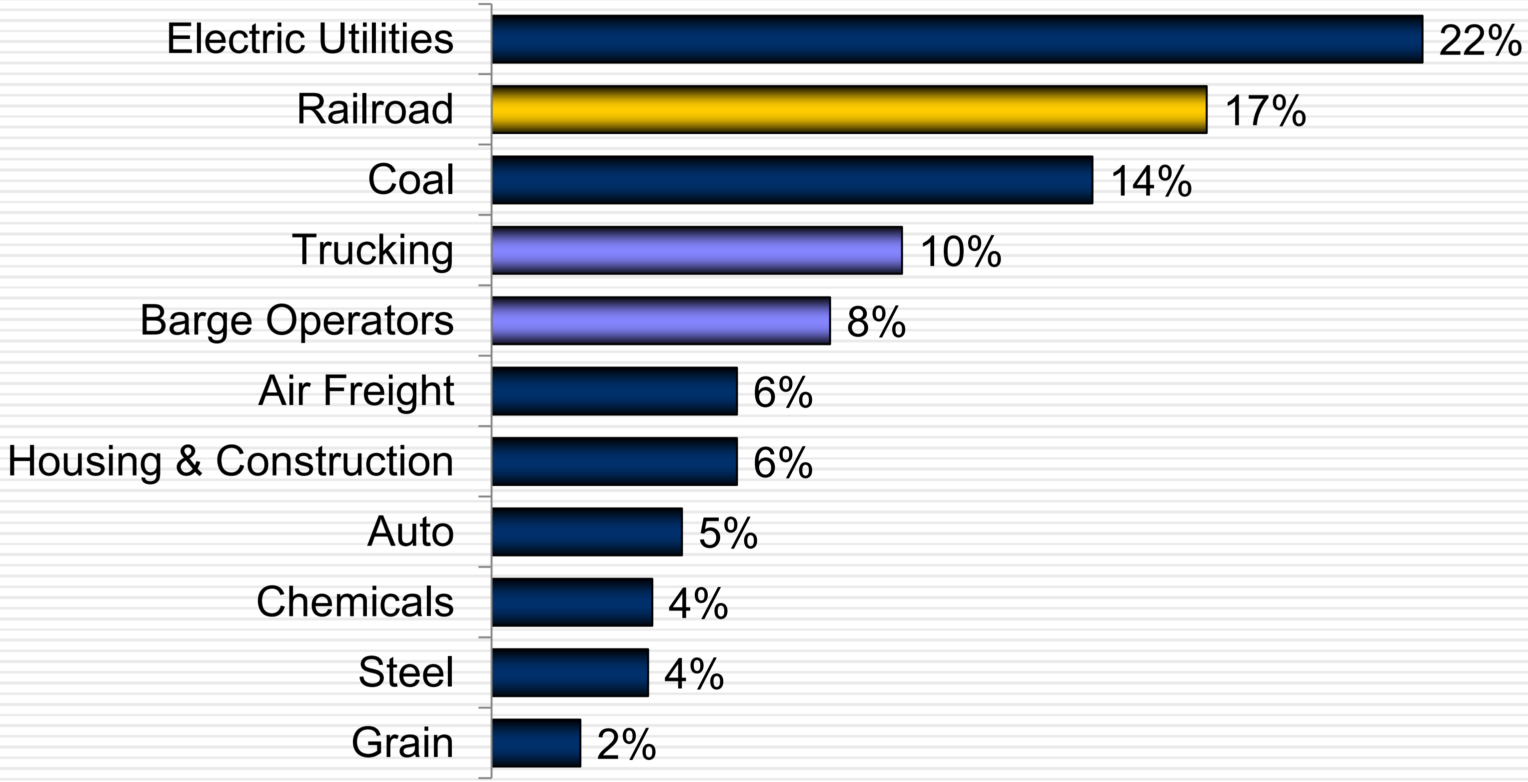
(1) Source: Capital IQ, as prepared by Morgan Stanley, July 2015

How tomorrow moves CSX

U.S. rail industry requires higher capital investment

U.S. Industry Comparison: Capital Investment[1]

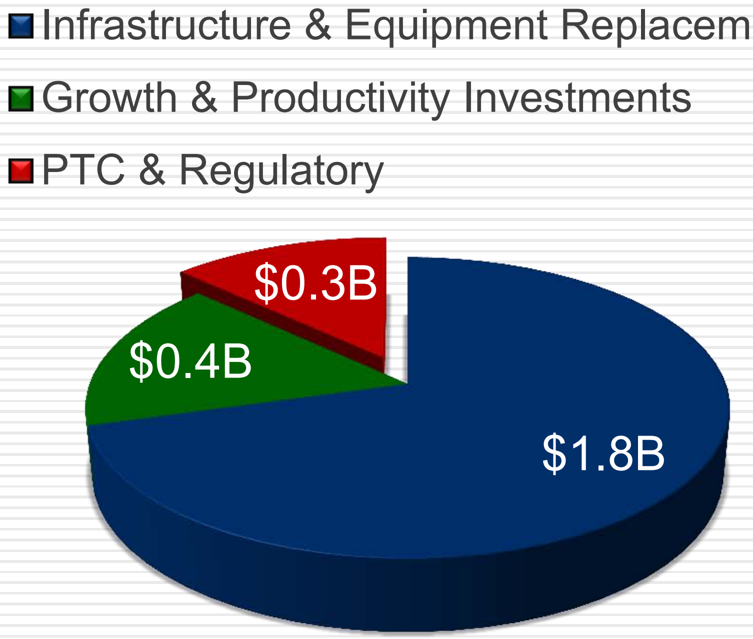
10-yr median Capital Expenditure / Sales



(1) Source: Credit Suisse analysis, June 2015; 10 year median from 2005-14

Capital investment of $2.5 billion in 2015

CSX 2015 Capital Investment
Total = $2.5 billion[1]



80%+ of capital investment in replacement and PTC

(1) Planned 2015 capital investment; actual results may differ

How tomorrow moves

Asset replacement costs are 3-4 times book value

Track	Locomotives	Freight Cars
		
Per Track Mile[1]	Per Locomotive	Per Freight Car
Depreciated Cost: $0.4M	Depreciated Cost: $0.6M	Depreciated Cost: $31K
3x	4x	3x
Replacement Cost: $1.1M	Replacement Cost: $2.2M	Replacement Cost: $100K

Note: Depreciated and replacement costs represent averages across each asset class
(1) Track mile costs are limited to the costs for rail, ties and ballast along existing right of way

Major infrastructure costs ~40 times book value

Bay St. Louis Bridge

Year in Service:	1967
Depreciated Cost:	$2 million

38x

Replacement Cost:	$75+ million

Virginia Avenue Tunnel

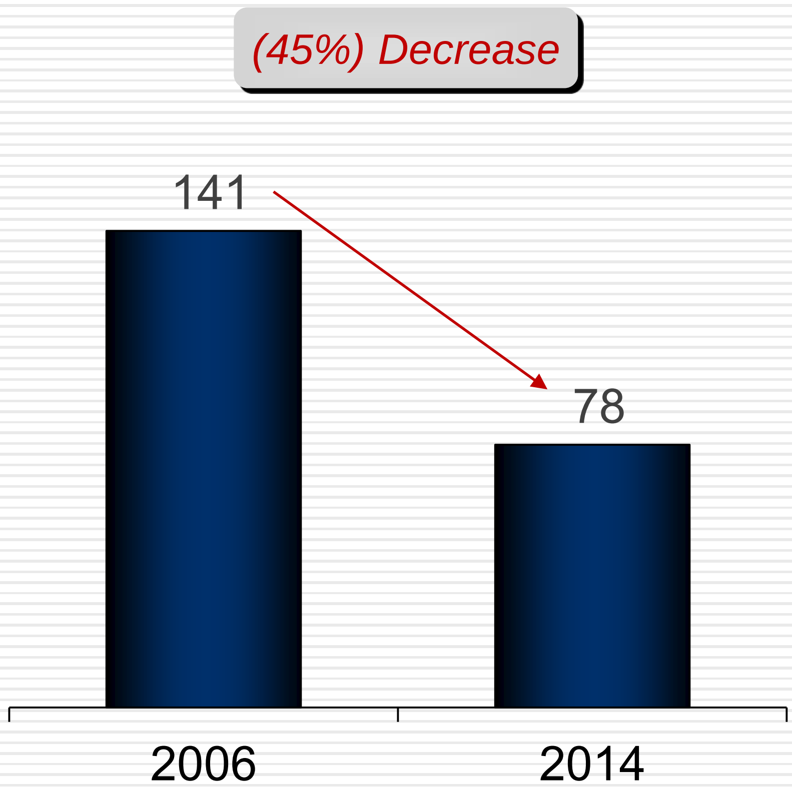
Year in Service:	Late 19th Century
Depreciated Cost:	$6 million

42x

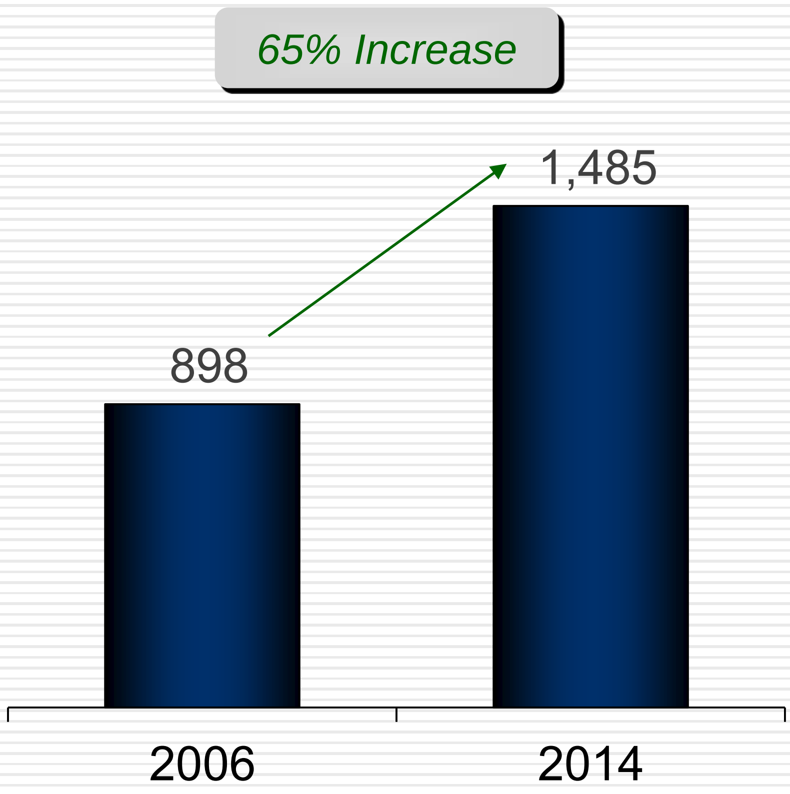
Replacement Cost:	$250+ million

Investments aligned to evolving business mix

Utility Coal Volume
Tonnage in Millions

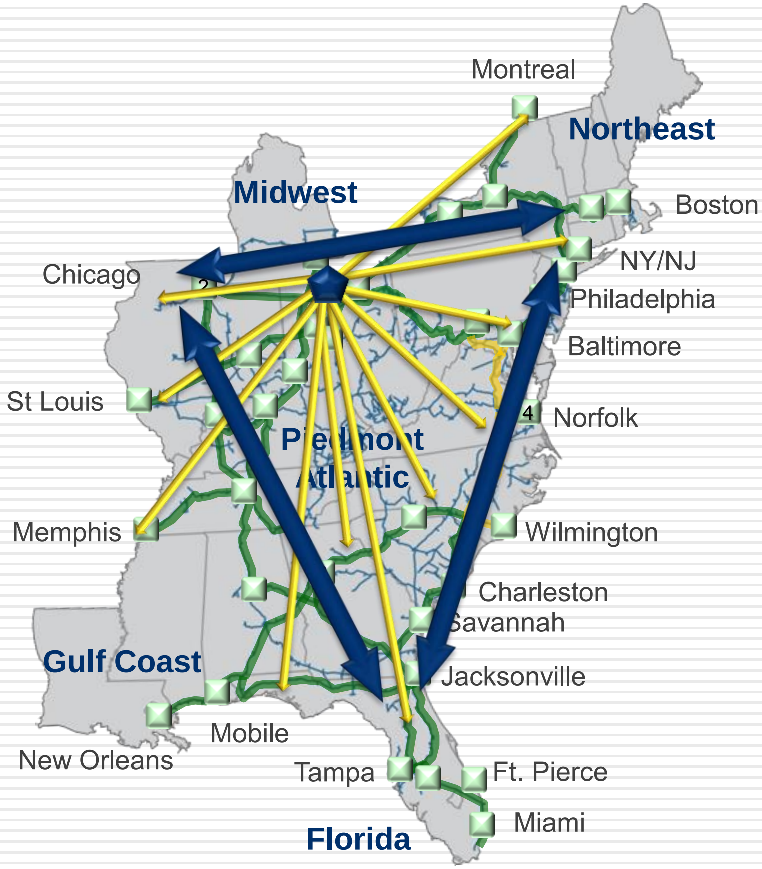


Domestic Intermodal Volume
Carloads in Thousands



Growth investments create public benefits

NW Ohio Intermodal Terminal

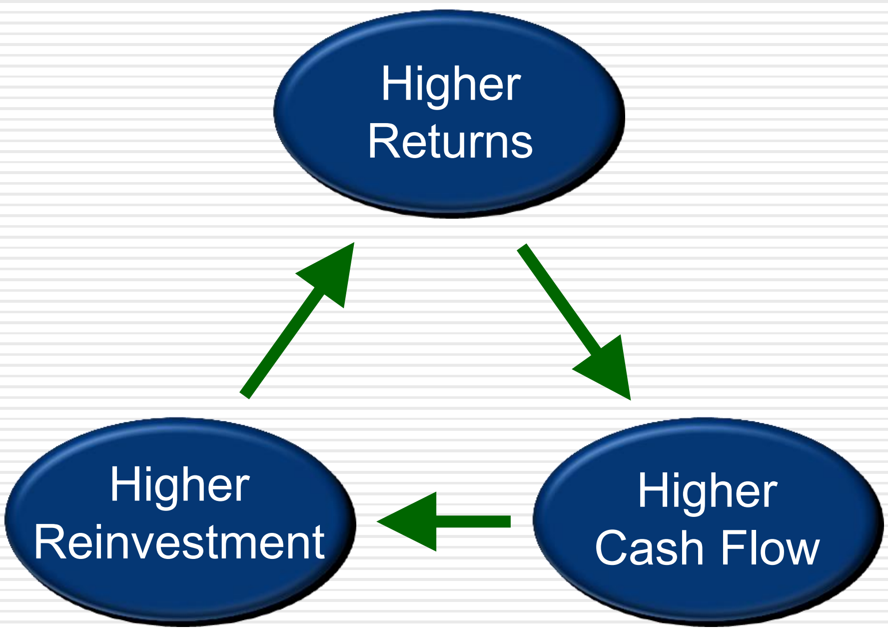


$200M+ investment in new terminal

How tomorrow moves

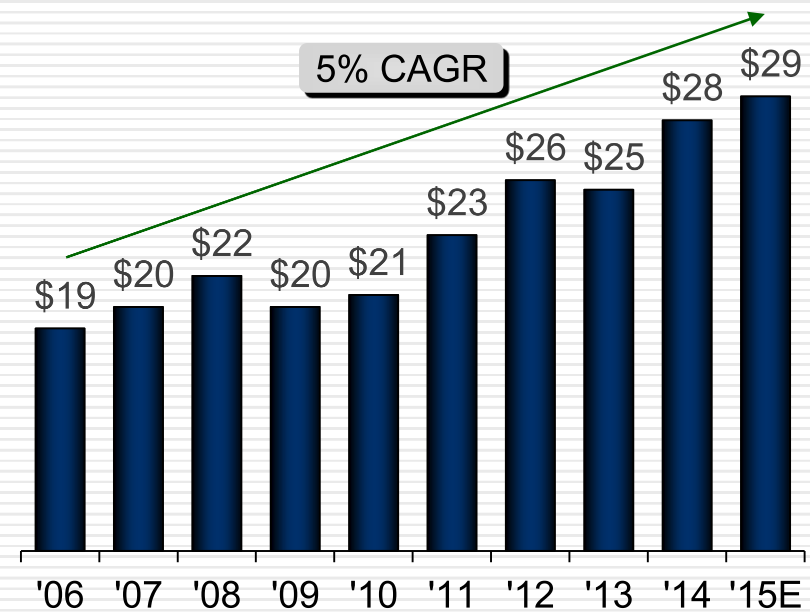
Higher returns create investment opportunities

"Virtuous" Investment Framework



Class I Railroad Spend on Infrastructure & Equipment[1]

Dollars in Billions

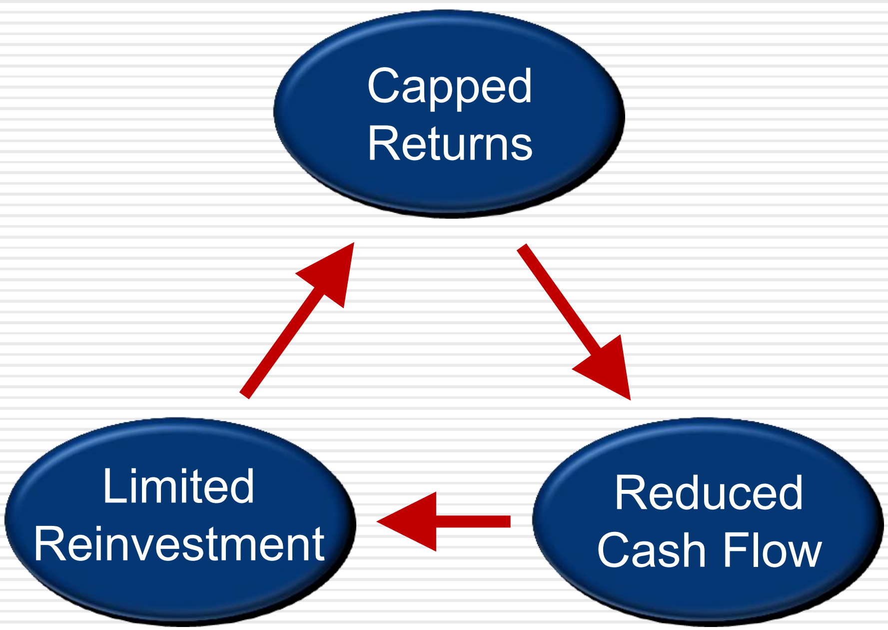


Returns above cost of capital needed to reinvest and grow business

(1) Capital investment plus maintenance expense; source: Association of American Railroads, 2015

Constrained returns lessen public benefits

"Vicious" Investment Framework



Impact of Constrained Return

- Less investment
- Less efficiency
- Less reliable service
- Less resources

Constrained returns would drive under-investment and limit growth

Summary: Four pillars of revenue adequacy

- Measure Progress – Don't Constrain it
- Address Replacement Cost Imperative
- Promote Differential Pricing
- Ensure Free Market Results to Foster Investment

These pillars are essential to sound regulatory policy

Fredrik Eliasson, EVP CFO
Ex Parte 722
July 22, 2015

THOMPSON HINE

STB EP 722—RAILROAD REVENUE ADEQUACY

TESTIMONY OF THE NATIONAL INDUSTRIAL TRANSPORTATION LEAGUE

KARYN A. BOOTH
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49 USC § 11102(c)(1)
Use of Terminal Facilities

The Board may require rail carriers to enter into reciprocal switching agreements where it finds such agreements to be practicable and in the public interest, or where such agreements are necessary to provide competitive rail service. . . . (emphasis added)

49 USC § 10101(a)(6)
Rail Transportation Policy

In regulating the railroad industry, it is the policy of the United States Government—

(6) to maintain reasonable rates where there is an absence of effective competition <u>and where rail rates provide revenues which exceed the amount necessary to maintain the rail system and to attract capital</u>. . . .
(emphasis added)

49 USC § 10704(a)(2)
Rates, Classifications, Rules, and Practices Prescribed by Board

(2) The Board shall maintain and revise as necessary standards and procedures for establishing revenue levels for rail carriers providing transportation subject to its jurisdiction under this part that are adequate. . . . to cover total operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business. The Board shall make an adequate and continuing effort to assist those carriers in attaining revenue levels prescribed under this paragraph.....

49 CFR § 1144.2(b)(3) Prescription

When prescription of a through route, a through rate, or reciprocal switching is necessary to remedy or prevent an act contrary to the competitive standards of this section, the overall revenue inadequacy of the defendant railroad(s) will not be a basis for denying the prescription.

Transportation Research Board Report Modernizing Freight Rail Regulation

"A possible starting point for STB in assessing the impact of reciprocal switching is to allow its use in a more limited setting. For example, it could be used as an optional remedy for rates that have already been ruled unreasonable and thereby offer an alternative to a prescribed rate." (Page 112) (emphasis added)

Questions(?)

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Ex Parte 722 – Railroad Revenue Adequacy

Presentation for Norfolk Southern

David Sappington
University of Florida

Bradford Cornell
California Institute of Technology

Raymond Atkins
Sidley Austin

July 22, 2015

Professor David Sappington

University of Florida

- Principles of Sound Regulatory Policy Design

- The Board's Present Policy Implements Those Principles

- Explicit Earnings Regulation Has Many Drawbacks Because It Does Not Implement Those Principles

- Asymmetric Earnings Regulation is Particularly Pernicious
- Regulators are Abandoning Stringent Earnings Regulation
- The Board is on the Frontier of Innovative Policy Design


Dispelling a Common Myth
MYTH – Regulators protect consumers by precluding regulated firms from securing more than "adequate" earnings.
TRUTH – All parties gain when suppliers are motivated by the prospect of financial reward.
NORFOLK SOUTHERN
One line, infinite possibilities.

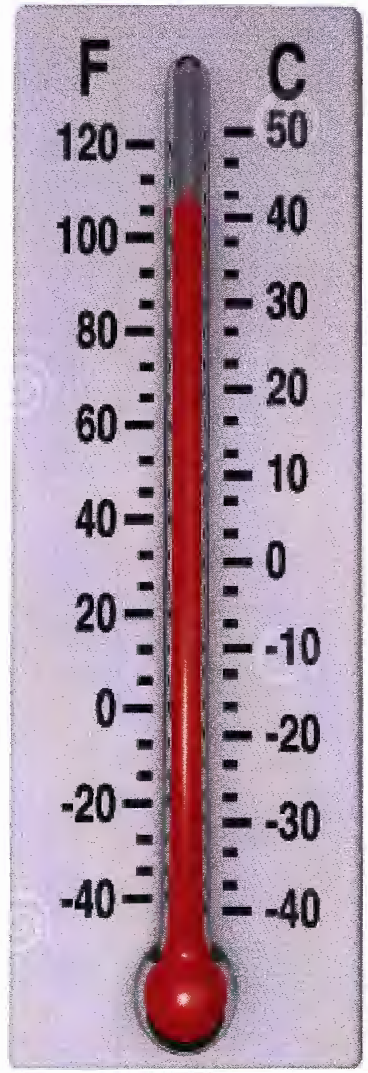
Conclusions

- Retain current progressive policy that embodies the key principles of sound regulatory design.

- Resist pressure to return to largely discredited regulatory policies of the past.

Professor Bradford Cornell

California Institute of Technology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Deficiencies in Annual Measurement of Revenue Adequacy

- Fails to measure returns over the lifetime of rail assets.
- Treatment of deferred taxes.
- Comparison of an economic measure with an accounting measure.
- Inappropriate for evaluating individual rates.

Exhibit 1a

Illustration of ROI from a Single Asset in each Year of its Life
Calculated using Straight-Line Depreciation

	A	B	C = A - B	D = PrevD - PrevB	E = C / D
Year	Cash Flows	Straight-Line Depreciation	Net Income	Book Value (Beg. of Period)	ROI
	(1000.00)				
1	$117.46	$50.00	$67.46	$1,000.00	6.75%
2	117.46	50.00	67.46	950.00	7.10%
3	117.46	50.00	67.46	900.00	7.50%
4	117.46	50.00	67.46	850.00	7.94%
5	117.46	50.00	67.46	800.00	8.43%
6	117.46	50.00	67.46	750.00	8.99%
7	117.46	50.00	67.46	700.00	9.64%
8	117.46	50.00	67.46	650.00	10.38%
9	117.46	50.00	67.46	600.00	11.24%
10	117.46	50.00	67.46	550.00	12.27%
11	117.46	50.00	67.46	500.00	13.49%
12	117.46	50.00	67.46	450.00	14.99%
13	117.46	50.00	67.46	400.00	16.87%
14	117.46	50.00	67.46	350.00	19.27%
15	117.46	50.00	67.46	300.00	22.49%
16	117.46	50.00	67.46	250.00	26.98%
17	117.46	50.00	67.46	200.00	33.73%
18	117.46	50.00	67.46	150.00	44.97%
19	117.46	50.00	67.46	100.00	67.46%
20	117.46	50.00	67.46	50.00	134.92%

Exhibit 1b

Illustration of ROI from a Single Asset in each Year of its Life Calculated using Economic Depreciation

	A	B	C = A - B	D= PrevD - PrevB	E = C / D
Year	Cash Flows	Economic Depreciation [1]	Net Income	Book Value (Beg. of Period)	ROI
	(1000.00)				
1	$117.46	$17.46	$100.00	$1,000.00	10.00%
2	117.46	19.21	98.25	982.54	10.00%
3	117.46	21.13	96.33	963.33	10.00%
4	117.46	23.24	94.22	942.21	10.00%
5	117.46	25.56	91.90	918.97	10.00%
6	117.46	28.12	89.34	893.41	10.00%
7	117.46	30.93	86.53	865.29	10.00%
8	117.46	34.02	83.44	834.36	10.00%
9	117.46	37.43	80.03	800.33	10.00%
10	117.46	41.17	76.29	762.91	10.00%
11	117.46	45.29	72.17	721.74	10.00%
12	117.46	49.81	67.65	676.45	10.00%
13	117.46	54.80	62.66	626.64	10.00%
14	117.46	60.28	57.18	571.84	10.00%
15	117.46	66.30	51.16	511.57	10.00%
16	117.46	72.93	44.53	445.26	10.00%
17	117.46	80.23	37.23	372.33	10.00%
18	117.46	88.25	29.21	292.10	10.00%
19	117.46	97.07	20.39	203.85	10.00%
20	117.46	106.78	10.68	106.78	10.00%

Exhibit 2a

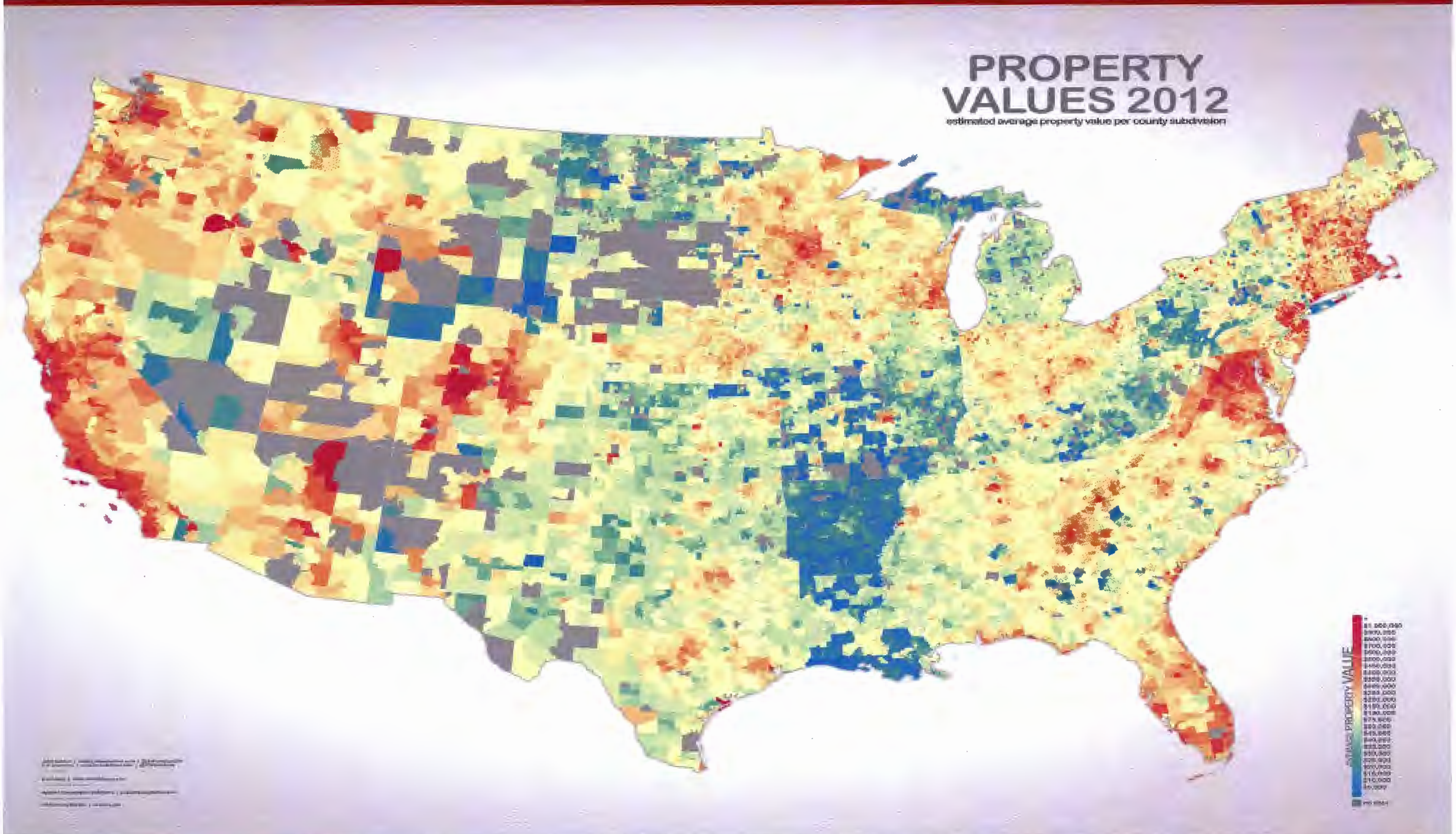
Illustration of ROI for a Single Year from a Set of Twenty Assets of Different Vintages Calculated using Straight-Line Depreciation

	A	B	C = A - B	D = PrevD - PrevB	E = C/D
Asset Age (Beg. Of Period)	Cash Flows	Straight-Line Depreciation	Net Income	Book Value (Beg. of Period)	ROI
	(1000.00)				
1	$117.46	$50.00	$67.46	$1,000.00	6.75%
2	117.46	50.00	67.46	950.00	7.10%
3	117.46	50.00	67.46	900.00	7.50%
4	117.46	50.00	67.46	850.00	7.94%
5	117.46	50.00	67.46	800.00	8.43%
6	117.46	50.00	67.46	750.00	8.99%
7	117.46	50.00	67.46	700.00	9.64%
8	117.46	50.00	67.46	650.00	10.38%
9	117.46	50.00	67.46	600.00	11.24%
10	117.46	50.00	67.46	550.00	12.27%
11	117.46	50.00	67.46	500.00	13.49%
12	117.46	50.00	67.46	450.00	14.99%
13	117.46	50.00	67.46	400.00	16.87%
14	117.46	50.00	67.46	350.00	19.27%
15	117.46	50.00	67.46	300.00	22.49%
16	117.46	50.00	67.46	250.00	26.98%
17	117.46	50.00	67.46	200.00	33.73%
18	117.46	50.00	67.46	150.00	44.97%
19	117.46	50.00	67.46	100.00	67.46%
20	117.46	50.00	67.46	50.00	134.92%
Current Year Total for All Assets			$1,349.20	$10,500.00	12.85%

Exhibit 2b

Illustration of ROI for a Single Year from a Set of Twenty Assets of Different Vintages Calculated using Economic Depreciation

	A	*B*	*C = A - B*	*D= PrevD - PrevB*	*E = C / D*
Asset Vintage (Beg. Of Period)	Cash Flows	Economic Depreciation [1]	Net Income	Book Value (Beg. of Period)	ROI
	(1000.00)				
1	$117.46	$17.46	$100.00	$1,000.00	10.0%
2	117.46	19.21	98.25	982.54	10.0%
3	117.46	21.13	96.33	963.33	10.0%
4	117.46	23.24	94.22	942.21	10.0%
5	117.46	25.56	91.90	918.97	10.0%
6	117.46	28.12	89.34	893.41	10.0%
7	117.46	30.93	86.53	865.29	10.0%
8	117.46	34.02	83.44	834.36	10.0%
9	117.46	37.43	80.03	800.33	10.0%
10	117.46	41.17	76.29	762.91	10.0%
11	117.46	45.29	72.17	721.74	10.0%
12	117.46	49.81	67.65	676.45	10.0%
13	117.46	54.80	62.66	626.64	10.0%
14	117.46	60.28	57.18	571.84	10.0%
15	117.46	66.30	51.16	511.57	10.0%
16	117.46	72.93	44.53	445.26	10.0%
17	117.46	80.23	37.23	372.33	10.0%
18	117.46	88.25	29.21	292.10	10.0%
19	117.46	97.07	20.39	203.85	10.0%
20	117.46	106.78	10.68	106.78	10.0%
Current Year Total for All Assets			$1,349.20	$13,491.90	10.0%


PROPERTY
VALUES 2012
estimated average property value per county subdivision
PROPERTY VALUE

Raymond Atkins

Sidley Austin LLP

Recap

- A system-wide revenue adequacy constraint is a discredited form of regulation that is fraught with perils.
- These perils are made exponentially worse by serious measurement errors.
- You do not need to travel down this path.

"... CMP, with its SAC constraint, is the preferred and most accurate procedure available for determining the reasonableness of rates in markets where the rail carrier enjoys market dominance."

D.C. Circuit 1993 & 2006

Burlington N. R.R. Co. v. ICC, 985 F.2d 589, 596 (D.C. Cir. 1993)
BNSF Ry. Co. v. STB, 453 F.3d 473, 481 (D.C. Cir. 2006)

"As railroads enjoy increasing market power with rising demand for their services the SAC test (in either its full or simplified form) would provide a critical restraint on their pricing of captive traffic, without deterring railroads from making the investments in their rail networks that are needed to meet rising demand."

STB 2012

Rate Regulation Reforms, STB Docket Ex Parte No. 715, at 10 (served July 25, 2012) (emphasis added)

"The very purpose of the SAC test is to determine what [the railroad] needs to charge to earn 'adequate' revenues on the portion of its system that is included in the system of the SARR."

STB 2005

Xcel v. BNSF Ry. Co., STB Docket NOR 42057, at 6 (served Jan. 19, 2005)

"The Board is on solid ground here."

D.C. Circuit 2006

BNSF Ry. Co. v. STB, 453 F.3d at 480 (D.C. Cir. 2006)

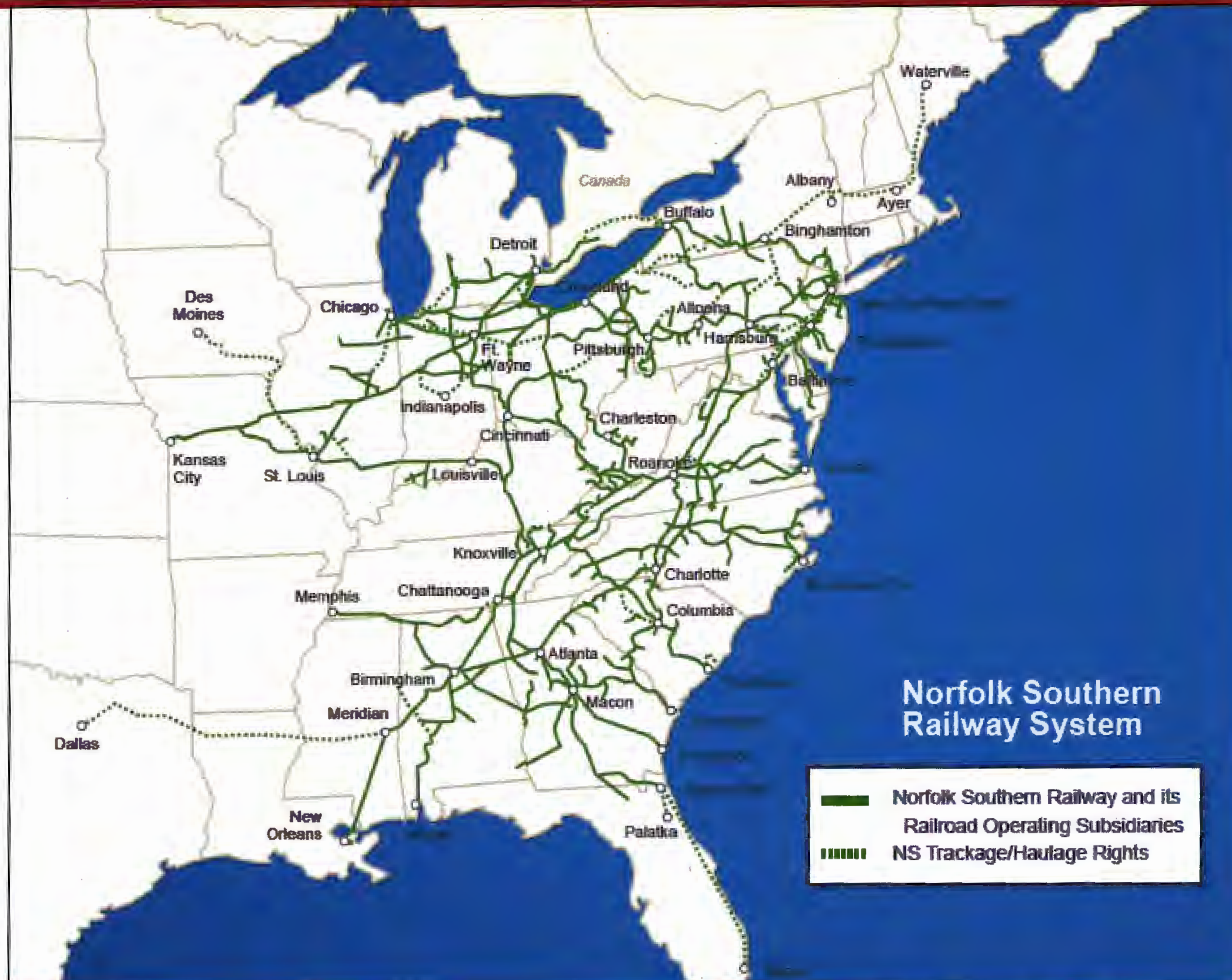
NORFOLK SOUTHERN
One line, infinite possibilities.

"[T]he RSAM figure merely provides a test of 'system-wide revenue need' and therefore 'provides no guidance on the rates Xcel should be charged for the particular facilities and services Xcel uses.'"

D.C. Circuit 2006

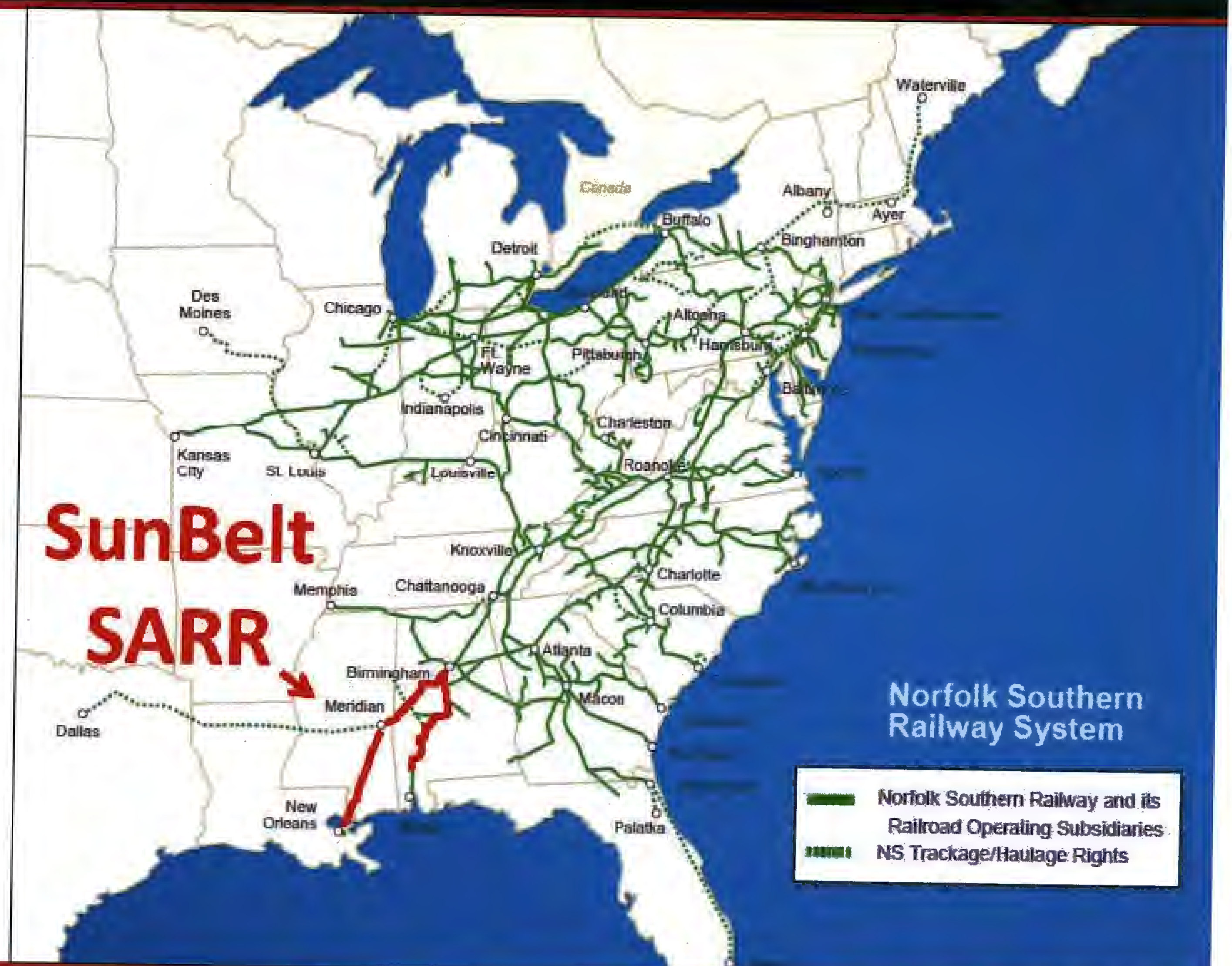
BNSF Ry. Co. v. STB, 453 F.3d at 481 (D.C. Cir. 2006) (quoting STB/DOJ brief) (emphasis added)

Norfolk Southern Network 20,000 miles

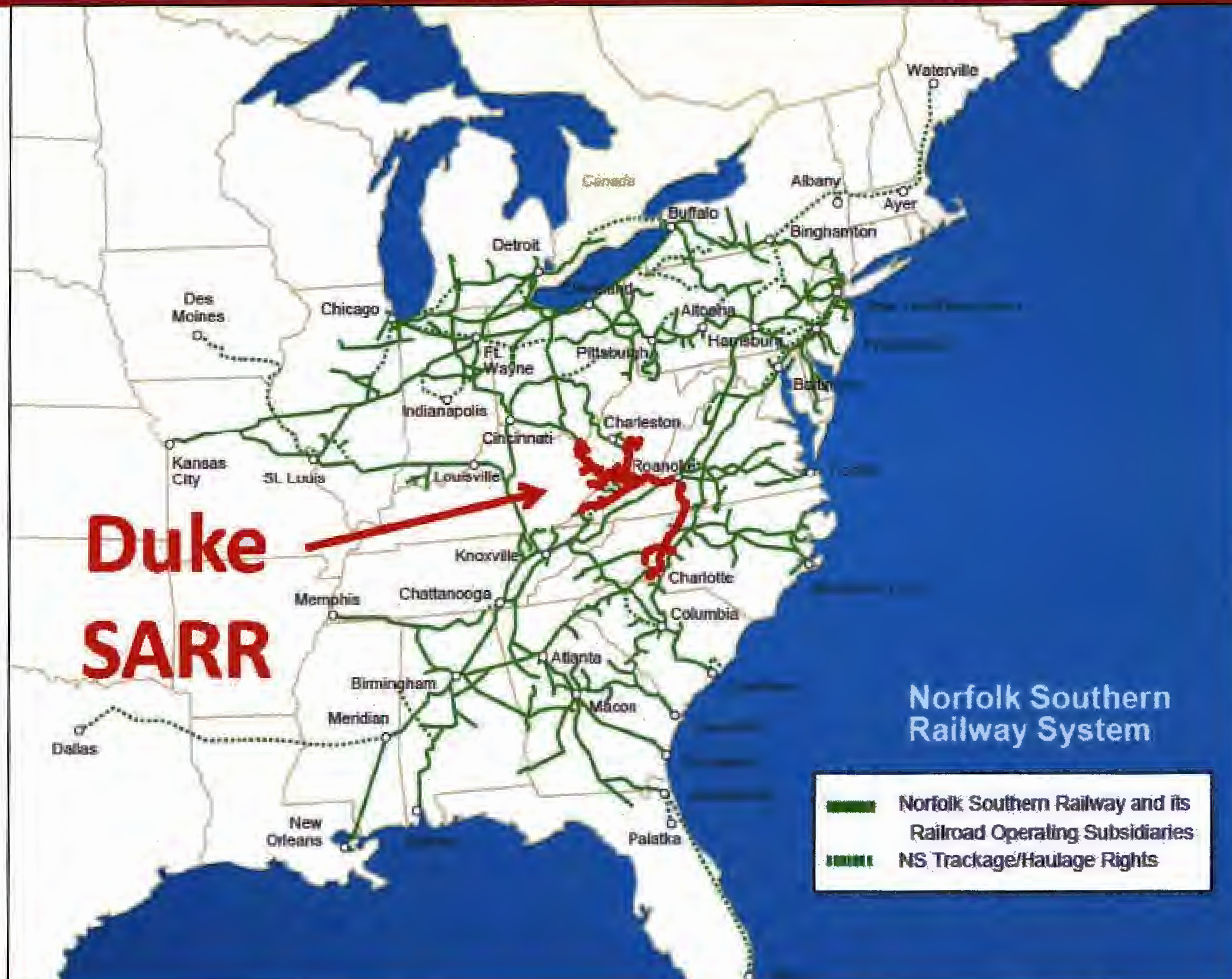


NORFOLK SOUTHERN
One line, infinite possibilities.

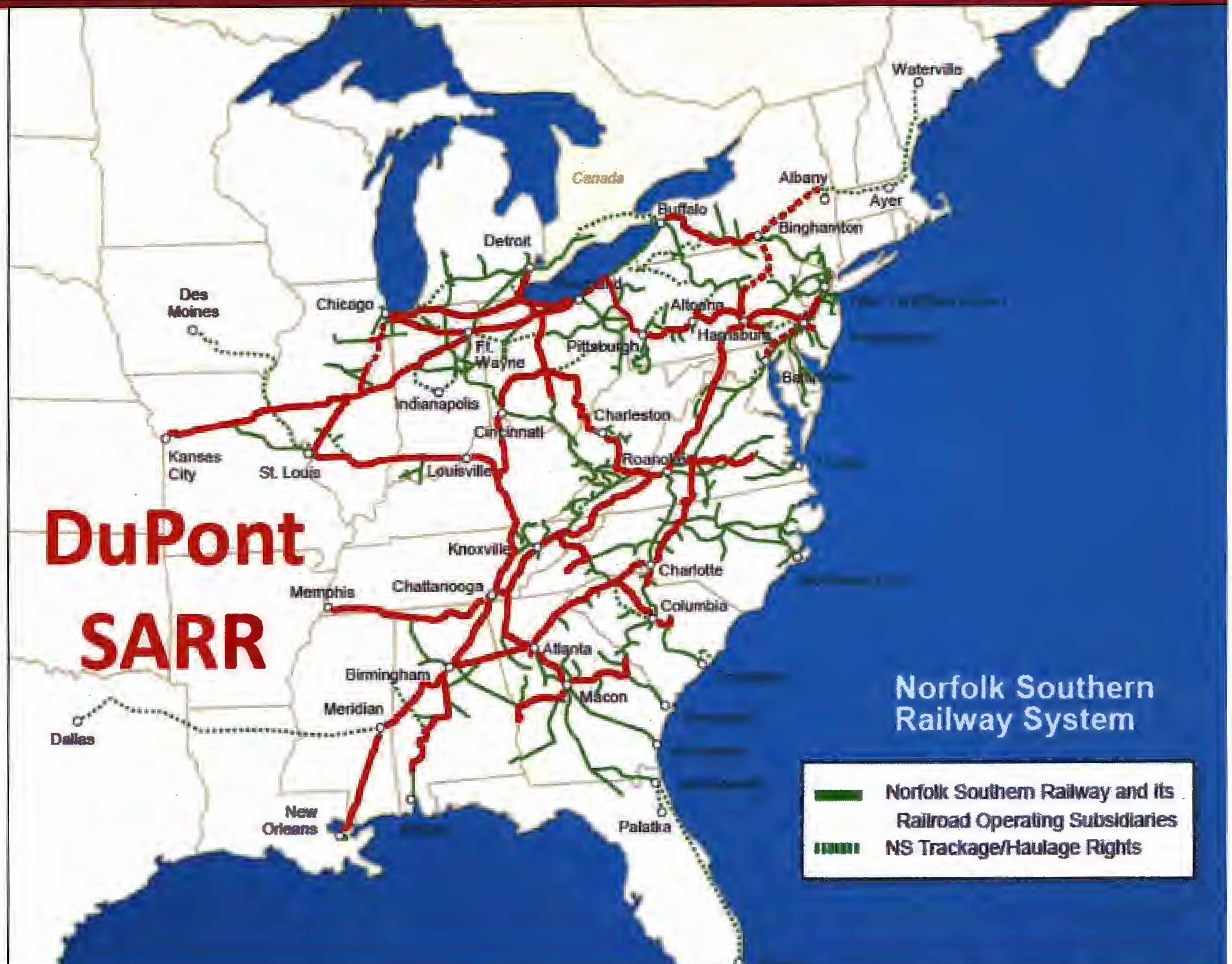
SunBelt v. NS - NOR 42130
580 miles



Duke v. NS - NOR 42069
1,100 miles



DuPont v. NS - NOR 42125
7,200 miles



NORFOLK SOUTHERN
One line, infinite possibilities.

Shipper Responses?

- Dismiss concerns about incentive problems that plague rate-of-return style regulation
- Dismiss concerns about cross-subsidies
- Dismiss the measurement errors

Subsidized Rent Control?

"A more appropriate comparison . . . would be to methods employed by government agencies charged with responsibility for setting affordable subsidized rents, or administering rent control policies, for the benefit of those who would be subject to economic hardship if forced to pay 'what the market will bear' for a portion of a limited housing stock. In those instances, 'current market values' are eschewed in favor of a public policy emphasizing reasonable rental rates."

Joint Reply Comments of WCTL, Consumers Energy Co., and S. Miss. Elec. Power Assoc., STB Docket Ex Parte 722, at 15 (Nov. 4, 2014) (emphasis added)

Economists' Statement in Support of Staggers Act (Feb. 25, 1985)

"The appropriate standard for determining the adequacy of railroad revenues is a rate or return equal to the current cost of capital on the replacement value of all rail assets that are required to meet the demands for railroad service, regardless of the source of funds used in investing in those assets."

Nobel Laureate Kenneth Arrow
Nobel Laureate James Tobin
(and 54 other leading economists)

Attachment D, Reply Comments of NS, STB Docket Ex Parte 722, (Nov. 4, 2014)

SAC Is Not Broken

- Full-SAC is well designed for cases where there are millions of dollars in dispute.
- Simplified-SAC
  - Fast.
  - Simple. NO HYPOTHETICAL RAILROAD
  - Discovery burden on railroads.
  - Unlimited relief.
- But that is not the relief shippers are looking for.

Multiple Independent Reasons To Abandon The Revenue Adequacy Constraint

- Regulators discarding rate-of-return regulation
- Stifle innovation
- Discourage investment
- SAC and Simplified-SAC are targeted "revenue adequacy" tests
- Massive measurement error
- Cost of capital should not be a ceiling
- Internal cross-subsidies
- "No Guidance" as to reasonableness of a particular rate

TO BE PLACED ON THE PUBLIC RECORD

BEFORE THE

SURFACE TRANSPORTATION BOARD

Ex Parte No. 722

RAILROAD REVENUE ADEQUACY

Ex Parte No. 664 (Sub-No. 2)

PETITION OF THE WESTERN COAL TRAFFIC LEAGUE TO INSTITUTE A RULEMAKING PROCEEDING TO ABOLISH THE USE OF THE MULTI-STAGE DISCOUNTED CASH FLOW MODEL IN DETERMINING THE RAILROAD INDUSTRY'S COST OF EQUITY CAPITAL

WRITTEN TESTIMONY
ON BEHALF OF OLIN CORPORATION
BY JOHN L. MCINTOSH, SENIOR VICE PRESIDENT OF CHEMICALS

1. INTRODUCTION TO OLIN CORPORATION

Chairman Elliott and members of the Surface Transportation Board (the "Board"), I am pleased to be here today on behalf of Olin Corporation ("Olin") as you explore the Board's methodology for determining railroad revenue adequacy and the revenue adequacy component used in judging the reasonableness of rail freight rates. I have served as a corporate officer for Olin for 16 years, and have nearly 40 years of experience in the chemical manufacturing industry.

Olin Corporation is headquartered in Clayton, Missouri and consists of three segments: Winchester Ammunition, a leader in small caliber ammunition production and a supplier to U.S.

law enforcement and military; Chlor Alkali Products, a leading producer of bulk chlorine, caustic soda, bleach and other chemicals in North America; and K.A. Steel, one of the largest distributors of chemical products manufactured by chlor alkali producers. Olin is a publicly traded company that has been listed on the NYSE since 1917. Today, I am testifying on behalf of Olin's Chlor Alkali Products business, which is headquartered in Cleveland, Tennessee and includes ten different locations throughout North America, including locations in New York, Georgia, Tennessee, Alabama, Nevada, Louisiana, California, Washington state and Quebec, Canada. Olin was the first commercial supplier of chlorine in the United States and has been involved in the chlor alkali industry for over one hundred years.

Olin ships the vast majority of its chlor alkali products via rail from its various manufacturing locations in North America, so rail transportation is absolutely essential to Olin. The ability to obtain reasonable freight rates is vital to Olin's business, so Olin appreciates the Board's effort to address revenue adequacy and rate reasonableness issues in today's hearing and hopes that meaningful changes will be made to the Board's current methodology.

2. FINANCIAL SUCCESS OF RAILROADS AND FAILURE OF STAND ALONE COST CONSTRAINT

As Olin has previously expressed in its Comments to the Board in this matter, there is a clear disconnect between the Board's current methodology in determining the railroad's revenue adequacy and the current actual financial state of the rail industry. As noted by the Senate Committee on Commerce, Science, and Transportation in November of 2013, the financial performance of the Class I Railroads "is at its strongest since the passage of the Staggers Act." A simple review of the major railroads' stock prices and corporate activity clearly supports the undeniable financial success of the rail industry. Despite their extreme profitability, the big four class I railroads have chosen to pay billions of dollars to its shareholders through stock repurchases and dividends instead of investing in the expansion of the railroad system to meet increasing demand.

In spite of the railroads' financial success, the Board's methodologies for determining the achievement of revenue adequacy and the reasonableness of rail rates have remained unchanged. In essence, while the railroads have enjoyed terrific financial success, the avenues for captive shippers like Olin to challenge the reasonableness of freight rates have remained unchanged. As noted by the Board, "Nearly all large rate reasonableness cases to date have relied upon the stand-alone cost constraint."

Unfortunately for captive shippers like Olin, the stand-alone cost constraint on rail rates has proven to be almost completely ineffective due to its prohibitive expense, lengthy time requirements, and unnecessary complexity. In fact, the inefficiencies of the stand alone cost constraint process have made rate cases almost completely inaccessible to shippers. The result of this is that shippers lack a meaningful counterbalance to the railroads' strong pricing power over captive shippers. As a result, captive shippers are faced with two bad alternatives: they can simply accept the "tariff premium" forced upon them by railroads, or they can challenge freight rates under the stand alone cost constraint. Recognizing that these rate challenges cost many millions of dollars and take years to resolve, Olin and similarly situated captive shippers are required to go "all in" with extremely uncertain outcomes. Despite the inherent and costly risks associated with rate cases, shippers have very limited upside. If a shipper manages to win a rate case, its only reward is that it can pay reasonable freight rates to railroads. Railroads, on the other hand, have no downside consequences in losing a rate case, as they are simply returning shipper money to which they were never actually entitled. And, considering that shippers must continue to pay tariff premium prices throughout a rate case, the railroads are actually incentivized to prolong rate cases as long as possible. Given this, it is not surprising that railroads and railroad groups adamantly oppose any suggested changes to the stand alone cost system.

In addition to the obvious inefficiencies of the stand alone cost constraint, there is no economic justification for this approach either, especially for railroads enjoying such extreme profitability. For a detailed analysis of the failures of the stand alone cost constraint on the basis of economic theory, I would like to draw the Board's attention to the Verified Statement of Dr. Gerald R. Faulhaber, which was attached to the initial comments of the Concerned Shipper Associations on September 5, 2014. Dr. Faulhaber is one of the original developers of the stand alone cost constraint, yet he clearly argues that in today's economic environment, there is no economic justification for the use of the stand alone cost constraint.

3. **REVENUE-TO-VARIABLE COST RATIO CEILING**

In addressing the various shortcomings of the Board's application of the stand alone cost constraint in rate reasonableness cases, Olin stresses that the Board should avoid the same pitfalls that have rendered the stand alone cost constraint so ineffective for captive shippers. The Board should avoid creating another "full employment bill for economists" as the stand alone cost constraint has been called and should focus on creating a simple and efficient alternative for reviewing rate cases.

Following the works of Dr. Russell Pittman of the U.S. Department of Justice, Olin has consistently supported the implementation of a ceiling on the railroads' revenue-to-variable cost ratio that may be charged by railroads to captive shippers. In its Comments, Olin cited to a number of past filings and sources that have advocated for this approach, so this is not a new concept. Nonetheless, due to the relative simplicity of the revenue-to-variable cost ceiling, it would provide a much more practical means of protection for captive shippers against the railroads' pricing power in lieu of the unworkable stand alone cost constraint. As a result, captive shippers like Olin would finally obtain a meaningful counterbalance to the railroads' pricing power. The increased efficiency of the revenue-to-variable cost ceiling and relative predictability due to the inherent simplicity of this approach would cause rail rates for captive shippers to be self-policing because a shipper's threat to implement a rate case would almost immediately become viable (as opposed to the empty threat of commencing a long and arduous rate case under the Board's current framework). This, in turn, would incentivize railroads to enter into private contracts with captive shippers or otherwise provide for reasonable rates under tariff. As a result, not only will a captive shipper's rate case become much more efficient for the Board, but fewer rate cases will be necessary because railroads will have additional incentive to enter into private contracts with captive shippers.

The Board has wisely undertaken this proceeding to examine the revenue adequacy constraint on Ramsey pricing in rate cases, which was adopted by the Interstate Commerce Commission in 1985. Because the revenue-to-variable cost ceiling may be implemented as a result of this 722 proceeding, Olin respectfully submits that it is not necessary for the Board to implement a formal rulemaking proceeding. Olin's understanding of the Board's mission in implementing this 722 proceeding is simply to provide some clarity to the process of enforcing the revenue adequacy constraint. Therefore, Olin strongly advises the board against implementing a burdensome rulemaking process.

4. CONCLUSION

The recent extreme profits of the major railroads show that they have far exceeded revenue adequacy, yet the Board's methodology in judging the reasonableness of rail freight rates and in determining whether railroads have achieved revenue adequacy has remained unchanged and ineffective for shippers like Olin. Olin, therefore, agrees with the Board that it is necessary to implement new methodologies for enforcing the revenue adequacy constraint on rail rates. Olin respectfully urges the Board to implement a clear, simple and efficient procedure for reviewing rate cases under this revenue adequacy constraint so that shippers may gain a meaningful counterbalance to the railroads' strong pricing power over captive shippers.

Respectfully submitted for and on behalf of Olin Corporation by:

/s/ John L. McIntosh
John L. McIntosh, Senior Vice President of Chemicals

Testimony of Edward R. Hamberger
EP 722, *Railroad Revenue Adequacy*
July 22, 2015

238915

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Office of Proceedings
July 22, 2015
Part of
Public Record

Key National Policies at Risk

- Improving rail service
- Increasing exports
- Achieving energy independence
- Enhancing rail safety
- Increasing freight railroads' share of freight traffic
- Improving on-time performance for Amtrak and ensuring reliable service for commuters
- Increasing the resiliency of the national freight network