Date: December 12, 2019

Case: Hearing on Railroad Revenue Adequacy

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SURFACE TRANSPORTATION BOARD

EP 761

HEARING ON REVENUE ADEQUACY

EP 722

RAILROAD REVENUE ADEQUACY

PUBLIC HEARING

Thursday, December 12, 2019

9:30 a.m.

James E. Webb Memorial Auditorium of the

National Aeronautics and Space Administration

300 E Street, S.W.

Washington, D.C.

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P R O C E E D I N G S

(9:30 a.m.)

CHAIRMAN BEGEMAN: Good morning. Thank you for joining us for the Board's hearing on railroad revenue adequacy and the related recommendations provided by the Board's Rate Reform Task Force in its April report. My colleagues and I have been making good use of the report, and I commend the members of the Task Force for their work on what was a very important and challenging undertaking.

The Board held a hearing on issues related to railroad revenue adequacy in July 2015, as part of the EP 722 proceeding. Last year the Board issued the decision clarifying that informal discussions between the Agency and stakeholders were permitted in that proceeding which was, and still is, in an informal pre-rule stage -- informational pre-rule stage.

We expected that the clarification would spur stakeholder interest in discussing the complete issues with us. Unfortunately, the interest didn't materialize, at least as I envisioned it would. But I'm very pleased that so many stakeholders are taking the opportunity to participate in this hearing today and tomorrow.

I thank the witnesses for their participation, and their effort to prepare for this hearing. We also received written comments from several parties who will not be appearing. Based on the submissions, I expect the hearing will be very informative. I will briefly go over just a few general hearing matters, and then turn to my colleagues to share any opening remarks they may wish to make.

So, during the course of the hearing today and tomorrow. Let me start again. Please silence your cell phones. We want to hear from every party that has filed a notice of intent to participate, and make sure there's an opportunity for questions to be asked and answered.

To allow that to happen, the parties are asked to stick to their allotted times. Each witness is asked to step up to the lectern to provide your testimony. The lectern is equipped with lights and a timer which will guide you regarding your time. Two minutes before your time expires, a yellow light will appear. When you see a red light, your time will have expired and you will need to conclude your remarks.

It's not my intent to cut-off a speaker, but we do need to keep things moving, so that we can hear from all the participants. The witness tables are also equipped with microphones. It's my hope that in responding to our questions, the panelists will not only interact with us, but with one another.

A transcript of the entire hearing will be placed on the Board's website within a few days of the close of this hearing. For the benefit of the recorder, please speak clearly into the microphone. He is welcome to interject when he can't hear. He's sort of helping control what we're doing, so let's really give him our assistance to the extent we can.

We'll keep the record open until February 13th to allow for the filing of additional written comments. We recognize that there are already several upcoming filing deadlines between now and then covering a variety of important matters, and we want to accommodate filers who may be involved in a number of those proceedings.

If you have slides or exhibits today that haven't already been filed, please submit them promptly to our Office of Proceedings in the EP 761 and EP 722 dockets by emailing them to milss@stb.com.

Whether we take a short break for lunch today will depend on how we are doing on time. We must conclude each day's session by 6 p.m. at NASA's request. They're accommodating us and we are very grateful and appreciative to their assistance, so we want to be good stewards of their space while we're in here.

As I said, please silence your phones. And I'm now going to turn to our Vice Chairman Patrick Fuchs.

VICE CHAIRMAN FUCHS: Thank you, Chairman Begeman. I will just -- briefly a word of thanks. You know, thank you to all the commenters for all the considerable time and thought that went into the filings. Thank you to staff for all the work that went into making this possible. And a special thanks to everybody who traveled to be here.

I think that there will be plenty of time to discuss views and explore topics, so I will just say I very much look forward to discussion and thank you very much, Chairman Begeman, for having this hearing.

CHAIRMAN BEGEMAN: Thank you. Marty?

BOARD MEMBER OBERMAN: Thanks Ann. Very briefly, I want to echo with what both Ann and Patrick have said, particularly, the amount of effort that has been put into this whole project by our staff and all of the industry representatives and commenters because I've not read every word, but I've read a lot and I know a great deal of effort and time has gone into it.

And we cannot undertake this effort on our own. We need the input from the people who are affected. Just one observation on logistics, just on a personal note on my speaking only for myself. I know there were some logistical concerns about recording and streaming, because we're not in our own space, and that has presented logistical challenges for doing what I think most of us, all of us would feel would normally be preferable and that is videotaping and live streaming.

And I understand that our friends at the AAR have tackled this problem and are now able to accomplish that in this space. So, I for one, I think all are grateful. But that happened, and I guess I would make the observation that perhaps this is an example of, in an unregulated setting, the private sector tackling a problem and solving it. So, thanks to our friends at the AAR.

CHAIRMAN BEGEMAN: And to the extent that AAR is able to do some recording, you are invited to submit that for the record, so thank you.

So, why don't we begin with the first panel. We will hear from the American Chemistry Council and the Association of American Railroads.

MR. SLOAN: Members of the Board, good morning and thank you for holding this important hearing on railroad revenue adequacy. My name is

Jeff Sloan, and I'm pleased to speak here on behalf of the American Chemistry Council.

Our member companies manufacture a wide variety of products that make our lives better and our world healthier, safer, and more sustainable. To deliver these positive benefits, ACC members depend on the U.S. transportation system, especially rail.

In 2017, railroads transported 2.1 million carloads of chemical products. Because of our industry's investments in new capacity, shipments are expected to increase by 300,000 carloads annually by the year 2022.

The U.S. has a competitive advantage in chemical production. Unfortunately, this advantage is hindered by increasingly high rail rates. Excessive rates act as a tax on ACC members, as well as on other manufacturers, farmers and energy producers. It hinders our ability to invest and innovate.

The STB's current stand-alone cost standard is so cumbersome, costly and lengthy that it's become unworkable, particularly for carload shippers. It's time for a better methodology to determine rate reasonableness. As stated by Chairman Begeman, developing a new approach has to be a top Board priority.

In both the freight rail policies established by Congress in the Board's own rate review guidelines, railroad revenue adequacy is inextricably linked to rate reasonableness. This raises two fundamental questions. First, how much more does a captive shipper pay solely because it lacks access to competitive transportation options?

And two, how much of this differential is necessary for the railroad to be long-term revenue adequate? Today, and in our written testimony, ACC proposes an alternative rate review methodology that gives the Board the tools to answer these questions.

ACC has developed the benchmark method, working with Economist Dr. Kevin Caves, who will speak in more detail after me. In short, the benchmark method is a two-step approach. It uses an economic model to predict a benchmark rate, meaning the rate that would be expected for that specific captive shipment if it existed in a competitive market.

The second step determines the margin above that benchmark rate that is necessary to maintain the railroad's long-term revenue adequacy. To bring a rate challenge using this standard, a shipper would need to prove market dominance for that shipment, show that the individual rate is above the competitive level, and demonstrate that the non-competitive rate premium exceeds what the STB determines is needed to protect the railroad's revenue adequacy. This approach does not cap rates across the board, nor does it limit the profit that a railroad can earn from competitively priced traffic.

Rather, it specifically limits the additional margin that a captive shipper must pay, solely because it lacks effective competition. As Jeff Moreno will discuss more fully, this approach is entirely consistent with the Board's statutory authority and legal precedent.

The benchmark method would be much quicker than a SAC case and less costly for shippers, railroads and the Board. The approach is grounded in widely accepted economic principals, and unlike SAC, it mimics competition based on actual market data rather than a fictional paper railroad.

Dr. Caves has developed a fully formed, working model as a baseline proposal. However, ACC recognizes that there are many choices and decisions inherent in our proposal that warrant further consideration and stakeholder input. Therefore, we ask the Board to initiate a rulemaking with the goal of adopting a final version of the benchmark method as an alternative rate methodology.

One additional topic I want to touch on briefly is the Board's bottleneck rules. As stated recently by Board Member Oberman, competition should be the Board's guiding light. Past decisions to foreclose competition may have been justified to protect the struggling rail industry, however, once a carrier has achieved long-term revenue adequacy, the Board should revisit these decisions and establish a more balanced approach.

Permitting shippers to access competitive service along routes would allow the markets to work and greatly reduce the need for regulation. The mere existence of an alternative would facilitate more competitive rates and better service, even if the shipper ultimately decides to stay with the originating carrier.

I compare the situation of a captive shipper to a housing development where the only road out is a privately owned toll road. As a homeowner, I'd accept paying that toll to use that road. What I would not accept is a requirement to stay on that company's toll roads for the entire length of my trip.

If other roads are available, I should have the option to choose one that offers cheaper tolls, shorter route and fewer potholes. Rail customers should have a similar option. Thank you for your time this morning. I'll now turn it over to Dr. Caves.

MR. CAVES: Thank you Jeff. Let's see I have a slide deck to go with my presentation. And I'm not sure how to call it up. Okay, thanks.

That's it. Okay, thank you. So, I'm Kevin Caves and as Jeff mentioned, I'll be talking about the competitive benchmark model that we've developed using masked waybill data that was provided by the STB.

So, broadly speaking, what this model does is it mimics competition as competition actually occurs in the industry. And by that, I mean the competition, the railroad space, when they are forced to set their rates in competition with other railroads, and with intermodal competitors.

How do we do that? We have access to data on literally millions of competitive outcomes in the industry, so there are lots and lots of shipments thanks to deregulation. There are lots and lots of shipments out there that are subject to competition and were able to fit in an econometric model to that data to predict what the competitive rate will be given the characteristics of a shipment.

Once we've done that, we can take that model and use it to make comparisons between the competitive rates the model predicts, and the actual rates that are being paid by captive shippers. And we can pinpoint on a shipment by shipment basis, exactly which shippers are paying rates that are substantially in excess of the competitive level.

It is those shipments and only those shipments which are potentially subject to regulation under the method that we are proposing. Everything else is off limits. I just want to be clear about that. So, that's the basic verbal description of how the model works and now I'd like to walk you through three illustrative charts that I think will clarify the concepts for everybody.

So, here we see a hypothetical simplified illustration of how the model works. I'd like to stress this isn't the actual model, in reality it's significantly more complicated than this. But this boils down the basic intuition into two dimensions. So, hopefully everything is fairly clear here.

And as you can see, we have a model. And in this case a model is just a straight line that predicts the competitive rate that would be charged as a function of the distance of a shipment. As the distance increases, the competitive rate tends to go down in this illustration.

And we fit the best curve that we can given the data and competitive rates. Once we've done that, we can take data on potentially non-competitive rates, and compare it to what the model's predicting. And if something is substantially higher, if a rate that a shipper is paying is substantially higher than what other shippers are paying on comparable shipments, under competitive conditions, and that will jump out of the model as you can see in points A, B and C here.

So, we can break that down into two different steps. Step one is simply establishing the benchmark or fitting the model. So, in step one, we get data on competitive rates and we try to predict it as best we can, using econometric techniques. That's all we're illustrating here.

In step two, we use the model to come up with some notion of rate reasonableness. So, here the idea is that once the model has been fit, the Board can decide how far above competitive rates --

how far above competitive rates railroads should be allowed to charge captive shippers, right?

How much -- so, if a shipper is captive, if it's found to be market dominant, how much in excess of the competitive rate should it be able to charge? If it's within a threshold that we call a competitive threshold, then nothing would happen. The shipper would continue to pay a rate, perhaps substantially above competitive levels.

But beyond some level, the rate would be deemed unreasonable. And those rates, and only those rates, would be subject to regulation and potentially reduction under the model that we're proposing.

So, hopefully that's clarified the concepts. I want to walk through a little bit of the detail of how we actually build the model. Of course, this is all laid out in my verified statement. So, I'm going to gloss over a lot of the details. But essentially, we were granted access to the carload waybill sample for a given set of years, just to perform this exercise.

We were not given unmasked data. All the data that we have was masked, but our presumption is that if and when this model is adopted and implemented for purposes of actually setting rates, the unmasked data would actually be used.

So, we have revenue per ton mile, which has been masked. And then we have characteristics of the shipments. And that's essentially what the CWS gives us. And then we import some data from other sources to use in the model. And those are primarily information on origins and destinations of different shipments and information on the distance of different origins and destinations to rail and water competition.

So, in broad strokes, those are the data sources we're using for the model. Once we've got all that data together, we have to figure out which of these shipments are actually subject to competition. So, to implement that, we came up with a variety of screens which are described in detail in my verified statement, but in broad strokes, this is what we did. A shipment had to have either rail competition at the origin destination, or water competition, or it had to be subject to trucking competition based on the screens that we've provided.

We did robust checks where we tried different screens other than the ones I'm showing here, but this is sort of the baseline model that I'm showing you. And so, if you apply these screens, just over three-quarters of the CWS shipments in the sample we looked at would be classified as competitive. 25 percent would be potentially non-competitive.

And the model would be fit again, only to that 76 percent. So, after we implement the model, the last step, or the next step I should say, is comparing the actual -- the rates that the model's predicting to the actual rates that captive shippers are paying -- the potentially captive shippers are saying, I should say.

And these are the broad results that we got when we took the -- again, the model that was fit to three quarters of the data, to the competitive sample and compared those predicted rates to what the other one-quarter of the sample of potentially non-competitive shipments were paying.

And we found that on average, as you might expect, the potentially non-competitive samples, rates in the potentially non-competitive samples were significantly higher -- about 48 percent higher on average than the rates in the competitive sample. And again, this is controlling for all of the shipment characteristics and the factors we control for the models.

All else equal, potentially non-competitive rates are higher than competitive rates. And then beyond that, you can break it down further and you find that within the non-competitive sample, there's a relatively small slice that is increasingly -- appears to be paying increasingly higher rates relative to the competitive level.

So, 12 percent paying about double the predicted competitive rate, 4 percent are paying three times or more than the predicted competitive rate, sorry, and 1 percent paying more than five times the predicted competitive rate.

So, this is again, suggestive of the

illustration we saw at the beginning where you have a small number of shipments that were significantly in excess of competitive levels. So, that's all of the econometric model that I just described.

The next step is this application of the competitive threshold. And this is simply a way, a method or a framework that we're proposing for the Board to determine once we know which shippers are paying abnormally high rates, how do we decide how high is too high? That's the entire purpose of the competitive threshold.

So, it's a multiplier that would be applied to the competitive benchmark. So, for example, if the multiplier is equal to two, that would say anything -- any rate that is more than twice as high as it would be under competition is going to be deemed unreasonable, assuming the shipper can demonstrate market dominance.

And our idea is that the STB would have the flexibility to determine what the competitive threshold should be. It could take revenue adequacy into account, measure however the Board thinks it would be appropriate to do so. And it could take into account other factors.

But regardless of how it's done, we illustrate -- I illustrate in my verified statement how this could be applied and how it would be, once you have the model in place, how it would be transparent to apply the competitive threshold.

So, just a couple notes about the competitive threshold. Obviously, it preserves differential pricing, right, for allowing shippers and for allowing railroads to charge shippers twice the competitive rate, that is differential pricing by definition. It's not a cap on aggregate revenue or aggregate profit for the railroad.

Again, only shipments that can be shown to be substantially above competitive levels are even potentially subject to regulation. All of the traffic is off limits, including of course, rates on competitive routes. And rates are only -- yeah, the last bullet just makes that same point. Rates are potentially constrained only if they're substantially above competitive levels.

So, we do -- I go through a purely illustrative application of the competitive threshold in my verified statement. I use a six year revenue adequacy period. Any timeframe could be used, any definition of revenue adequacy could be adopted, and it would be applied in an analogous fashion.

In our illustrative example, we first showed that over the time period from 2008 to 2013, which includes the great recession and the aftermath, the worst economic crisis since the great depression, without rate regulation you can show that three railroads are revenue adequate.

And then if you assume that all three of these railroads have been subject to the rate regulation we're proposing, and that all of the potentially captive traffic had gotten the maximum possibly relief, that all three of these railroads would have remained revenue adequate. So, this is an illustrative application that's suggestive of the idea that revenue adequacy, as it's defined here, would be preserved under rate regulation, even if you make these fairly aggressive assumptions about how it would be applied.

And the last slide just touches on how the model would be implemented in practice as we envision it. Obviously, we'd want to use unmasked data, rather than masked data. We want to use the most recent CWS data available. Presumably, there would be comments on how the econometric model would be specified and that would probably be tweaked in one way or the other and then the STB would have to select the competitive threshold.

I think my time is just about up. So, I'll turn it over to Jeff Moreno.

MR. MORENO: Thank you Kevin. Good morning. The benchmark method has been developed to comport with statute precedent and the constrained market pricing principal that the Agency adopted as the foundation for rate reasonableness determinations in the coal rate guidelines decisions.

It specifically implements the revenue adequacy constraint in that decision, which is a constraint on the extent to which a railroad may charge differentially higher rates on captive traffic as quoted in the first block of the slide.

In guidelines, the Agency declared that 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. In other words, when that carrier is revenue adequate.

The rail industry represented by the AAR, has urged the Board to abandon the revenue adequacy constraint all together because earning revenue above a revenue adequate level is not a problem to be solved by regulation, and the regulation of earnings is antiquated and discredited.

We all agree -- disagree with the general principles that have been laid out by the AAR to earnings based on system, or constraints based upon system earnings. The flaw in the AAR's argument, however, is that it wrongly assumes that the only way to apply the revenue adequacy constraint, is by restricting system earnings.

A revenue adequacy rate constraint, however, can be applied to individual movements without restricting overall system earnings. The benchmark method applies to the revenue adequacy constraint without implicating either of the AAR's concerns. As required by statute, the benchmark method first requires a market dominance determination, which is the basis for concluding that market power exists.

Differential pricing is permissible -- is a permissible exercise of that market power under constrained market pricing principles, but only to the extent needed to attain and maintain revenue adequacy.

The econometric model developed by Dr. Caves, determines a competitive rate for the issued traffic. And it determines the competitive threshold which determines the appropriate degree of differential pricing needed to maintain revenue adequacy.

The benchmark method is not rate of return regulation. There is no limit imposed on a carrier's total earnings. For individual market dominant movements, a maximum prescribed rate will be subject to a floor. A floor that is the higher of the competitive rate predicted by the econometric model, or the 180 percent jurisdictional threshold.

A rail carrier can retain all revenue that exceeds a system-wide revenue adequate level, so long as that revenue is earned at competitive levels represented by that floor. Indeed, AAR and several individual railroads have testified in both this docket, and previously in the Ex parte 722 hearing that competitive traffic is making a growing share of contribution to revenue above variable cost. None of that revenue would be affected by the benchmark method.

The AAR also wrongly contends that the revenue adequacy constraint in guidelines violates the statute, agency precedent and sound economics. This is the rebuke of their testimony from the 2015 hearing the Board held in Ex parte 722.

The Concerned Shipper Associations in that proceeding, of which ACC was a participant, thoroughly debunked AAR's claims. I refer you to page 9 to 19 of the Concerned Shipper Association's reply comments. Also, at pages 22 to 26 they made the point that the rail industry attacks on revenue adequacy constraint are predicated upon the false premise that revenue adequacy necessarily equates to rate of return regulation.

The revenue adequacy constraint as articulated in guidelines, has direct support in the statute. In the second quote on the screen, Section 10-1016 of the National Rail Transportation Policy expressly charges the Board 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. In other words, to maintain reasonable rates where those rates exceed the amount needed to be revenue adequate.

This correlates with the preceding statement and guidelines on the same slide. Only captive rates are subject to a revenue cap, as is the case whenever any form of regulation prescribes the maximum rate, including stand-alone cost. There is no cap on system revenue under the benchmark method.

In affirming guidelines, including the revenue adequacy constraint, the Third Circuit clearly comprehended that revenue adequacy constraints individual captive rates, not system-wide revenue.

Paraphrasing the guideline's statement on the previous slide, the Court declared in other words, "When a carrier has achieved revenue adequacy, the rate charged to a captive shipper will be the same as that determined by competition for non-captive shippers." That is precisely what the benchmark method does when it uses an econometric model to determine a competitive rate for the captive movement and then employs the competitive threshold multiplier to determine the appropriate amount of differential pricing above that competitive rate level.

The rail industry's insistence that the Board abandon the revenue adequacy constraint means that no matter how high a railroad's revenues are above what the Agency determines to be an adequate level, however the Agency defines revenue adequacy, and no matter how much captive traffic is forced to pay differentially higher rates that exceed what is necessary to be revenue adequate, the Board must blind itself to those circumstances in determining whether that rate is reasonable. That clearly is not what the statute requires.

Such a result would be antithetical to the type of regulation contemplated by the statute, controlling precedent and economic theory. ACC urges the Board to initiate a rulemaking proceeding to adopt some form of rate benchmark method that shippers can use to challenge the reasonableness of rates published by revenue adequate carriers.

The purpose of the rulemaking would be to adopt an econometric model, and a methodology for calculating the competitive threshold. The same proceeding also would address corollary matters, such as rate prescriptions and procedures. ACC has discussed these and other matters appropriate for a rulemaking in more detail in its written testimony.

The benchmark method should not be a simplified standard with restrictions like those that exist for existing simplified standards. It should be treated as the economic equivalent of SAC.

In the interim, however, the benchmark method is ideally suited for the final offer rate review process proposed in Ex parte 755. And ACC has presented the benchmark method as such an alternative option in the coalition association comments, in that docket.

In the final offer process however, each complainant would be required to develop its own econometric model and competitive threshold calculation, and address corollary matters anew, in each individual case. In contrast, by addressing such matters through rulemaking, the Board can provide greater predictability and consistency and enhance the defensibility of its decisions.

Also, once the model is established by rule, it will be relatively straight forward and easy for the Board to update the model annually with the most current waybill data and revenue adequacy determinations.

On behalf of ACC, I thank the Board for consideration of the benchmark method, and we look forward to receiving your questions.

CHAIRMAN BEGEMAN: Thank you. We'll turn to AAR.

MR. KALT: I also have slides. We have slides we can put up, just push go. Thank you very much. My name is Joe Kalt. I'm a Professor Emeritus at the John F. Kennedy School of Government at Harvard University and I've been asked by AAR to provide my views on the issues before us today.

In my discussion, I'd like to cover four main topic areas. One is what we call the mimic competition principle, which appropriately serves as the guide to sound regulation. I'll also discuss the proper and improper measurement of this concept of revenue adequacy. And the uses and misuses of revenue adequacy in railroad regulation.

And finally, I will talk about what I think represents an appropriate approach for this industry, which is what I call smart simplification, improving the capacity of regulation to mimic competition for all traffic and all shippers.

Let me turn first to this question of the mimic competition principle. What is it? It's pretty straightforward. It says allow competition to set rates where competition is present and use regulation to mimic competitive prices where competition is absent.

This principle actually grows out of Nobel Prize winning economics, which demonstrates that setting prices at competitive levels, whether through actual competition, or through regulation where competition is not viable. Setting rates at competitive levels is in the public interest and the public's interest in particular, in a healthy economy.

Now, I think just to state the principle that way, we all recognize that the Staggers' framework embodies this principle, allowing rate freedom, contract freedom across wide swaths of the network, but also applying regulation where there are pockets of market power in the industry.

So, mimic competition is deeply embedded in the Board's framework. And I think we all recognize, pretty straightforwardly, once you read those principles, that SAC is the mimic competition principle. And in fact, I'll stress that SAC, with its underlying concept of contestable markets, is the appropriate kind of competition that we have to apply and imagine in the railroad sector.

Staggers' framework also wisely rejects old style rate of return earnings triggered rate tightening or regulation. It's wise to do that as I will point out in a moment, because that is extremely distortionary as regulator after regulator across the developed world has learned.

And lastly, the mimic competition principle and the framework embodied in the Staggers' Act, in your regulation, is the heart of the rail renaissance. We're all familiar with that renaissance, but what does the mimic competition mean in this industry -- in the railroad industry?

This is important because the rail industry is subject to massive economic scale and scope. The economists, Dr. Caves and I, we're very prone to jargon in this phrase, massive economy is a scale and scope, fundamentally means that over vast portions of the country it would be wasteful of society's resources and ultimately harmful to consumers to operate multiple railroads.

We're going to have a system where one large provider -- one large supplier, can provide service at less social cost than any combination from multiple smaller suppliers. This massive economy as a scale and scope also means that customers inherently share network facilities and ultimately bear the costs of those facilities.

Now what does competition look like when you have these economies of scale and scope? I think in Econ 1, when people start taking economics, most of us teach a model of perfect competition in which a multiplicity of firms, each of them small relative to the overall business in the market, compete head to head for a customer's business -- for consumer's business.

When you get to Econ 100 or 101, things

change a little bit because there we start to recognize the implications of these economies of scope and scale. As I've just said what they mean, what those economies mean is that one large firm is more efficient for society's purposes than a multiplicity of small firms competing against each other head to head.

What does competition look like under those conditions? What competition looks like is this word that you hear, and it's embodied in language and orders and so forth. And that's the word contestability. And the idea here, and you can think in your mind of something like the airline sector where we deregulated, multiple firms don't operate necessarily where their economy is scaled to scope, but rather multiple firms contest to build and run the winning system.

Secondly, this competition, this contest produces differential prices, differential prices as one of its core outcomes, particularly, in relatively low density portions of a network system. We're going to find that the contestable competition outcome is one in which you have a single supplier, but the contestable result produces differential prices, and on low density rate, low density portions of a system.

You're going to see relatively high shares of cost being borne by customers on a low density system, simply because there's less traffic to carry the costs. Importantly, under railroads, economies of scope and scale, competition does not mean that multiple firms are competing everywhere.

It does not mean that prices are pushed to narrowly calculated marginal costs. And it does not mean that a contestable market produces customer control, network access or routings. The mimic competition principle in an industry like railroads, produces at least over large portions of the system, single carrier service, prices which are pushed to the contestable SAC level costs and bringing of the control over network access and routings inside the firm, rather than leaving it to customer decisions.

And I'll talk more about that in just a moment. I'll jump forward slightly here. Let me talk about the renaissance that this framework that has been adopted, this appropriate measure of mimicking competition has resulted in the railroad industry. This is a familiar picture, I won't dwell on it, but its familiarity is reasonable.

We need to take heed of the fact that we economists can't find any other industry where a regulatory change has such a dramatic impact on the productivity, the magnitude, the rates and the revenues of an industry. And we're all familiar with that -- with what that's meant for the recovery of the railroad industry over the last 30 or 40 years.

Let me turn to the question of the proper measurement of revenue adequacy. Accounting returns on the book value of net investment -- the way rate of return is calculated currently in revenue adequacy calculations. The ROI cannot reliably identify revenue adequacy. The reason for this is because book accounting doesn't attempt to capture revenue adequacy if revenue adequacy truly means the ability to earns rates of return sufficient to attract capital and cover its cost.

A simple illustration we all use in our teaching and it shows up in my verified statement is the proverbial -- to economists at least, proverbial, fully depreciated apartment house. In a study perhaps of 1,000 apartment houses, a very competitive market. What rates will competition set? For that apartment house, rates which are comparable, given its quality to the other apartments in the industry.

What rate of return will that produce on a fully depreciated apartment building? An infinite rate of return. Because you'll have income. Anything over zero is infinite. So, a fully depreciated apartment building has an infinite rate of return. Is it gouging customers? Is it ripping them off? No. It's going to have to price competitive levels. What is that competitive level? That competitive level is the level needed -- what we call, what we see economists call, replacement cost. It's the cost needed to replace and keep the capital in the industry of the capital that is needed to keep bringing apartment houses into the industry and keep them operating.

So, the core point that we need to understand -- and this is not a subject of professional disagreement. Accounting majors of ROI simply do not capture revenue adequacy. Moreover, accounting revenue over adequacy is the norm across industries. It's actually the norm across industries.

And seeking rates of return higher than the cost of capital, is in fact, the driving force of investment. That's why you invest. You're just trying to make a profit. You're trying to beat your cost of capital. I'll show you some data that's in my verified statement very quickly.

This is taken from some data and academic research that was done over the period from 2004 - 2013, that's the period of available data in the study. And we're going to put on the vertical access here. We'll put the rate of return, the ROI, in various industries and S&P 500, and we'll -- on the bottom access down there, we'll put the rated average cost of capital.

High school geometry I guess, the diagonal line tells you where the two are equal. That is the diagonal line tells you where ROI equals the cost of capital, or the accounting rates of return equal the cost of capital. And down here, firms start reporting ROIs which are less than the cost of capital, and up here they're reporting in this quadrant, rates of return that are greater than cost of capital.

Now, I've made the point here that this is the norm across industries. What does the data actually look like? Here's the group of Fortune 500 sectors for which the data is available. And you can readily see that the cluster of dots, if you will, is up in the quadrant, up in the upper half of the diagram where ROI is greater than the cost of capital.

This is a repeated result that we find across industry after industry. Rates of return, accounting rates of return higher than the cost of capital are, in fact, the norm. What does it tell us about the railroad industry? Railroad industry has to compete with those industries that you see on that chart and other industries for the capital.

And the cost of capital for the railroad industry reflects that competition. Coherent measurement of revenue adequacy as I've said, uses replacement cost. This is not a matter of principle disagreement and the Board already recognizes it because the Board's long-standing SAC framework is properly a replacement cost framework. It asks the question if there were a contest for this business, for this market, who would win the contest? The winner of the contest would offer customers and shippers differential prices, but in total those revenues would just cover the stand-alone cost of the perspective entrance of the contestants of the winning contestant.

Neither book accounting, nor economic revenue adequacy can reliably identify above competitive pricing. That is even if revenue adequacy is properly measured and doesn't run into the fully depreciated apartment house problem, even if revenue adequacy is properly measured, it doesn't identify above competitive price. This is for two reasons.

One, firms can earn above their cost of capital because they are efficient. We call them efficiency rents. That is, they figure out a better mousetrap and they do better in running their business and they beat their cost of capital.

Secondly, firms indeed can earn above their cost of capital if they have the ability to exercise, and they do exercise market power. But an overall firm-wide measure of revenue adequacy tells us nothing about where, what traffic, what shippers, where any such market power may be in the system. There is no substitute for detailed analysis of competitive conditions on specific traffic if one is to really identify problems with market power and implement and mimic competition form of regulation.

Let me pause and say a few words about the -- well actually let me move forward slightly. Let me talk about the uses and misuses of revenue adequacy. Revenue adequacy triggers represent a threat to the nation's railroad system. Because the railroad system has what we call a sitting duck problem.

We economists sometimes talk about sitting duck industries. What do we mean by that? What we mean is if you have a long line of some capital network, it invites regulatory opportunism to get the network healthy, get all the capital invested, it's not going anywhere, and it becomes an individual's interest to nibble away at that system.

To nibble away at that system because the individual shipper, et cetera, doesn't bear the full cost of the gradual decay of a network. For that reason, a sustained revenue adequacy policy is actually protection. It provides regulators with a guide toward avoiding the sitting duck problem.

Revenue adequacy triggers for rate constraints are distortionary. There's a general principal at work here. If increased earnings trigger rate constraint, regulation creates incentives to avoid triggering the constraints. This is the perennial problem that old style public utility franchise public utility regulation ran into and it's the reason that form of regulation is now so widely discredited.

What do those distortions look and feel like? If I'm approaching my revenue constraint, one way to avoid it is to raise my invested capital. If I can get a return on it, raise my invested capital by gold plating -- by gold plating.

I put in capitals, it's not really necessary and it's wasteful. Or, if the rate of return constraint is excessively tight, I just don't invest at all. You end up with distortions to investment decisions. Similarly, you can distort operational decisions. If innovations will in fact, if innovations will in fact raise my returns, but trigger rate constraints, I will be less likely to undertake innovations, and I will tend to undertake more expensive innovations to avoid triggering the regulatory rate constraint.

Pricing could even be distorted. If competitive forces are actually pulling up my rates in parts of my system and I will realize more revenue as a result of that, perhaps diesel prices have gone up and trucks have gotten more expensive, they're pulling up my rates. Then in that kind of situation, I may forgo raising my rates in order to avoid triggering an overall revenue adequacy rate constraint.

So, these kinds of distortions to investment operations in pricing are the preeminent examples of regulatory distortions. I won't go through all of the research. I have this in my verified statement, but economic study after economic study would probably fill this room with studies on this problem.

Documents how triggering rate constraints, revenue constraints, in the fashions that have been proposed by the task force, lead to these distortions of operations investment and pricing. They also lead in the regulatory arena, to ever-burgeoning regulation.

Any of you who have worked at all in the public utility sector, under old style public utility regulation will recognize that these kinds of distortions lead regulators to try to prevent those distortions through things like prudence review, used and useful standards. Endless hearings about those kinds of things as regulations snowballs on itself to try to prevent the distortions that are created by rate constraints triggered by overall firm revenue adequacy.

Let me now turn briefly to the task force proposals. And specifically, the revenue increase constraint. Because it is a constraint, regardless of how it's characterized, that would be triggered upon revenue adequacy determinations, it would carry the distortions that I've just discussed -- distortion to investment operations and pricing.

Access triggers, an indirect way to try to impose rate constraints triggered by revenue adequacy have exactly the same incentive effects to cause firms to try to avoid the trigger. And in particular, access triggers, such as remove the bottleneck protection, violate the mimic competition principle because the kinds of scale and scope industry such as we have here, with the high costs, we do not see as the competitive outcome customer controlled access in routing.

I would very much like this evening when I fly west, to not have to stop in Dallas. If I have the ability as a customer to tell American Airlines to stop in Dallas, what happens? I will be better off. There is no question about it. But because the firm has to run a network and consider what we call network externalities, that is ripple effects across the network, it's unwise for American Airlines to let me just dictate where I have access, my routing, et cetera.

Let me comment briefly now on the ACC proposals. The ACC proposal represents an ambitious academic exercise, but I don't think that it actually satisfies either the mimic competition principle, or the goal of streamlining regulation in ways that would actually allow us to better implement the mimic competition principle, where there are pockets of market power in the railroad system.

First, the regression analysis that is used does not actually model the right kind of competition. It models the Econ 1 competition, whether multiple railroads, for example, were present. It does not manage competition in an industry characterized by massive economies of scale and scope.

It does not matter contestability. It does not discover the presence of market power. In determining what were labeled in the proposal and in the slides this morning as anti-competitive rates, but no account is taken in the modeling of exactly where we worry about market power problems. Low density portions of a system where there's only a single carrier, those are precisely the areas that the model doesn't model how a competition actually occurs in industries with these economies of scale and scope.

Importantly, the explanatory power of the ACC model is quite low. I won't go into the details, but you'll start to hear words like our squared adjusted for fixed effects and these kinds of things. The model can't actually even tell you why it's -- what it calls competitive rates are determined. It can't tell you why that's a competitive rate.

Moreover, the model of regression and statistical regression model is nothing more than a complicated way of taking a kind of weighted average. It passes through the blue dots in the picture. In that framework for a carrier, which is at the competitive threshold in the model with 1.0 competitive threshold, that carrier's -- half of its rates are above the competitive benchmark.

Half of its rates, the arrows in the picture with red arrows, those red arrows would go down to all the blue dots above the regression line for a carrier that is at the competitive threshold. So, in other words, rates that would be competitive according to the model, turn out to be labeled non-competitive, or anti-competitive.

Lastly, if we think that this kind of approach is going to make regulation more simple, less complicated, more understandable, I would pause and not invite you into our seminar rooms where we discuss words like heteroscedasticity, multicollinearity, adjusted R squares, left out variable bias. These are the kinds of economic or econometric statistical problems that lie within any attempt to use this broad brush approach to regulate rates.

Let me turn and talk briefly about as I have, briefly, talk about the question of non-rate or indirect mechanisms of controlling railroad revenues through various consumer control of access of routing, such as the elimination of bottleneck protection. What we find in the research, and I cite it in my verified statement. What we find in the academic research is that consumer control of access or routing is especially poorly suited -- and I know there's some jargon in the second line of this title, to congest -- especially poorly suited to congestible, non-linear complicated web networks with non-fungible traffic.

By fungible, we mean something like electrons or molecules of natural gas. Molecules of natural gas, one molecule is as good as another. But in the railroad industry, we have a highly congestible system as we all recognize. We have a web system, particularly in the United States with multiple nodes, and we have non-fungible traffic.

The furniture shipment needs to go to my destination, not to somebody else's. In that kind of situation what we find is two primary problems. Customer control of access of routing results in what I referred to earlier as network externalities, ripple effects.

I might like to put my traffic in control where it goes, but there are costs to doing that, that I, as an individual, don't take into account. Those are externalities. As the effects of adding congestion to the system, disrupting interchanges and switchings and so forth, those things are appropriately and in a contestable, competitive market, held within the firm, not granted to consumers or shippers for them to control.

Secondly, what we find in the research is that in these kinds of systems, those problems of consumer disruption through consumer control of access or routing, result in under investment. And so, you find for example, in the English situation, massive under investment in the rail network, under this system of open access.

Leading them now to now -- and in a number of countries who've tried the open access regime, leading them now to look at nationalizing, renationalizing the rail networks because the private sector is unwilling to send capital into such a crazy system.

So, how do we do better? It is everywhere always the case that the regulators, the policy makers should be concerned that its regulatory systems are efficient, accessible, and able to carry out the goals of regulation. In this case, the mimic competition principle.

What do we mean by smart simplification? The general principle is don't throw out the baby of SAC mimic competition, rate making contestable market competition. Don't throw it out with the dirty regulatory bath water.

And in my verified statement I make a number of recommendations about possible approaches here, rebuttable once and for all decisions on recurring cases, standardizing of recurring matters and the utilization of third party experts and technical conferences.

I've had considerable experience in the FERC arena where these approaches -- they allow the regulator to narrow down arenas of debate, to reduce the cost of the regulatory proceedings, and to make better and more effective regulation. Thank you very much.

MR. ATKINS: So, between the rate reform task force and ACC, the Board has before it three different concepts, all of which are really designed to suppress railroad earnings towards their cost of capital. You've got the concept of system-wide earnings regulation, which we believe, and we'll talk about it in a moment, that ACC's approach falls pretty squarely into that category.

You've got forced competitive access, which is tied to concepts of revenue adequacy, and you have the idea of a rate freeze. And so, what I would like to do is talk a little bit about the legal obstacles that either of these proposals, and then end by talking a little bit about some -- whether the empirical data actually supports any of these proposals, even if you think they might be lawful.

So, let's start with earnings regulation. And that's actually a bit comforting to hear ACC right out of the gate, that they agree with the AAR that earnings regulation really isn't part of the Staggers Act. But I just want to emphasize the point so that we don't lose it.

Earnings regulation is a highly -- is a discarded form of utility style regulation which at its essence says you can only earn your cost of capital and no more. But this is a form of regulation that Congress did not use for the freight rail industry, even pre-Staggers. And so, the question is by introducing the concept of revenue adequacy in the four R Act and Staggers, did Congress somehow reintroduce this concept back into the freight rail industry.

But, you know, the Supreme Court has cautioned that Congress does not make fundamental changes to the basic framework of an industry lightly, and ancillary terms are in vague meaning.

The Supreme Court demands some clear showing of that type of fundamental shift in how you regulate industry, and that does not exist here.

Here, earnings regulation is our proverbial elephant and the Staggers Act is our proverbial mouse, a mouse hole. And the question is can you find the clear direction from Congress to adopt earning regulations? And the answer is no. It doesn't appear anywhere in the statute. What does the statute actually say?

Well, of course, as you know, it has an obligation for you to make a continuing effort to help the industry achieve revenue adequacy. In the definition of revenue adequacy itself, it speaks about permitting railroads to earn an economic profit. You'll see it in the definition of revenue adequacy.

And an economic profit is a term of art. It's well-known in the economic literature that economic profit means earning above your cost of capital. And in addition, in 1980, Congress put in place the zone of rate flexibilities. One of them permitted revenue adequate carriers, carriers already earning over their cost of capital, to increase their rates 6 percent over inflation.

There is no way to reconcile that directive from Staggers Act with the concept that they thought the cost of capital or revenue adequacy was going to be a constraint on the system. Well, in our opinion, this is probably the most significant bone of contention between the AAR and ACC. We believe that the ACC's proposal is indeed, earnings regulation.

And so, what I would like to do is just walk you through some of the key features of earning regulations and see how they compare to the ACC's proposal. Well first of all, earnings regulation treats the cost of capital as a revenue requirement.

If you look at Table 5 of Dr. Caves' testimony, it does appear that they are using the revenue adequacy as a revenue requirement. Chairman Begeman, I see my time is expired. I have probably 7 minutes left if you'll indulge me? 5, alright, I'll go quick.

System-wide earnings constraint as driven down to the cost of capital. You can look at Table 5 as well. It has that. Rate relief is tied to what you earn from competitive traffic. Here they say that well, we're not regulating competitive traffic. But the revenues that you earn from competitive traffic drives the competitive threshold.

So, what a railroad earns on his traffic for intermodal traffic, will affect the reasonable rates that it can charge to chemical traffic, and it has the effect of discouraging innovation if you drive earnings down to the cost of capital, you deprive them of the opportunity to earn an economic profit. That is the carrot that drives innovation in the freight rail industry.

What about the idea of revoking the bottleneck protection? Based on a finding of whether the fact that a carrier is revenue adequate? Well, in these circumstances you'd look to the language of the statute to see did Congress tie that long held protection to the finding of revenue adequacy.

And nowhere in this statute will you find that connection. In fact, in Staggers Act, Congress did deliberately tie certain protections to revenue adequacy. This was not one of them. And the standard of statutory construction is if Congress tied one protection to revenue adequacy and did not do so here, you have to assume that that decision was deliberate.

And that has led the Board to previously say that it's decisions in this area are compelled by the law. They are not driven by considerations of revenue adequacy, they are driven by these long standing directions from Congress to permit railroads to be efficient and their entitlements to the long haul, absent very specific statutory limitations.

And when I went up on a -- you know, when this concept went up to the D.C. Circuit in its various contexts, the shipper communities were making the point that I know you've heard, which is competition appears all over the place in the statute. Isn't it really your obligation to encourage and create as much competition as you can so that more customers have head to head rail competition?

And the D.C. Circuit said twice that there's no indication anywhere in the Staggers Act that Congress intended to move the industry towards that of perfect competition. Well what about the rate increased constraints? Well, we appreciate the rating constraint was designed to try to avoid some of the flaws of variance regulation, but it's likely to have some unintended consequences by capping the rate increases on the upswing, but not on the downswing as markets move.

It's going to drive the rates down towards the RIC, transforming it from a rate freeze into a rate cap, but perhaps, more fundamentally from a legal perspective, you're assuming the rate is unlawful.

Any rate increase above a certain threshold is unlawful, without actually looking at the particulars of the rate. So, it could be on a white density line where you need more money to earn a sufficient return on those assets, and yet you're deeming it an unlawful rate increase.

But if you believe this may be some flicker of hope here that these might survive judicial review, does the empirical evidence support all the assumptions that underline every one of these proposals, which is generally, that the railroads are making too much money?

But as Professor Kalt has explained to you, your findings of revenue adequacy are insufficient to make that -- to draw that kind of conclusion. And to emphasize this point, I would like to focus the Board's attention on a different industry. I'd like to focus your attention on the chemical industry.

And so, what this chart shows you is the return on invested capital minus their cost of capital for every member of the American Chemistry Council, who appears in the S&P 500. And now this data is drawn from what the submission by Professor Murphy and Professor Z, they'll talk to you more about the data tomorrow. The key point for you is that this data replicates your analysis exactly.

The return on invested capital is done the same way you do with the book value, less accumulated deferred taxes. The cost of capital is done the same way as the railroad industry with the use of the cap and the multi-phase DCF. And what does it show?

Well, it shows you that ACC members are earning 19 percent over their cost of capital. Now, does that suggest that their members are exploiting market power in some fashion that demands some sort of government solution? Of course not. They operate in a fiercely competitive market, just as the railroad industry.

Does that kind of appearance of a staggering return on investment suggest that you should be forcing a company like Dupont to open up its facilities to another chemical company to create more competition and enforce leverage in order to drive down rates towards that floor? The answer, of course, is no. That would be as catastrophic for the chemical industry as it would be for the freight rail industry.

And does this suggest that you should impose the kind of earnings constraint that ACC is proposing for the railroads on its own members? So, returning again to Table 5 of Doctor K's report, what he's saying is that the repeated application of his approach would deprive Union Pacific, Norfolk Southern and being a staff of roughly 1.5 billion dollars a year. Now that's a massive wealth transfer.

But it pales in comparison to the 50 billion dollars ACC members are earning over their cost of capital as measured by the Board. Now, we're not here, of course, proposing that you do anything of the sort, but we are here to ask you the empirical data, what it does show, is that here is insufficient evidence from your findings to make a determination to make the kind of seed changes that are being proposed at today's hearing. Thank you very much.

CHAIRMAN BEGEMAN: I'd like to start by thanking the two panels as I indicated, it was going to be interesting, and you succeeded. So, thank you. Some of it I found really far-fetched, but that was also what I expected.

I'm going to start, I think with ACC, just sort of a question and maybe to you, Mr. Moreno. Throughout the carrier's written testimony, not simply AAR's testimony just now, but sort of the drum beat is that the Board does not have the authority to really make any changes with respect to bottleneck.

I wouldn't say just with respect to revenue adequacy prompt a bottleneck, but across the board we really don't have any authority. However, you know, if the Board were to do something with respect to revenue adequacy, and perhaps, you know, finessing the task force proposal, so that it wouldn't be an automatic change to bottleneck, but perhaps a shipper would have to show that the bottleneck route would be more efficient.

Do you think that would be a better legal approach? More defensible?

MR. MORENO: The Board does have the authority clearly, and within the three exceptions that are enumerated within the statute to short haul a carrier. And none of the -- ACC is correct when the say that revenue adequacy does not appear in the statute. But revenue adequacy can be a relevant consideration with respect to some of the statutory considerations.

At the risk of pre-empting the testimony I'll give tomorrow as part of FTI specifically on this subject, we are -- the Board would have rational basis for adopting additional standards beyond just revenue adequacy for purposes of deciding when to grant bottleneck relief.

And we think, for example, one of the exceptions that is enumerated in the statute, is the reciprocal switching. And the Board has a proposal before it right now which includes standards that are not tied to revenue adequacy at all, which could be considered.

But if the Board wanted to link revenue advocacy to the reciprocal switching standards, that might be one additional method for it to do so. In the TFI presentation tomorrow, TFI will be suggesting factors in addition to revenue adequacy that the Board could consider when deciding whether bottleneck relief is appropriate. And you'll note that several of those factors are very similar to what appears in Ex parte 722 and I think would be a reasonable proposal from the Board.

CHAIRMAN BEGEMAN: You know, one of the things that I actually would like both you and Mr. Atkins, if he would talk as well. But you raised the Board's competitive switching proposal and I'd like you to both kind of talk about how you see -- what you see the difference between bottleneck access versus a competitive switch. Is it really a distance issue?

MR. MORENO: I think distance is the most obvious differential that reciprocal switching is a form of a short distance bottleneck. Bottleneck scenarios might arise in a more varied set of scenarios than reciprocal switching, which is solely at the origin and the destination.

But yeah, I think distance is the predominant different distinction.

MR. ATKINS: I would just add that the reciprocal switching provisions in the AAR's -- that only is permissible a terminal area. So, there's a limitation that Congress contemplated both on reciprocal switching and traffic rights that would be contained within a terminal area.

The distance outside of the terminal area is for traffic rights only, not for reciprocal switching, so there's a very strict geographic limitation on the use of reciprocal switching. If you were to adopt a revoked bottleneck decision, that would apply across the entire network, so anyone, anywhere could ask for an in-change anywhere on the network.

It would be an order of magnitude more problematic than reciprocal switching, which in itself is from the industry's perspective, a recipe for some significant operational disruption.

MR. MORENO: I would take issue that the statute limits it to a terminal. I believe the statute would first determine areas in a reasonable distance beyond the terminal areas. And in fact, that's solely in the traffic rights context. There's no such language in the reciprocal switching portion of the statute.

VICE CHAIRMAN FUCHS: So, within the ACC testimony, there was appended a verified statement from Professor Faulhaber on the stand-alone cost test. And I think he identified four key issues. That there was no profit constraint, it's not a pure monopoly, not every rate is regulated, and the overall complexity.

And for obvious reasons, can I just, you know, start with the first one. And, you know, as I understand it, the whole theory behind SAC is that, you know, if you have a profit constraint hypothetically efficient railroad, the costs or sorry, the rates will fall somewhere between the incremental costs and stand-alone costs such that if you exceed the stand-alone costs, someone is below incremental cost, and that's the cross subsidy.

And that cross subsidy is bad because it's inefficient and people see it as unfair. So, I guess I'm wondering, you know, Professor Faulhaber said that because railroads are not profit constrained, the entire model of cross subsidy goes away. And that's a part of why he finds SAC invalid. Do you all agree with that general assessment as one of the core criticisms of SAC?

MR. SLOAN: I do, yes. It's one of the core criticisms, yeah.

VICE CHAIRMAN FUCHS: So, for railroads making economic -- but if a railroad is making economic profits, doesn't that just mean that there's an additional player in the game and it's just investors that are kind of getting the cross subsidy, and so a shipper would still be entitled to relief if they're over stand-alone cost?

MR. SLOAN: Well it depends on what method you're using to give relief to the shipper. But --

VICE CHAIRMAN FUCHS: Should a shipper ever have to pay more than stand-alone costs?

MR. SLOAN: Oh, more than stand-alone costs?

VICE CHAIRMAN FUCHS: Yes?

MR. SLOAN: No. And I think the problem is the stand-alone cost is generally such a high threshold that it will prevent monopoly pricing well above competitive levels, but yeah. No, but I can't think of a circumstance where the shippers would have to pay more than that in order for the rate to be deemed competitive.

VICE CHAIRMAN FUCHS: Then talk me through why the profit constraint is defeating for SAC? So, he puts forward if there's not a profit constraint for the railroad overall, then model cost subsidy goes away, but if it's just that the money goes to investors, and shipper is still entitled to relief, why does that defeat the purpose of SAC?

MR. SLOAN: Yeah, I'm not sure I follow. I mean the purpose of SAC is, as you point out correctly, is and as Faulhaber points out is to prevent cross subsidization, right?

VICE CHAIRMAN FUCHS: Right.

MR. SLOAN: Right. So, under a very specific set of circumstances that don't really apply here. So, I think right out of the gate, SAC's purpose is just -- it's very difficult to translate to the rail industry.

VICE CHAIRMAN FUCHS: Right.

MR. SLOAN: But to the extent that it does apply, it involves a hypothetical competitor that would have to construct its own network from the ground up and pay all those costs up front. And all SAC says is that as long as the railroad is not charging such a high price that it would induce their entry, it's competitive.

VICE CHAIRMAN FUCHS: Sure, sure. So, Mr. Atkins, you generally agree that if a shipper is paying more than the stand-alone cost, they're entitled to relief?

MR. ATKINS: If you can demonstrate a lack of effective competition, yeah.

VICE CHAIRMAN FUCHS: And so, you know, one of the things I saw within your revenue adequacy testimony is you know, and I think Dr. Kalt, you mentioned it today that SAC uses replacement costs. And you all contemplate using replacement costs for revenue adequacy and not on a long-term basis.

So, thinking about SAC tests, for a stand-alone -- when are rates found unreasonable, stand-alone railroad, after relief is given? What is the ROI? What is the return on replacement cost that that SAR has, the stand-alone road?

MR. ATKINS: Yes, the Board uses the industry average cost of capital to set the threshold.

VICE CHAIRMAN FUCHS: Right, but so, talk me through, what is -- how much is the ROI greater than the costs of capital? After the relief is given on the stand-alone railroad.

MR. ATKINS: So, if we're talking about what the hypothetical railroads ROI would be.

VICE CHAIRMAN FUCHS: Yes.

MR. ATKINS: It's -- the Board sets it at the cost of capital. So, it would be hypothetical railroad, the SAR.

VICE CHAIRMAN FUCHS: So, the hypothetical railroad, understanding what costs -- can never earn more than its cost accounting?

MR. KALT: That's correct. But the rate of -- the ROI portion.

VICE CHAIRMAN FUCHS: Is not a replacement cost?

MR. KALT: Is not a replacement cost. Not the accounting book cost, yeah.

VICE CHAIRMAN FUCHS: But here's the thing -- is if we do replacement costs for the entire network, then if every segment that was subject to the SAC has no ROI that exceeds the cost of capital, then at a system-wide basis, ROI can exceed the cost of capital.

MR. KALT: That's correct.

VICE CHAIRMAN FUCHS: So, how can a railroad ever be revenue adequate?

MR. ATKINS: Well, like you said, that's a good question and it's certainly one that I've heard -- we've grappled with for years. So, there's a couple things about SAC in the application of CMP that I think are important. It's generally not done on a system-wide basis, right? So, the key to SAC is looking at what are the facilities that are being used to serve a particular customer who lacks effective competition?

So, there will be pockets of captivity. And what the Board has done is it's embraced this contestability theory in those limited circumstances where it has to inject itself. But that does not mean that the revenues that are earned from traffic that's a thousand miles away, has any bearing whatsoever, on the reasonableness of that rate.

And if those lanes that you're speaking of are all competitive traffic, then there will be -- the SAC constraint will never be placed on those particular lanes or networks in the industry. It only -- it is only applied in those small circumstances where there's a lack of effective competition, and that's 70 percent of the traffic is not governed by that.

VICE CHAIRMAN FUCHS: I'm with you, but in those pockets where there's a lack of effective competition, those would be particularly likely, I would think, to have an ROI that meets the cost of capital, or exceeds it, right? Because if it's competitive traffic, you're going to have, you know, you're going to try.

And so, I guess I'm wondering where is the pocket that the ROI exceeds the cost of capital using replacement cost?

MR. KALT: It's readily the case that in competitive markets, firms are -- yeah, I go back to the way we teach it, but I make a mistake as an economist. We start out teaching every firm is identical.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: In the rail world, firms are not identical.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: And they can earn what we refer to as efficiency rents. What we really mean by that is even in competitive markets they may be able to, for example, produce better quality at lower cost, and earn returns which exceed their cost of capital.

So, in that kind of situation you wouldn't be using SAC style regulation, because they're competitive segments, and yet they would be generating revenues that would be in excess of their cost of capital.

VICE CHAIRMAN FUCHS: Using replacement costs?

MR. KALT: Yes, yes. Just yes.

VICE CHAIRMAN FUCHS: So, in a competitive -- if on that segment the railroad was making returns.

MR. KALT: A competitive segment?

VICE CHAIRMAN FUCHS: The competitive segment, the railroad was making returns above its cost of capital. Then the Board could not lower it, because it could not apply a SAC test and there would be barriers to entry such that nobody could come in and take that traffic, or how does it -- I guess, if it's a truly competitive segment, then why can't someone come in and take those profits?

MR. KALT: Well people may be coming in. Things like trucks. Those are competitors.

VICE CHAIRMAN FUCHS: So, it will be a temporary thing?

MR. KALT: No, not necessarily. Again, if you've got a situation where you have particular efficiencies, particular -- sometimes guessing right.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: On technology change and so forth. You can have sustained periods where someone can in fact, not duplicate what you're doing, but you're not in monopoly profits, you're constrained by competition, you're earning what we call efficiency rents, excess profits if you will, but they are not attributable to the exercise of market power.

They can be fairly long lived until someone catches up with you.

MR. ATKINS: And so, and let me just emphasize that you know, you're talking about replacement cost. I think what Congress envisioned for the freight rail industry was that there will be two constraints on it and the first constraint is the giant. It's competition, just like any others out there, whether it's the chemical industry or the railroad industry, competition is going to act to constrain the overall profitability and you might earn above your cost capital because you're more efficient than your competitors, you've found a better way to build a mouse trap.

The market, your market will reward that type of behavior and where there are pockets of captivity, that's where it's your role to come in and

try to simulate that competition. That doesn't --
so, over time, there should be, if the railroads are,
you know, if somebody is particularly innovative, and
has found something particularly new that the -- a
new way to innovate and compete with traffic, it
should earn true economic province --

VICE CHAIRMAN FUCHS: Even on that
segment.

MR. ATKINS: On those segments. Over time
competition is, you know, the greatest disciplinary.
It will eventually force through whether it's from
trucks, or rails, or barge or products, you've got
the competition, whatever the form might be.

VICE CHAIRMAN FUCHS: And so, your point
is when ROI exceeds the cost of capital, in a
regulatory regime that has a SAC constraint, and
they're both based on replacement cost, necessarily
the money that's over the revenue adequacy threshold
is all due to efficiency and economic.

MR. KALT: Let me say in the real world,
that is -- in the real world there are two
possibilities. Is that SAC test being applied in a

way that is ferreting out the actual pockets of market power?

VICE CHAIRMAN FUCHS: Right.

MR. KALT: And I've tried to stress in my testimony. I don't know if AAR even likes it, but that is appropriately what we need to focus on. That's the challenge here is ferreting out. But yes, if you've been successful across all those pockets of market power, then you'll find rates of return in excess of the cost of capital, if firms, railroads have these efficiency rents, these payoffs, if you will, to their innovation, cost savings and so forth.

VICE CHAIRMAN FUCHS: ACC, what is your view on the flaws in that logic?

MR. CAVES: I don't, sorry. I don't see any flaw in the idea that railroads could earn returns in excess of their cost of capital on competitive roads. I don't see anything wrong with that.

BOARD MEMBER OBERMAN: Good morning, thank you all. I have some sort of basic questions I wanted to explore. My first question Dr. Caves, is just, and I didn't have time to really absorb the entire model. It's something I hope to do soon, but is one of the screens, the 180 percent measurement?

MR. CAVES: It's a good question. No, for two reasons. First, we were given masked data, so we couldn't compare a railroad's actual revenues to its URCS costs, given the data that we were given.

And of course, we recognize that you know, if this were applied in practice, any railroad with an RVC less than 180 wouldn't be subject to regulation. As an economic matter, I'd be reluctant to apply that as a screen from a modeling perspective because there are well-known economic problems with URCS that TRB and others have pointed out.

So, I wouldn't want to -- so there are two separate issues there.

BOARD MEMBER OBERMAN: Well under the current statutes.

MR. CAVES: Yeah.

BOARD MEMBER OBERMAN: If your model were to be utilized, would you not have to use the 180 as a screen in order to comply with the statute?

MR. CAVES: You would certainly --

BOARD MEMBER OBERMAN: But given its inadequacies.

MR. CAVES: Yeah, you would certainly have to use it in the sense that you couldn't, you know, if the model told you that rates should be reduced on a route, and it turned out the RVC was below 180, then it would be a non-starter. I agree with that.

BOARD MEMBER OBERMAN: But even in terms of just figuring that threshold part of the graph.

MR. CAVES: Yeah.

BOARD MEMBER OBERMAN: Are a threshold in order to get into that wouldn't you have to use the 180 as a screen?

MR. CAVES: You could. I don't. I mean you could do it if you had to and I don't think it would -- it certainly wouldn't be detrimental to the model to impose that constraint, but if you don't think RVC is a good measure of competition, then I don't see any reason, and again purely from a modeling perspective, if one of those -- I don't see any reason to use that as a screen to determine whether or not a rate gets included in the blue dots that you saw on my first graph.

But if someone told me that I had to do it that way, I could accept that.

BOARD MEMBER OBERMAN: My only question is whether the statute requires it to be done.

MR. CAVES: Well for modeling purposes, I mean I'm not a lawyer, but I don't know if the statute says anything about how you're supposed to model these things.

BOARD MEMBER OBERMAN: Jeff?

MR. MORENO: I would say from a legal perspective, the 180 percent threshold sets the floor below which the Agency can prescribe a rate, but it doesn't necessarily prohibit the Agency from considering in the econometric model rates are below 180. That may be a factor when the Board decides how to set the competitive threshold level that the Board might consider, but it's not a requirement.

BOARD MEMBER OBERMAN: Let me Jeff, ask you a question. I don't want to get too far into the final offer part, because we've got a lot of work to do here in the next two days, but you suggested, or the ACC is suggesting that the Board got this model as a rule. I assume you're not suggesting that it be the only model, but just adopt it as one of the alternative models that could be used.

MR. MORENO: Yes. It would simply be an additional model to what currently exists.

BOARD MEMBER OBERMAN: So, that in the final offer setting, a shipper who wanted to use the final offer approach could make their argument based on the ACC benchmark test as opposed to SAC or three benchmarks, or whatever?

MR. MORENO: Absolutely. We consider that to be a possibility and that it's a good fit for the timeframe and the other limitations that the Board has proposed in Ex parte 755.

BOARD MEMBER OBERMAN: But as the proposal is currently drafted, even if the Board did not formally adopt this, Dr. Caves' model as a rule, don't you agree the proposal the way it's drafted now, it would allow a shipper to say well we're going to argue this one anyway because we think it's bad.

You're not restricted just because it's not a rule?

MR. MORENO: No. There's nothing that prevents a shipper to use this methodology in the final offer process. The reason we're requesting a rulemaking proceeding is that in the final offer process, we start from square one in every situation. So, every shipper has got to come in and develop the econometric model that Dr. Caves has already developed.

They've got to come up with their own CT. They need to defend their competitive screens. All of those will have to be defended in that case. If the Board takes this up in a rulemaking, all those issues can be addressed by all stakeholders, and then we'd get the certainty and the consistency that we get with the level of SAC, at least in understanding how the model will work.

BOARD MEMBER OBERMAN: Alright, I'd like to shift over to Dr. Kalt and to Ray. I've started out by going through your written presentations, and I just have a number of questions about that and somewhat based on the presentations. Let me ask you this Dr. Kalt, and Ray both. Throughout your written presentations, there's reference to you know, the overwhelming vast majority of rail traffic faces competition, only in small slices lacking competition.

Are you referring to traffic that's just above or below the 180 mark? What are you talking about when you say 76 percent is competitive?

MR. ATKINS: So, that figure that we put in as the amount of traffic that falls below 180 percent and by law, is deemed to be reasonable from Congress.

BOARD MEMBER OBERMAN: So, when you say traffic can conclusively presume to be competitive, you're just talking about the 180 threshold.

MR. ATKINS: That's correct.

BOARD MEMBER OBERMAN: So, recognizing that we now have a statute that we have to follow, but in the real world that assumes that URCS and the measurement of traffic that's above as low as 180, is really an accurate measure of what's competitive. Does it not?

MR. ATKINS: Right. It's a commandment from Congress to use that tool and that threshold as a safe harbor for railroad pricing.

BOARD MEMBER OBERMAN: But Congress didn't command the particular URCS that we have, it just commanded some uniform system.

MR. ATKINS: That's correct.

BOARD MEMBER OBERMAN: Because as I think has been mentioned, TRB, but they're not unique. They have a lot of criticism of URCS as it's now framed, and as it might be framed in the future. So, it just strikes me that the way you speak in your presentations with certainty about the vast majority being competitive, has a certain artifice to it, because it assumes that the 180 as currently calculated, is somehow an accurate reflection of competition in the real world. And we don't really know that, do we?

MR. ATKINS: So, it's obviously in the statute creating the 180. It is the law of the land. So, I don't think it's inappropriate for us to observe that roughly 70 percent of traffic is outside your jurisdiction, because Congress has a presumption that those rates are reasonable. The railroad's position is, in fact, most of the freight rail industry is subject to intensive competition, particularly the most intense competition flow is from product and geographic competition which is a function of something that the Board declines to look at because it's too complicated.

BOARD MEMBER OBERMAN: Well, I understand that and yes, we have to limit ourselves in terms of what we actually have power to do to what Congress has restrained.

MR. ATKINS: Correct.

BOARD MEMBER OBERMAN: But I'm also trying to grapple with the actual real world. You know, I made an observation once years ago when I was in a different role, about PTC, that if Congress passed a law mandating that all Metro trains levitate, you know, they could say that, but we couldn't do it.

And that you know, we had that same problem with artificial deadlines in PTC. So, Congress could pass a law saying we are declaring all of this traffic to be competitive, and for the moment we have to follow it. But in the real world I'm trying to figure out if it's really competitive or not.

It could be that more traffic is competitive, or less is, but all of these -- I just want to make sure I understand that when you and when Dr. Kalt, an economist says, the vast majority is competitive, is he referring simply to the 180 measurement or is he referring to some other way of our determining what's really competitive?

MR. KALT: In my case I'm not really referring to the 180 measure. There is considerable research, the Christianson studies and others, that find -- I use the phrase vast swaths of the network. And I believe that in the ACC study, they don't use the wide screen, but rather use structural screens about whether there are other railroads, and I believe they find 24 percent of the traffic as being in the non-competitive benchmark area.

So, in fact, that kind of number is consistent with a 180 based calculation, but that's not the sole basis for recognizing the extensive competition on a network.

BOARD MEMBER OBERMAN: Well, is there anything other than the Christianson study for us to look at to figure out how we really determine what's competitive, other than the 180? Is there some other -- that's what I'm just trying to get at, what are you facing?

MR. KALT: Well and it's been a while, but in various exemption proceedings, and in the treatment of intermodal and so forth, there is data around those studies and proceedings and so forth. I haven't reviewed it recently, but there is certainly data on that.

There's also data, I believe by Cliff Winston, Congress -- looking at the impacts of mergers which attempts to measure some of that regarding multi-serve locales and so forth.

MR. ATKINS: I do believe that the Christianson study is probably the most robust analysis of the particular freight rail industry. I mean I know it's about a decade old, but it was promulgated by, you know, an independent consultant retained by the Board to look into the state of competition in the freight rail industry.

BOARD MEMBER OBERMAN: Alright, well I appreciate that. I was only trying to get at. You know it's important I think, to all of us to be able to rely on and understand the submissions. Because I think your assignment is to educate us and I, for one, need it.

So, I'm trying to really understand what's in here and what is reliable and how I determine that. And in that vein, I wanted to ask I guess, Ray you're the responsible part for this submission, so I'm going to ask a few questions about it because I was trying to get at it.

So, one of the things I have been plowing through in the last year when I have time and you don't leave me a lot of time, are both InterVistas and TRB. And you say right off the bat at the beginning of your submission that the task force proposal of using a revenue adequacy measure flies in the face of our studies, and you cite TRB and

InterVistas. I have combed through those looking for their attack on revenue adequacy, and all I find -- and I want you to disagree with me on this, are TRB's statements that the annual determination of revenue adequacy is anachronistic. That's what you quoted.

I can't find anything in any of the studies that says don't use some mechanism such as a task force here to propose. So, am I missing something?

MR. ATKINS: Well, so the task force, the TRB clearly didn't address the specific proposals from your task force because those task force proposals came afterwards. So, it's more of a general observation looking at revenue adequacy and that concept.

And they did point to your annual determinations was antiquated and inconsistent with Staggers, but they were making the more profound point that an earnings cap is a discredited form of regulation that is inconsistent with the deregulatory thrust of the freight rail industry.

And so, I don't think there is any

suggestion in the TRB report that adopting regulations designed to curtail revenues down towards the cost of capital is a good idea.

BOARD MEMBER OBERMAN: Well, I didn't find anything that said we shouldn't use the revenue adequacy standard as a constraint either. That's the problem I'm having, and you seem to be telling us that's what they're doing. So, maybe I need to go back and read it again.

But if there is something more concrete that supports the notion that they are on the side of the AAR on this, I'd like to know what it is so I can.

MR. ATKINS: Well I would just refer you to every indication where they cite about revenue adequacy in their task force, they do it several times, their affirmative recommendation is that you stop doing the annual determination of revenue adequacy because it's trading the misperception that you're going to use it to curtail revenues and that misperception is what's led to the two proposals of the rate reform task force and the ACC's proposal that you're hearing about today.

BOARD MEMBER OBERMAN: Well, to me, one response to what TRB said was to have the multi-year approach that the task force has recommended, which is not something that they criticized. So, in any event, let me move forward.

Professor Kalt, the constant reference of both you and Dr. Caves to mimicking competition is actually, you know, a constructive Board concept. But from a regulatory point of view, and maybe this is actually a question for Ray or Jeff. Is the concept of mimicking competition mandated somewhere in our statute? Anybody who wants to address that. Because I realize it's maybe a good idea, but I'm trying to figure out what our statute requires.

MR. ATKINS: So, I guess I -- Jeff, I'll start with that. But I mean clearly, the term "demanding you to mimic competition," doesn't appear in the plain language of the statute. The point that Professor Kalt is making is that commerce worldwide will recognize that the role for the federal regulator, when they step in and intervene in a market is two-fold.

First, is you don't step in unless there's a market -- clear market failure. And that when there is a market failure, the way that you try to guide your decision-making is trying to mimic the result and limit competition. Now we have a pretty sharp disagreement between the ACC and the AAR over what that term actually means and what type of competition you're supposed to be mimicking.

But I actually think there's a consensus amongst economists, and even amongst the lawyers that what you should not be doing is to try to mandate outcomes that would not flow naturally in a well-functioning competitive marketplace.

BOARD MEMBER OBERMAN: But if we chose an approach that didn't mimic competition, I'm trying to figure out if we'd be violating the statute and try some other approach?

MR. ATKINS: It certainly depends on what idea you had. But I would bet money that if you tried to do something that doesn't mimic competition, it would either violate the statute, or it would be arbitrary and capricious. It wouldn't survive judicial review.

BOARD MEMBER OBERMAN: Well, I guess what I'd like to learn is that if there's something in the statute which says, no, this is the way you've got to do it, where is it and what language are we relying on? I don't think the specific direction was in there.

Now, maybe that's a matter of policy we should. I'm not correlating with that, but I'm -- my starting point for all this is whereby it is created by statute, you have to stay within the statutory guidelines. I understand that and the court interpretations, so I'm trying to figure out where this one comes from. If it's there.

MR. KALT: If I could comment at the risk of doing legal interpretation. I think the reason your economist focused in this way comes about for the following reasons, at the risk of being accused of legal interpretation, I cite in my verified statement the actual segment of the federal law which says, "Railroads will have contract freedom unless determined to be abusing market power," or some phrase like that. I don't know what the phrase is.

Then you couple that -- there's an economist reasoning now. You couple that with, and I think you had it on one of the slides. What's the definition of reasonable if you do regulate because you have found market power? And when that says you will regulate to allow recovery of costs plus an economic profit, that's immediately telling me as an economist, that's the model of mimicking competition, that you're going to allow people to recover their costs, and you're going to have an economic profit that is not an accounting notion, it's an economic notion of profit.

That's the chain of reasoning by which I think economists have, you might disagree, fallen into if you will. But how we get to this notion that we're watching mimic competition regulation, appropriately and successfully apply.

BOARD MEMBER OBERMAN: Yeah, I don't disagree at all. I wanted to just figure out what the guidepost is.

VICE CHAIRMAN FUCHS: On the mimic competition point, it's to one of the criticisms that Faulhaber puts forward about how the rail industry is not a pure monopoly, and that of course, there is competition and there's competition across railroads. So, I guess, you know, what he puts forward a schematic -- a diagram, that says that actually the way you should be doing SAC is not the full kind of de novo OD pair, but if there's another railroad that's close by, you should just do the SAC on the spur, such that you know, you have the SAC calls for that spur, and then he says you know, take a market price for the segment that exists.

Obviously, there's some difficulties in getting that market price. Beyond, so what other difficulties with that approach and if a, you know, and if AAR, if you could comment on the logic of Dr. Faulhaber there.

MR. MORENO: If I could just, that's the whole point for which we submitted Faulhaber's testimony and it really goes to the bottleneck relief aspect of this. I don't think you need to try to figure out what the competitive price would be on the segment. I think you just simply create a bottleneck rate and you've modeled the stand-alone railroad on the bottleneck segment alone and let the competition on the rest do what it must.

VICE CHAIRMAN FUCHS: How do you get that market price?

MR. MORENO: You simply allow the railroad -- you allow the shipper to get a rate from both carriers and compete.

VICE CHAIRMAN FUCHS: But how do you stop the carrier that you're going to connect the spur to what could be a competing carrier if there were no barriers to entry and exit, how do you get that carrier to not game the system such that that creates a difficult situation for the incumbent carrier?

MR. MORENO: I'm not sure what you mean by gaming the carrier?

VICE CHAIRMAN FUCHS: So, if you have the stand-alone costs for the spur and then you have the other carrier, the non-incumbent carrier that has to quote a market price as you've described, right? Why would that other carrier quote the actual market price -- because it's just for the purpose of a rate case, it's not actually to deliver anything.

MR. MORENO: Okay. This is where I think the disconnect is coming from.

VICE CHAIRMAN FUCHS: Yeah.

MR. MORENO: In our concept, that competition should be allowed to exist, so the alternative carrier actually does have the option. So, you only regulate the bottleneck rate. This is what the bottleneck decisions really were all about, the shippers wanted to be able to get a regulated rate just for the bottleneck segment and allow that competition to actually function in reality.

VICE CHAIRMAN FUCHS: But in Dr. Faulhaber's schematic, it's -- there's not a bottleneck. I don't think. It's just that there's no spur connected to switch point X, and switch point X can take you to the facility. So, in that sense, let's say -- so, you have an incumbent railroad that could go to the origin of destination.

Then you have another railroad that can

take you to the destination, but it just hasn't connected to the origin.

MR. MORENO: Right.

VICE CHAIRMAN FUCHS: So, you have a SAC for the origin to that switch point of the other railroad, right? There's no bottleneck. So, you can't get a market price. So, my question is how would you get that market price without that road gaming the system?

MR. MORENO: Well, we're assuming in the bottleneck situation, is we're talking about situations where the two railroads do interchange, and what is that closest interchange point to the origin.

VICE CHAIRMAN FUCHS: Right, I'm with you there. I'm just talking about you know, Dr. Faulhaber's potential critique. And so, you know, if you could get a market price, let's say there was one, what would be the issues with Dr. Faulhaber's critique.

MR. KALT: From an economy perspective. With all due respect to Dr. Faulhaber, I think it's actually improper or incorrect economic analysis. And the reason for that is when you take that single spur focus.

VICE CHAIRMAN FUCHS: Yeah.

MR. KALT: You're not focusing on the fact that you have a network industry, at a very fundamental level. And we push you, urge you to go back and look at some of the testimony submitted by Mr. Reineke, in 722, or in the switching -- reciprocal switching, who described these things in detail.

But the reality is what SAC has done, which you attempted to do with your SAC test, is ask well, what's a reasonable arena in which to try to take account, if you will, the spillover effects of the change here by looking at the issued traffic, crossover traffic, and trying to define what the traffic is that the SAR is going to carry.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: Okay. That's evolved because we recognize that there are these network externalities, if you don't do that. Okay. And so, in that situation, that's why the whole framework in the diagram actually is inconsistent with the underlying economics of a network industry where people share facilities. It is as if I came in and said to, you know, American Airlines, I'd like you to stop in Dallas on this non-stop flight to the west coast.

I can show you that's only going to cost you $1,000 and I'm willing to pay for it. That actually ignores that I might be messing up American Airlines' entire network.

VICE CHAIRMAN FUCHS: I'm not sure, I want to make sure because as I understand it the contestability theory is premised on the notion that if -- that it's the hypothetical efficient carrier that can come in his best position to swoop in and take the traffic.

MR. KALT: That's correct.

VICE CHAIRMAN FUCHS: And so why wouldn't the other carrier that's already close by, can build a cheaper SAC than the de novo carrier, why isn't that the carrier that swoops in?

MR. KALT: If that's actually the case, it's already disciplining rates. If it's realistic. Not SAC, in SAC tests, however, the SAC railroads have to -- the competition you're imagining.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: If it's inefficient, it messes up the network, no one comes in and builds a single spur. Even the railroad that's coming in to add that spur, okay, has to take into account the network economics, take into account.

VICE CHAIRMAN FUCHS: I understand.

MR. KALT: Network economics, so that in fact in a contestable market that spur would not be built. If it is realistic, and we do have cases of build ins and build outs, it's already disciplining rates. If it's really -- in other words, if that's a feasible entry, in other words there aren't barriers to entry, it's already disciplining rates.

MR. ATKINS: Let me make a couple of points too on three of them. The first one is your building point was where are you going to find the rate? The answer is you're not going to, right, because for that to work you'd have to compel a carrier to be able to code a rate to any fictional point where the build out might actually happen.

And this is not just a hypothetical about 15 years ago, either UP or BNSF was in a rate case where they were arguing there should be -- there's an easy build out to a competitive railroad, and the Board rejected that as a sign of effective competition, because they couldn't find a rate from that other carrier to get to the Powder River Basin. So, it's not just a hypothetical, it's a fact.

Second, is that if you adopted that approach, you're going to strand assets all over the network, because what you'd be saying is let's say hypothetically, like take the CSX Consumers rate case where you figure out exactly what CSX needs to earn to earn a reasonable profit from Chicago to the plant, and now you're saying well, we're going to lower the rate down further because some hypothetical railroad might put it on a different network. That's going to strand CSX's assets in the ground that are being used to serve that customer.

And the final point is that there are some limitations that the Board has imposed on SAC. Even if theoretically you think it might be something that you'd see in a fully contestable marketplace, so the economist might say that's appropriate. You've said that is just not something we can tolerate in this framework.

And the example I'll give you again, is I think it was the AEPCO case, or one of the ones out west, where the hypothetical railroad was proposing well how about if we merge the traffic of UP and BNSF South into a single SAR. Wouldn't that generate tremendous efficiencies and wouldn't that be what you would expect in a contestable market?

And the answer is probably yes. But the point that the Board made was we're never going to permit that to happen. It will be a cold day in hell that UP and BNSF are permitted to merge. We're not going to gauge the rates of this based on that type of hypothetical.

So, I appreciate that -- I think there are serious practical problems with that Faulhaber approach, but also as Professor Kalt indicated, I think there's theoretical problems with it as well.

MR. KALT: You just sent their stock price down.

MR. ATKINS: And I apologize to those in the room from those companies.

MR. SLOAN: Yeah, I just want to make a comment. I mean I think part of the purpose of the Faulhaber statement and kind of the overall criticism we have of a SAC is that it simulates or mimics one particular type of competition, not broader competition.

And that's kind of the basis of our entire proposal is looking at the real world data from competitive markets that's out there and using that as a basis to mimic competition and think that that is at least as reasonable and as economically founded as stand-alone cost is for the purpose of rate regulation.

MR. MORENO: And I would add to that that the statute does say that the policy is to allow competition to function and to minimize the need to regulate rates. And if you regulate solely, the bottleneck segment, which is going to be the low density segment, you're regulating on a replacement cost basis as AAR says for that low density segment, so the carriers still recovering that cost. We're just allowing the competition to work on the rest of the route.

VICE CHAIRMAN FUCHS: So, I want to kind of one more on the Faulhaber's just to make sure, because this is the third one and the last one is complexity, which I think we all talked about quite a bit. And that's that rates aren't fully regulated, right? And that's one of the conditions within you know, Faulhaber's SAC test.

So, implied if a railroad is not making economic profits overall, which I think, you know, AAR's intention is that they're not, then somebody must be getting cross subsidized when a segment is over the stand-alone cost. So, somebody, somewhere in the network is getting below their incremental cost. Do you generally agree with that logic?

MR. ATKINS: I don't think I'd agree it's below incremental cost, but it means that those customers are not themselves, recovering the full -- providing a return that gives you the full economic return on those assets. So, the idea behind cost utilization, this is something that the shippers themselves embraced is that if I'm a coal customer and I operate 200 miles on the network, that all I should be responsible for paying for is, in this hypothetical world, is the replacement cost of the assets that are being used to serve me and not from other facilities from which I don't receive a benefit.

That's the concept of cost utilization that the SAC test is designed to root out where there is a showing of a lack of effective competition. So, it doesn't necessarily mean that intermodal traffic in California or on the east coast is below it's, you know, directly variable cost. What it means is that you can't -- that there, you can't use revenues or the rates of these -- from these pockets to pay for the entire revenue market.

Because if that weren't the case, then

when a railroad is revenue inadequate all rates would be lawful, so in the ICC test, that's just not an acceptable outcome in 1985 when they document the --

MR. KALT: And the cost subsidy would only occur if the revenue inadequacy was being used to justify above competitive pricing anywhere in the system. So, it's perfectly consistent with a network industry, contestable markets and all of that, some of the segment is very dense and subject to a lot of competition, either intra or intermodal, or private and cheap traffic. That's perfectly consistent with the fact that you may have long segments of a network with relatively low density.

So, there's not a contradiction in the SAC test, the fact that we have some of the revenues are coming from competitive markets. That's perfectly expected if you will.

VICE CHAIRMAN FUCHS: And I think, the TRB report said that it's because some of the revenues come from a competitive market and that area is not regulated, then that makes the application of SAC, I think it's highly questionable.

MR. ATKINS: So, your contention is that TRB had it wrong, or were they referring to something else?

MR. KALT: I'm going to say the TRB got it wrong. I don't understand. The fact that the market is largely competitive, although I understand for a minute, he might not share the perspective on how much it's competitive, but I think all indication, certainly a majority of it.

That doesn't undermine the validity of the SAC test. The SAC test is about looking at the facilities that are being charged to a particular customer. If they're -- and then it looks to see what other customers use those same facilities, so you can determine how much of the joint and common cost of that network can be borne by competitive traffic, and the rest of it has to be recovered from the residual supplier of capital, which is the other customers on the line.

The fact that there's a lot of competitive traffic 1,000 miles away, has no bearing on the Board's application of the SAC test. And so, the mere fact that there's -- we understand this market to be robustly competitive in most lanes, does not undermine the theoretical foundation for the SAC test that the Board has been applying for the past 30 years.

MR. KALT: Let me just add to that if I could very quickly. When we conduct these contestable market analyses, that we anticipate, or we understand that different customers on a network will have different elasticities of demand. Some will be very responsive and move off if you try to raise the rates, others won't.

The implication of that is that when you have highly competitive markets, the demand for your particular service as a railroad can be highly elastic, very responsive to raising prices. Well, whether that's due to competition or just underlying characteristics of the shippers with no competition, doesn't change the reality that the contestable railroad is out there saying, "Well, these customers can't charge them as much because they've got very elastic demand." I don't know why, maybe they're running to other competitors, maybe they're just going out of business. I don't know, but I can't charge them very much.

I have to have more of the cost -- this is where differential pricing comes from, appropriately, when you have a network industry where these economies scale.

MR. CAVES: And can I have a quick follow-up question, or comment I mean. So, I just -- first I say it seems to me that the railroads are claiming that both the author of SAC and the authors of the TRB report have completely misinterpreted the SAC standard.

So, I fall on the side of the author of SAC and the authors of the TRB report. We can go into the reasons why if you want. And then second of all, I do think it's an excellent point to talk about the relative elasticities of different shippers, probably don't want to get into detail, but an important point that sometimes gets lost in these discussions is that yes, it's true that a captive shipper holding all else constant, will have a less -- tend to have a less elastic demand than a non-captive shipper.

But it's also true that if the railroad is maximizing profit, which I think we can all agree they are doing their best to do, they're going to raise their price to the captive shipper to the point where the captive shipper's demand becomes elastic, not in-elastic. So, they're going to be pricing on an in-elastic part of the demand curve. It's a little bit of a subtlety, but I think it's worth pointing out. Those are my two comments.

CHAIRMAN BEGEMAN: Just a couple of things I wanted to touch on. First of all, I want to thank ACC and Mr. Kalt. Thank you for -- or Caves, apologies, for the effort that you went to help, to you know, to put a proposal forward. I know it took well over a year and it is appreciated.

I also really appreciate the fact that you recognize that it's a proposal that the Board wants to really delve into and perhaps, you know, adopt, that it really would merit a separate proceeding where we could have much more, I think, conversation, and you know, input from all interested stakeholders.

Today, in preparation for this hearing really is a bigger issue than just your proposed benchmark method. But thank you for that. I do, I really think that you know, put up or shut up and you put up, so thank you.

Mr. Kalt, one of your slides, and you went through really quickly so, bear with me. But it was the one where you had sort of the comparison of all the industries that are not earning their ROI, I believe it was. And the only thing -- so it was the railroads in green and then the electric utilities a smidge, and then everybody else is like really out there.

Was that just illustrative, or did you touch on every -- I mean what did you touch on every single industry, or was it?

MR. KALT: In that study, I have the source statement. I can't recall. In that study what they did was they went and took, and it wasn't for purposes of this case, I believe, the study it's Bloomberg data that was used. They just went and took the S&P 500 companies in those industries, about 15 of them, or 10 or 15 of them, and just calculated the accounting rate of return relative to the cost of capital using the Bloomberg data.

CHAIRMAN BEGEMAN: So, there are other industries that don't earn their cost of capital either that is not on the list?

MR. KALT: There may be, but in other studies that I cite in my verified statement, where we actually have hundreds of industries, it's the graph in my verified statement, you'll see it's kind of a vertical graph like this graph here, but it's got all these dots on it. When you've looked at the broader samples, you find that the average is produced, the result that a rate of return in excess of the cost of capital is in excess of the cost of capital, is the average -- the more greater frequency and the averages are higher than simple cost of capital on rate of return.

And I -- that study, I think this study that I put up was actually done for 722 using the Bloomberg data. But the other studies were not even done for the railroad industry, they were just studies of rates of return across industries, and many industries.

CHAIRMAN BEGEMAN: I want to talk just briefly or ask a question on another question on bottleneck for both panels -- Jeff and Ray, probably. Why doesn't the contract exception work?

MR. MORENO: I wouldn't say it doesn't work in all circumstances. Whether it does tend to work is on traffic moving east to west across the Mississippi River gateways. So, for example.

CHAIRMAN BEGEMAN: So, it's working, we just maybe not be aware of it?

MR. MORENO: No. It's -- the problem is the contract exception is too narrow for one, in that it does not apply when the origin carrier is capable of serving both the origin and the destination. The mid-American example is the classic. But if you take the Dupont and the other chemical rate cases that were filed, those were contract exception rates. They were rule as in rates that were filed against the -- either the origin carrier or the destination carrier, depending on the case.

And in order to be able to do that, they had to have contracts with the carrier on the portion of the route that was not -- where the rate was not being challenged. But we're talking about situations like in the mid-American bottleneck, where you had a BNSF staff and UP that both could originate the traffic in the Powder River Basin, the Mid-American Power Plant however, was captive to UP over the last 90 miles of a 750 mile route, I believe.

Because of that, the contract exception was not allowed to work there because UP had the ability to serve both the origin and destination in single line service. Whereas, if it had been allowed to work, they could have gotten a contract from BNSF for its 700 miles, and then brought a rate case just against UP's final 90 mile segment.

MR. ATKINS: So, Chairman, I would reiterate that and just emphasize it is working. So, you just heard, almost every rate case brought has been a rule of rate. The contract exception would have -- without that, they would have been required to challenge the rule 11 rate, and the contracting as unreasonable from origin to destination.

So, precisely what the Board contemplated would happen, happened. Now when you hear him say what's not happening, that -- the Board chose not to override. Not chose, it was required by law, not to override the right to the long haul. So, that's not part of the contract. There's no contract exception to the right to the long haul.

So, it's working precisely as it was designed to in 1996 or '97 or so, when it was adopted by the Board.

CHAIRMAN BEGEMAN: Alright, I'm just going to ask one more quick question and then turn to my colleagues. Ray, in your opening statement, actually on page 1, you said that you kind of mentioned your -- AAR's support to the Court for -- the Board, I think just general effort to improve some of our existing tools, et cetera.

And at the end of your first paragraph, you said that AAR would support further efforts by the Board to explore ways to promote alternative dispute resolution. And that's something, as you know from your time at the Board, and my new members know this, my old members feel it's something that the Board really values. We encourage, we sometimes impose it even when a particular party may not want it, and there's someone in the room that they knew who we were talking to.

But I would love to know, I really like to know any recommendations that you have that kind of back up that language. And I also would be happy to hear any ideas that you have that we can do to promote alternative dispute resolution. You know, we have an arbitration program, never been used.

We are out seeking arbitrators for our yearly list of folks that will possibly never be tasked to do anything for us, but thoughts?

MR. ATKINS: Well I welcome the question because I do think that alternative dispute resolution is a, you know, extraordinarily useful tool that is used in every industry across America to resolve disputes. And I don't have a specific proposal, because I know it would have to come from the AAR and I'm not prepared to give you any specifics, although I will take back to them, of course, that you'd like to see somebody put up, you know, to come in with actually specific ideas of how to improve that.

But I will share with you, just a personal story of just a couple of weeks ago which is, you know, I've been around and seen the ADR process at the Board, and gone through numerous rulemakings and in long conversations with my staff about the things that we might think about to improve it. One thing I did not realize, as a senior practitioner in this space, was that rate cases were now subject to our alternative dispute resolution under the Board's rules.

Now, that may -- I mean it may come as a bit of a surprise, but it came in in the fast facts of their STB Requisition Act, thank you, and you know, it kind of just slid into the provision and no one has signed up for it.

I'm not -- no railroads, but also no

shipper organization or shipper group has come in and said I'd be willing to, I'll do alternative dispute resolution of rate cases. And so, from my perspective, the fact that I'm not as aware of it as perhaps I should have been, is maybe a call to the Board to put a bigger spotlight on that particular tool that's in your tool shed of ways to try to find solutions, particularly for really small customers who can't justify 3B or simplified SAC, and we know the concerns with the large SAC process.

So, I would personally urge the Board to take a hard look at that particular model and ask yourself why isn't it being used more aggressively. It's voluntary, but it does have public disclosure of the result. Is that a concern? Is that something that drives people away from the program?

It does tie to specific arbitrators that you've got listed. Is that a problem from people's perspective? Is that discouraging people from using it?

CHAIRMAN BEGEMAN: Well you could choose your own. That's just sort of the back drop.

MR. ATKINS: Right, so I honestly believe that it's something that it would be certainly worth the Board taking a hard look at. The one, and I know the AAR is firm on this, is mandatory arbitration, that's not the solution. Trying to take a round peg and jam it into a square hole is not the right result. And I know, respectively, that you have a proposal in front of you that where you're going to try to basically mimic the features of arbitration in an adjudicatory process.

I don't think that's a workable solution, and the AAR's position is it's not, but voluntary arbitration, there's really no reason for you not to explore that more in greater depth, and I will just commit to you that I will go back to the AAR and we'll put our heads together and see if we can come up with some specific recommendations for you to explore, or maybe even just the idea of having a hearing and letting people come to and talk about why isn't it being utilized. Why aren't people signing up for it?

CHAIRMAN BEGEMAN: ACC, would you like to make any comments?

MR. MORENO: Yeah, over 20-some odd years of my career, I've had both successes with alternate dispute resolutions, and I've been stiff armed in alternative dispute resolutions. And frankly, I've not been able to figure out what the common denominator is between them.

From -- with respect to the Board's current rules, most shippers when we talk about -- when I talk about them, my client shippers, it's really a question of has the railroad opted in? If the railroad hasn't opted in, then we look at it okay, that's not an option.

I think only Union Pacific, I believe, had opted in, at least for the longest while.

CHAIRMAN BEGEMAN: A number have opted in since.

MR. MORENO: More have done so since, yes.

CHAIRMAN BEGEMAN: At least with respect to the demurrage.

MR. MORENO: And I will also say that a lot of shippers do use.

CHAIRMAN BEGEMAN: A lot of shippers have opted in.

MR. MORENO: The open gap process which is kind of a -- which is an alternative forum. It's not formal arbitration and may have used it successfully and then others have used it and been totally -- had no -- hit a brick wall when it comes to it. And beyond that I can't explain rhyme or reason as to why.

MR. SLOAN: I think, as it pertains to rate dispute, I think there's a concern that without you know, a back stop of more accessible, workable rate review procedures, that you know, it's the belief that we're not going to get something significantly better than that in an alternative dispute resolution. I think if there was you know, workable, meaningful, rate relief available, that required you know, a process to go through the Board. I think alternative dispute resolution would be seen as a good alternative to maybe get you quicker and more agreeably to a similar end.

But I think without that back stop of a

functioning regulatory system for rate reviews, the alternative dispute resolution may not work.

MR. CAVES: Yeah, and my only comment would be I can't speak to the details obviously, of how this might work. But to the extent it just gets us away from SAC, and towards something that targets or benchmarks competitive rates based on how competition actually works in the industry, I think it's a good idea. On the other hand, if the railroad knows that it always has SAC as a back stop, I don't know why it would ever settle for a rate better than what it could get in the SAC case.

BOARD MEMBER OBERMAN: Jeff, are you saying Jeff, that the existing methodologies before the Board don't work for most shippers and therefore you don't have enough leverage going into a AAR situation?

MR. CAVES: Yeah, I think that's what my point was.

MR. ATKINS: Member Oberman, can I respond to that? Because you can't leave that out there that the idea that they don't work and your job is to create more leverage for customers, right? So, does it work? It works if it establishes the proper maximum lawful rate when there's a lack of effective competition.

If you can't prevail and can't win, that doesn't mean it doesn't work.

BOARD MEMBER OBERMAN: Well when I suggested it didn't work, I mean that it wasn't a practical, supportable, usable methodology. You know, and Professor Kalt said that we shouldn't throw out SAC with the bath water. But based on what I've learned since I've been here, we're now throwing out anything. The shipping world has thrown out SAC because they, except for coal, and maybe chemical occasionally, nobody files a SAC case. So, somebody threw it out.

Unless you assume, and I know AAR has tried to persuade us of this, that all, except for the 51 cases that have been filed in the last 30 years, all other shippers are happy with their rates. And that is not consistent with all of the shippers who have traipsed into my office since I've been here in January, saying how unhappy they are.

MR. ATKINS: Right, but Member Oberman, the question is not whether they're happy with they're happy with their rates. Because I guarantee none of them are ever going to be happy. You always have -- understandable, you will always have a parade of shippers walking into your office if they think that that office might drive rates down below the level that's being set, either by regulation or by competition.

So, you cannot use that as a gauge as to whether or not the SAC test is producing the right results. And you can't use the absence of rate cases either, because the railroads conform their behavior to the guidance from the Agency.

And so, I can attest personally, that if a complaint comes in, we'll work with the railroads and try to figure out whether it violates SAC, does it violate the simplified SAC, or does it violate the three benchmark approach? So, the absence of cases also can't be used as a gauge that you need to come up with a fourth, fifth, or sixth rate constraint on railroad pricing.

BOARD MEMBER OBERMAN: Well, you know, you're assuming that all of the entire population of people who have brought their concerns to us, are overstating it or insincere just ingenuous.

Some are. People will always complain, although I did make the observation that I have had many, many shippers come in and complain not only about rates, but service and de-marketing and so forth. I haven't had one railroad come in and complain to me that they're not making enough money.

So, you know, I have to go with what I'm hearing. Ultimately, whatever the Board does has to be court ordered and Congressional ordered standards. I think we all agree on that. But to me, the notion that somehow everything is fine, and we should make no changes in our procedures, that's not consistent with at least that I have.

Let me get back Ray, to a few questions from your presentation. At page 44 you say that Congress's prior directive not to presume unlawful rate increases by revenue adequate carriers is an insurmountable obstacle to the RIC concept.

MR. ATKINS: Yep.

BOARD MEMBER OBERMAN: So, Congress's prior directive. Is that its own inflexibility, is that what you mean?

MR. ATKINS: Correct, yep.

BOARD MEMBER OBERMAN: But that's been repealed.

MR. ATKINS: Well yes, taken away because it was no longer necessary.

BOARD MEMBER OBERMAN: Well, but --

MR. ATKINS: But there's no way you can interpret it as taking away that limitation, but implicitly letting you put in place its own rate inflexibility in its place. It's also deregulatory. So, let me just for everyone's perspective, in 1980, Congress created zone and rate flexibilities.

One of the first zones is exactly RIC. It was a you can raise your rates for inflation. And you could do so without any concern that the ICC will have the authority to suspend that rate or challenge that rate under its own authority. That remained in place from 1980 all the way to ICCTA.

It was removed with ICCTA because they simultaneously removed the STB's authority to suspend rates or challenge rates on its own initiative. So, it was no longer a necessary commandment. But it's clear indication that Congress did not intend for you to put in place rate freezes and presume the rate to be unlawful when the statute specifically says, "A rate increase above inflation may not be presumed to be unlawful," as it was put in place in 1980.

BOARD MEMBER OBERMAN: Yeah, but that's the statute that's not there any longer. So, well let me proceed, because you also tell us that the Coal Rate Guidelines are untethered from the statute?

MR. ATKINS: Yes.

BOARD MEMBER OBERMAN: Since untethered is one of my favorite words I focused on that. And I'm trying to figure out what your statement is tethered to because we have statutes that specifically refer to this, including, as Dr. Caves mentioned, Subsection 6 of the RTP, which specifically talks about maintaining rates where revenues you know, exceed the amount necessary to maintain the rail system.

And to attract capital. So, the Coal Rate Guidelines are not tethered to the RTP? I mean I'm trying to figure out what's the basis of your --

MR. ATKINS: So, I say no. First, re-read that language of the RTP. All it says is you're supposed to be regulating rates where there's a lack of effective competition and where rates are sufficient to provide adequate revenues. That doesn't mean you cap them at the level that that minimal threshold established by Congress as a goal, it just says that's when you're supposed to be regulating rates.

The point we were making in our pleading is the idea of twisting the revenue adequacy directive into a count is completely untethered from the statute. There is no indication in the statute that that goal that Congress envisioned for you to be continuously looking to achieve, is suddenly to be transformed into a rigid constraint on the overall earnings of the freight rail industry.

BOARD MEMBER OBERMAN: Well let me pursue that a little bit. Because of the original challenge to the guidelines.

MR. ATKINS: Yes.

BOARD MEMBER OBERMAN: In the Third Circuit, resulted in the Third Circuit stating, "We are convinced that the ICC's basic approach on revenue adequacy is consistent with 4 R and Staggers." And they were specifically referring to the Coal Rate Guidelines statement which says carriers do not need greater revenues than the standard permits.

MR. ATKINS: Yes.

BOARD MEMBER OBERMAN: Which is revenue adequacy. So, it seems to me the Third Circuit found some tethering there and language that wasn't repealed.

MR. ATKINS: So, I would disagree. Because if you look at the challenges to the Court of Appeals only reviews the issues that are brought to its attention. And nobody was challenging the revenue adequacy constraint as being an inappropriate application of the statute. They were challenging the managerial constraint. They were challenging the SAC constraint. And somebody was saying that the whole thing was amorphous and that you weren't doing anything at all.

So, you need to be very careful about taking a case where an issue was not presented to the court, and presuming it gives you a green light to apply that constraint.

BOARD MEMBER OBERMAN: Well, I didn't suggest that it gives a green light. I'm only talking about at least the one court that specifically looked at tethering the overall guidelines of the statute, which it did. But it certainly didn't suggest that those guidelines were untethered to the statute, because it had -- I understand what the case litigated. I read it.

But they have the opportunity, because the guidelines were being challenged, to say that they aren't consistent with the statute, and they didn't. But beyond that, we've got, you know, the Koch Brothers case, in which it's true. The Koch Brothers didn't challenge the existence of the guidelines.

MR. ATKINS: Right.

BOARD MEMBER OBERMAN: So, my hunch is that the Koch Brothers would have challenged it if they thought that the guidelines were untethered in the statute because that would have been a way to win their case.

MR. ATKINS: Maybe they would and maybe they wouldn't. Koch's a great illustration. I'd like to sit on it for just a moment because you're right. So, our position is you can't use that case to defend the revenue adequacy constraint, because the D.C. Circuit was very specific in observing that it was not being asked to call upon to opine on it, for whatever reason Koch, and the parties in that case just assumed its existence, and they were fighting over its application.

But it's a much more interesting story behind CF Industries case that I think the Board should be mindful of, is what happened after that case? So, that case you decided to set the maximum lawful rates based on a determination of revenue adequacy that was premises on the acquisition price, that Koch paid for that railroad. And Professor Kalt has already told you that when you tie a rate constraint to that type of metric, it creates significant disincentives in the industry.

And Koch Brothers are a very bright group of people and they figured out immediately what the flaw was in that approach because if you tie what I can charge to what I pay for it, I'm going to sell it to somebody else, and they're going to charge a higher amount of money.

And it's just indicative of the problem of using system-wide revenue adequacy, and what the acquisition price of an asset to set the reasonableness of a particular rate.

BOARD MEMBER OBERMAN: I want to come back to that because of what the Third Circuit said, tying it to the acquisition price was appropriate. It was consistent with the statute.

MR. ATKINS: Which Third Circuit decision are you referring to?

BOARD MEMBER OBERMAN: I'm sorry. The

Koch Brothers case, I'm sorry, not the Third Circuit.

MR. ATKINS: That was the D.C.C.

BOARD MEMBER OBERMAN: I'm sorry, I misspoke. So, I want to get back to the argument you cited in terms of arguing that we shouldn't adjust or change the bottleneck rules because you know, Congress hasn't suggested that we should. And you make the argument, and I think it's solid precedent, about in connection with the bottleneck cases, you tell us, "Once an agency's statutory construction has been brought to the attention of the public and the Congress, and the latter has not sought to alter that interpretation, although it has amended the statute in other respects, then presumably the legislative intent has been correctly discerned."

So, here we have on using revenue adequacy, we have the Coal Rate Guidelines. We have the Third Circuit's decision. We at least have the impact of it, even if it wasn't challenged in the Koch Brothers case. It's been on the books since 1985, the concept.

We have ICCTA, we have the Reauthorization

Act and we have any number of times that various people in Congress have tried to come up with other approaches. And no, the Congress has never said don't do it. So --

MR. ATKINS: So, what does that mean, I'm curious?

BOARD MEMBER OBERMAN: So, you make a dramatic attempt -- AAR makes a fairly dramatic approach to the task force saying it's untethered and we can't do it, whether it's a good idea or not. I don't find it here, including in your own argument that's been around and Congress hasn't told us abandon it, so I'm just sort of lost.

MR. ATKINS: So, let me draw a distinction between -- and this concept between forced switching and revenue adequacy. So, the key point is that Congress reenacts statutes all the time. And the courts do not adopt a policy that says every time you reenact a statute, every decision of the Agency is now been ratified, because that's just absurd.

There's no way that Congress actually knows everything that ACC's been doing. So, the law that's developed in the Supreme Court is very specific. What it looks for is a clear indication that Congress considered replacing it and chose not to.

So, on the forced competitive access proposal, 18 different times legislation was proposed in Congress to change the Board's competitive access rules. And 18 different times Congress chose not to adopt it. That is a -- now, you know, whether you --

CHAIRMAN BEGEMAN: Are you saying just because a bill got proposed that means that the Congress is considering it?

MR. ATKINS: Well you know better than I do what -- the background.

CHAIRMAN BEGEMAN: I think that's correct.

MR. ATKINS: But from the legal perspective, is that the type of indicia that you look for. Because you can't just assume, you need some indicia that Congress was aware of this condition and they acted on it. And there's -- I don't have it in front of me but there's more than just 18 different measures, particularly with ICCTA.

There was a lot of discussion at the time about the competitive access rules and whether they should be transferred or not. The details of it are in the AAR's and prior railroad submissions. But the point I'm trying to make, Member Oberman, is so, on the one hand you've got a Board policy that we know with absolutely certainty, that people were lobbying Congress to change, and they chose not to.

Versus revenue adequacy which I don't believe there's a single indication ever, since it was adopted, that Congress has ever -- was even aware of it, or had made any effort at all, or was even asked to modify what it may or may not have meant. And that's an important distinction in the law.

BOARD MEMBER OBERMAN: I don't think that as I read the case law, not only what you've cited, it doesn't turn on whether some random Congressman has tried to amend a bill. It turns on whether Congress has dealt with this subject, in this case reenacted the authorization, enacted ICCTA, which was fairly far reaching, actually repealed some of the rate matters that we were just talking about, the zone inflexibility.

And left in place the Coal Rate Guidelines, you know, it didn't pick and choose. It left in place the entire Coal Rate Guidelines, and there was plenty of reason to reexamine those by people who have been arguing about SAC since day one. They didn't choose to do anything.

So, I don't think that the court precedents are so tightly drawn as to whether a revenue adequacy standard is, or is not, to use your language, tethered to the statute. I still go back to the RTP subsection 6, which is supposed to guide us. And it's been there, you know, in ICCTA and nobody's changed it.

And it's staring you right in the face there. I don't think it's a far reach.

MR. ATKINS: So, Member Oberman, I would just ask you to address how do you address, how do you reconcile that with other language of the statute, like the idea that economic profit shows up in the definition, or the idea that there were rate increases that were specifically identified, or the entire concept of permitting the railroads to be regulated more like ordinary businesses, with the concept of resurrecting a firm earnings constraint that wasn't even in place pre-Staggers?

That's the part of revenue adequacy constraint that we think is untethered. Now, if you looked back as to how it was actually proposed in 1983, and so if you're saying to me, well actually maybe Congress did sufficiently ratify that we can use it, well then what the ratified was what the Agency proposed to adopt and any changes they made to it in the final rules.

But the initial proposal that they were adopting was to look and only be concerned if you saw a pattern of returns substantially in excess of the cost of capital. So, that builds right in the idea of economic profit and not using it as a ceiling. And they propose not to use it as a rate freeze, but only to use it to probe more carefully the types of -- to look a little more carefully at the rates.

And so, even if you believe that you know, that Congress somehow endorsed with ICCTA, the idea of revenue adequacy constraint, it still leaves a question what are we talking about? What does the constraint actually mean and I just will emphasize the AAR's position is that if you interpret that to mean there's a cap on earnings as to cost of capital, we believe that is completely untethered from the statute.

BOARD MEMBER OBERMAN: Well, I would just say this on this particular point. You raised a very appropriate question and that is how do we reconcile these various parts of the statute. And my answer to that is that's what we get the big bucks for because the statute has many contradictions in it as I've observed and others have, and we're sitting here, and you have the assignment at one point, of trying to reconcile conflicting directives.

But that doesn't mean we should throw out one of the directives. It means that we have to balance all of these directives, and I don't think it's an easy task, which is why I'm pursuing this. Let me just ask one more question at this point. I know Patrick has a couple and then I'll come back.

Throughout your presentation Ray, and Professor Kalt, you refer to the task force proposal as a system-wide rate freeze. And I'm not sure what you're talking about because a rate challenge based on the task force proposal, first of all requires the shipper to prove market dominance.

So, if there's relief, it's only going to apply to a shipper who's market dominant, which is something the generally accepted notion here that most 24 percent of the population, that is non-competitive.

And secondly, the complex MMM formula, and I don't -- I have had it explained to me, I couldn't repeat it to you, results in rate relief or freeze, only for the highest person being charged, and then only at that highest level, so everybody else could be charged up to that and may get no relief at all.

So, where does this concept of system-wide rate freeze -- all of the railroads traffic that's revenue adequate is not going to be frozen at all, as I understand the way it's proposed. So, if I'm misapprehending it, I'd like you to explain that.

MR. ATKINS: Well, I mean it's your -- it's their proposal. When we talk about system-wide, we mean it's going to apply across the entire system, to all of the traffic that is designed by the proposal to have a rate freeze on it. I mean it obviously --

BOARD MEMBER OBERMAN: I think you misunderstand it, and we may need another hearing to have our staff --

MR. ATKINS: I'm confident we understand it. It's going to impose a rate freeze on certain traffic above the rate pre-defined levels if you can make a showing of market dominance, which let's all confess, in today's environment with the Board not looking at product and geographic competition, and with the limited price test, doesn't have much bite to it anymore. So, it's largely going to be a rate freeze on all of that traffic across the board, and I will tell you that the idea of injecting yourself into the markets across all those commodities and all those observations, simply because somebody has become revenue adequate, is -- it just brings back all of the problems that Congress was well aware of from the 1980's with that failed policy from the 1970's.

You can't respond to market forces. You can't raise rates if there's a surge in costs. You, as we've said, it actually is the unintended consequence of ratcheting down rates over time. The idea of rate freezes is something the ICC specifically looked at in terms of whether that's something they would propose, and they said no, that's not a good idea.

BOARD MEMBER OBERMAN: And I don't think that's what's being proposed. So, I think we need further exploration of that, Patrick?

VICE CHAIRMAN FUCHS: I kind of have kind of quick questions in a couple of different areas. Dr. Caves, your model. It doesn't take into account when it's looking at the RPTM, it doesn't take into account the density of the line the shipper's on. Does it? In terms of what rate relief that shipper is entitled to.

MR. CAVES: I'm trying to think. It

certainly could, if you could find a way to measure it, but in terms of the illustrative model that we've presented, we account for characteristics of the individual shipment.

VICE CHAIRMAN FUCHS: Right.

MR. CAVES: As opposed to the line overall. That's correct.

VICE CHAIRMAN FUCHS: And does it account for some things that are pretty common, like interchange commitments and other things?

MR. CAVES: No, no.

VICE CHAIRMAN FUCHS: So, don't those things affect the rate such that somebody maybe who's on a higher density line or what have you versus a lower density line, there might be perfectly good reasons why someone is charged more than others, but if we were to adopt a model, it might be blinded, if there wasn't somebody that would get more relief than others on an unjustified basis?

MR. CAVES: I would say any econometric model has some factors that it's going to fail to account for unless it has an R-squared of 100 percent, which no model does.

VICE CHAIRMAN FUCHS: But in freight rail, when economies scope and density are so important, isn't the density of a line just a critical factor that's missing?

MR. CAVES: I would say -- I wouldn't see how that would introduce any systematic in the model.

VICE CHAIRMAN FUCHS: Well it would make some shipper get a lot more money than another shipper?

MR. CAVES: It could, it could generate predictions in the model, which is why we -- which is one reason why we're not proposing that anyone who makes one penny above the predicted competitive rate be --

VICE CHAIRMAN FUCHS: Right. And I'll say that you know, the Board has comparison group approach through the 3 benchmark test, and that also doesn't include density. And you know, there may be a trade-off reason for that in terms of simplification and other things.

MR. CAVES: Yes.

VICE CHAIRMAN FUCHS: But this is, of course, it's not a small -- it's not a simple. I mean you might say it's simplified, but it's obviously it is system-wide, right? And we're talking about over a billion dollars. So, that's why I ask whether or not that kind of leads to a greater importance when you're talking about that kind of redistribution. Greater importance on making sure that's right.

MR. CAVES: Yeah, yeah, I'd say you could -- I apologize. I'd say if there were a way to measure density, you could directly incorporate it into the model. And if you couldn't it could always be an after the fact issue where a rate appeared to be particularly high. You could say, oh, well that's, maybe the model made a mistake.

VICE CHAIRMAN FUCHS: And you have a great description of type 1 and type 2 errors, I thought it was really clear in your verified statement. And you know, one of the things that kind of struck me is the treatment of exemptions.

MR. CAVES: Yes.

VICE CHAIRMAN FUCHS: And you presumed everything that's exempt, to be competitive. And obviously, we've got a pending proceeding, which we don't need to get into the merits of that.

MR. CAVES: Yeah.

VICE CHAIRMAN FUCHS: But I just wonder whether or not you think that the information in that docket casts any doubt in your mind about that particular screen?

MR. CAVES: I'd have to familiarize myself with the docket.

VICE CHAIRMAN FUCHS: Okay.

MR. CAVES: I will say that you could run a different version of the model where you didn't apply that statement.

VICE CHAIRMAN FUCHS: Turning then to the replacement cost. You know, obviously there was a petition and a rate, and the Board made a decision. And a few things the Board said in terms of why it didn't go to replacement costs and I just want to give you the opportunity, AAR, to address that.

First is -- maybe is, you know, the Board uses a nominal cost of capital and if it went to replacement cost, you agree that it would have to shift to real? To real cost of capital?

MR. CAVES: I agree that that's an issue I have to look out. I'm not sophisticated enough to be able to tell you that the answer is clearly yes.

MR. KALT: I think the answer is yes, it just has to be consistent, nominal on both or real on both.

VICE CHAIRMAN FUCHS: And so, we went to replacement costs would the consistency be real then in the cost of capital?

MR. KALT: If you are -- it's complicated by the time pattern of investment that you're imagining.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: The replacement occurring. And again, you'll want to be consistent between how you treat inflation over the time period.

VICE CHAIRMAN FUCHS: Okay. And then another issue, I think the most significant issue the Board raised was this notion that not everything is going to be replaced, and you know, and it's hard to -- within a SAC test, you can kind of cast aside some assets and the like in building hypothetical.

It's hard to do that on a system-wide basis I assume. How would you propose the Board get around that problem?

MR. ATKINS: We don't have a specific proposal to go back to because I think, we just feel like we brought this proposal to the Board's attention on several occasions, and it said it's not interested. I will observe.

VICE CHAIRMAN FUCHS: But you have replacement costs everywhere, I mean replacement cost is a heavy theme.

MR. ATKINS: The idea though, is that if you're not going to move to that measurement and you don't think it's possible, it's feasible. I mean the flawed measurement you've got should not be used as a trigger for significant forms of changing how you regulate the freight rail industry. So, to your point about the unused assets, let me just say that that decision by the Board, by the ICC, was in what, like 1984-85, or so, when it said we really can't use the replacement cost because there's too much inefficiency in the network.

VICE CHAIRMAN FUCHS: The Board said, resaid this in denying that, I think it was in '08, yeah.

MR. ATKINS: That's right, you're right. But the nature of the freight rail industry today really is not at all what it was in prior years. And the idea that there's a lot of excess capacity in this system that should prove to be a significant obstacle, in shifting to a replacement cost approach, I don't think that that is as great a concern.

And it's not just me. In your decision adopting some the Act and proposing that as a robust model, the Board made the observation that the time for being concerned about significant over -- under-utilization of the network is passed. What we're actually more worried about is the capacity constraints of the network and the need to expand, not the strength.

VICE CHAIRMAN FUCHS: And I kind of think about replacement costs as kind of you know, not from an asset standpoint for RPI and other assets, it's kind of like SAC for the element in a sense, right?

MR. ATKINS: Yeah.

VICE CHAIRMAN FUCHS: Alright, so in a couple rate cases, some of the hypothetical railroads were quite large. So, we looked at the numbers and I think in some cases, for two different cases with Easterns, the hypothetical railroad was over 30 percent of their network.

So, if in one case the Board can figure out the hypothetically efficient, or the replacement cost for 30 percent of the network, so to speak, and I know it's not quite the same thing, but how hard would it be to just do the other 70 percent?

MR. MORENO: Five years and 12 million dollars. That's what was spent just on the Dupont case.

VICE CHAIRMAN FUCHS: Right.

MR. MORENO: To try to extend that to the entire rail network, plus and every year.

VICE CHAIRMAN FUCHS: But we're talking

about a policy that could potentially have over a billion dollar's effects a year, right? So, in comparison, is that level of investment still out of line?

MR. MORENO: Well, and frankly, there were a lot of disputes as to how you calculated those costs.

VICE CHAIRMAN FUCHS: Right.

MR. MORENO: That's where a lot of the litigation was over.

VICE CHAIRMAN FUCHS: Right, right, right, right.

MR. CAVES: Sorry, really a brief comment if that's okay.

VICE CHAIRMAN FUCHS: Yeah, of course.

MR. CAVES: So, I just want to push back a little bit on the replacement cost as the absolute gold standard for measuring these sorts of things. You know, you can find people doing research and publishing articles, comparing replacement costs, historical costs, and there's a tradeoff and neither one is perfect.

VICE CHAIRMAN FUCHS: Right.

MR. CAVES: And neither one is considered the gold standard. And just one quick point, this slide here from AAR does a nice job of demonstrating something that we've emphasized earlier, which is that it appears that the Board's method, which the Board's ROI calculation appears to be conservative because if you believe these numbers, the AAR are earning less than their economic profit from I believe it's 2006 to 2018, and they've invested about 25 billion dollars a year on average over that period. So, clearly their investors thought they were going to earn a decent return.

VICE CHAIRMAN FUCHS: But I hear you on the kind of -- oh, I'm sorry. You know, using the historical, you know, kind of book value. But Canadian Pacific, in their testimony, kind of put forward what I thought was a real interesting example. Where they talked about how, you know, land of course doesn't depreciate, but they, you know, a lot of their own industry, the land was acquired very long ago. Some of the assets are very old, you know, some of the bridges, we all know that.

And you know, they put forward that prior to their acquisition of DM and E, there was 4,500 miles of track and 7 million dollars in land assets at book value for 4,000 miles. And when they acquired DM and E, they went up to 8,000 and all of a sudden, their book value of land went to 664 million. So, it went up, you know, I think by nearly 10,000 percent.

Given how important land is, and that's just one example, and we can talk about a lot of old things. How can the Board defend something on a historical basis that has that type of error?

MR. CAVES: Yeah, I'd say, you know, you can -- that particular example is very hard to defend. I agree. I think you could also construct other hypotheticals using replacement cost that would also -- using, yeah, replacement cost that would also be very difficult.

VICE CHAIRMAN FUCHS: Can you give me that hypothetical?

MR. CAVES: Sure, the railroad -- I'm

trying to be as specific as I can.

VICE CHAIRMAN FUCHS: And I don't mean to put you on the spot, that's alright, then.

MR. CAVES: No, I mean in general, the railroad's investors are not -- okay, here's an example. BNSF had an example from their deck where they showed how a bridge was washed out by a flood. And they had to replace the entire bridge.

VICE CHAIRMAN FUCHS: Right.

MR. CAVES: So, they had to do that. But that was just one segment of their network, right? And how often did it actually happen? How often do their investors have to make those kinds of adjustments?

VICE CHAIRMAN FUCHS: They just make small adjustments over time as opposed to build the whole thing.

MR. CAVES: Yeah, so that's the best one I can come up with on the fly.

VICE CHAIRMAN FUCHS: Okay.

MR. KALT: Just one point, on the question of how difficult is it to do essentially revenue adequacy as a system-wide SAC test. Right, which is what you're asking.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: I believe in 2012 or 2013, in 722, Mr. Bernowski submitted actual calculations that didn't take 5 years and 12 million dollars, for railroads, by making some reasonable assumptions. I won't go into all of that and try to repeat that testimony.

But you can see by my graph, the productivity in the railroad industry, is now flattened out. That's what you expect after you get all the fat out of the system.

VICE CHAIRMAN FUCHS: Right.

MR. KALT: And so, you're in a system where the concerns that there's still a gross inefficiency after all the mergers, all the rationalizations of the system and so forth, you in fact, have a sound basis for thinking, well, maybe we've gotten most of the fat out of the system.

And in that case, and I think what was proposed there and what was measured in terms of the actual replacement cost of an entire company, was the notion that we won't change its footprint. We won't try to rewrite, you know, pretend that we're going to rip up the tracks, you know, and not run them through Chicago anymore, okay.

So, you accepted realism there, I think appropriately. I don't think anybody is going to get into and lastly I will point out that regulators who have gone for replacement costs, if you employed that, and actually often put in productivity zones where, for example, you tried to estimate -- forecast 2 to 3, 4 percent, something like that and so you make adjustments for any remaining inefficiencies in an otherwise rationalized system.

VICE CHAIRMAN FUCHS: And I'll be very quick, because my other Board members have been very generous in accommodating a number of questions. The industry comparison, I think you cited a Mocker article.

MR. KALT: Yes.

VICE CHAIRMAN FUCHS: The good, the bad and the ugly, I think. They used for their cost of capital, they used Demotorin's numbers, which are a cap M, correct?

MR. KALT: That's right, that's right.

VICE CHAIRMAN FUCHS: And there's nothing wrong with using cap M for estimating a cost of capital, is there?

MR. KALT: I think it's very appropriate.

VICE CHAIRMAN FUCHS: Okay. And this is going to be a little bit out of left field, but we have Professor Sappington, you know, and you might think everything's been out of left field. But because you mentioned in your testimony, you know, SAC is based on Nobel -- you know, there's elements of Nobel Prize insights, right.

And there's a recent, for instance Professor John Turrault talks about price caps. What is his insights on university price caps and you know, what does he say when it comes to the incentives that they provide, and how does that apply to the rail industry?

MR. KALT: Well, I have to go back and reread that literature. But I believe what the central theme is, from an economist perspective is that the theme that I think I put out there, which is this notion of triggering, not rather than even freeze. Just triggering tightening, okay, via some firm-wide measure of revenue adequacy or inadequacy, whatever you use, necessarily creates incentives to avoid the triggering.

And so, this is --

VICE CHAIRMAN FUCHS: He differentiates rate of return regulation from a price cap regulation.

MR. KALT: Right, but if you're triggering price caps, or triggering earnings -- the same principal applies, and that's I think, the applicability. A key thing that our economists are worried about is the triggering mechanism in real time, creates incentives. Whether it was a cap, or a rate of return freeze, or an ACC proposal, whatever it is, if it's going to tighten, you're going to create incentives to avoid the tightening.

VICE CHAIRMAN FUCHS: So, in your view, it's not that price cap regulation in and of itself is the problem, it's that the rate of return screen for price cap regulation is the problem?

MR. KALT: The price cap regulation has other problems.

VICE CHAIRMAN FUCHS: Right, service issues and other things.

MR. KALT: I'm old enough to have seen gasoline lines with the Nixon price freeze.

VICE CHAIRMAN FUCHS: But I think Dr. Turrault's talking about a different type of price cap regulation.

MR. KALT: And the essence of that is the problem that this industry faces is the triggering in real time if you use revenue adequacy as a trigger, or any measure of earnings. You can sense that. If I'm approaching the trigger, I don't want to pull it.

MR. ATKINS: If I, oh, I was just going to say just to clarify. If you're going to be doing a comparison approach. Let's, like with the comparison approach that's still up on the screen, the cost of capital there used your existing approach. Other models might do a benchmark in your comparison approach using just cap M. As long as you're using a consistent cap methodology, so there's not apples and oranges, that would make sense.

But the AAR's position is that when it comes time to actually calculate the cost of capital for the railroad industry, your approach of using multiple models is actually the right approach. So, we're not suggesting that you should be abandoning one of your models. This is just for the analysis of a comparison.

VICE CHAIRMAN FUCHS: I totally understand. It's much easier to do, right. Dr. Caves?

MR. CAVES: Just very briefly, under the framework we've set out what triggers the regulation and is pricing substantially above competitive levels. Right, if the railroad is not pricing substantially above competitive levels, then it will never face any form of regulation.

And if it is pricing above competitive levels, but then brings its rates not down to competitive levels, but just closer, it will also no longer be subject to regulation.

MR. ATKINS: Sure, and I just -- we just disagree with that because their entire proposal is premised on you being revenue adequate. So, it does, by its own definition, it does not apply to CSX, or the Canadian railroads. It only applies by definition to UP, BNSF, and Norfolk Southern because they are meeting your measurement of revenue adequacy.

When if you look out at a comparison of ACC members, or anyone in the S&P 500, everyone is earning. Everyone meets that measurement because of the flaws, which I don't think that you can correct in that calculation. It's a useful tool for what it was designed for, which is for you to monitor direction of the health of the freight rail industry to make sure it was going up and not going down.

But the idea that you use it with the type of precision that you've said that shipper organizations are giving it, just is you can't look at the data and support that type of conclusion.

MR. CAVES: Yeah, so the problem, sorry,

very quickly.

VICE CHAIRMAN FUCHS: Go ahead.

MR. CAVES: The problem, and I agree the comments recognize this is a big problem, the rate of return regulations that, you know, every time you do something to increase your profits, you know, there can be a one relationship right, that your prices get regulated more.

Here there is, you know, you could argue there's sort of a knife edge criteria that happens when you become revenue adequate. But the idea that, you know, you're going to be able to -- that there's some kind of one-to-one relationship between extra profits on this specific route, and whether or not you're regulated, is very far-fetched, I think.

MR. ATKINS: So, and again, we would just -- you don't even have to what you're looking for, because we just disagree with that point. And it's because of the competitive threshold that they've designed. That chart that he showed you where you've got the competitive threshold that's moving around, that's what's going to determine the maximum lawful rate, and it's a function of your revenue adequacy.

So, if a carrier is earning, if they're right at the threshold, there's no constraint. If they become more revenue adequate, a company earns another billion dollars on its intermodal traffic, or it finds a new -- entirely new market, fracked sand becomes more viable, and all of a sudden that revenue is being used to take that competitive threshold and drive it down. So, this proposal, I appreciate you're not taking money out of the hands of competitive traffic and giving it back to the competitive traffic, but what you're doing instead is taking the money the railroad has earned from the competitive traffic, and you're giving it to the customers like the chemical customers under their approach, and tell that competitive threshold is driven all the way down to the projection from their model.

MR. MORENO: I'll take absolute issue with that because what the ACC model does, is it sets the appropriate level of differential pricing on captive traffic. As long as the railroad is earning revenue from -- is exceeding its cost of capital with respect to and from its competitive traffic, it gets to keep all of that revenue.

We are not shifting from one pocket to another, it's the differential pricing that the captive traffic is paying that's accounting for that excess. And as long as that excess exists, there should be differential pricing needs to be capped at that level. And that's what coal rate guidelines says the purpose of rate regulation is for the rail industry.

MR. KOLT: I'm going to make three points. First -- 13 point, real quickly. First, there's plenty of theorems in economics that tell us that when you have so-called knife edge conditions, you can magnify those because of their all or nothing character. I cross one inch farther.

Secondly, I put up a quote on the screen this morning and it's in my verified statement and it's not by me or even by people looking at railroads. But looking at earnings triggering rate constraints. One of the things you have is you'll see a phrasing in there by an economist, distorted pricing in non-core markets, okay.

Well what does that mean? You may not take the money away from a competitive market, but if the competitive market is pulling up my revenue adequacy because it's a good time in the market, I have a sense to hold back on those competitive rates and you start to distort. And you have a form of cross subsidization going on via that. That's only two points, but I'll stop there.

MR. ATKINS: And I would just ask not Jeff, but Dr. Caves, I just -- maybe I am not understanding our model, but it is my impression that that competitive threshold moves. It is not -- once you become revenue adequate, it doesn't stay where it is. For Norfolk Southern, your project was it's 1.8. For BNSF and UP it's 1, which means and the reason for the difference is because BNSF and Norfolk Southern have made more money, probably from competitive traffic, which pushes down the competitive threshold. And so, Jeff has just said that it is completely indifferent. That if you make more money from competitive traffic, it has no impact on your model.

So, I'm just looking for confirmation that that competitive threshold is frozen. That it doesn't move based on how far you are above or below revenue adequacy.

MR. CAVES: Oh, okay. I think I can clear this up. So, you're correct in the examples I gave, we showed different competitive thresholds for different time periods. Because we were not calculating the competitive threshold that the Board should or would choose, we were calculating what we call the minimum viable competitive threshold.

Which is, if you believe that this revenue adequacy calculation that we've performed, used masked data you have all sorts of other problems, so it's purely illustrative. But if you believe this illustrative calculation, and if you wanted to know according to these numbers, what the minimum viable competitive threshold would be, we solved for it.

We're not suggesting that the Board go in and readjust it whenever it feels like it.

MR. ATKINS: So, how are you proposing that the Board calculated it? Because that minimum threshold will move, right, based on how much money they made from competitive traffic. So, it may be one year for Norfolk Southern. It might be 1.8, but if they make more money, it's going to fall down to 1.

MR. CAVES: No, it doesn't have to move at all unless the railroad, you know, suddenly becomes revenue inadequate, in which case it's not subject to any form of regulation at all.

MR. MORENO: We contemplated that the competitive threshold, as well as the economic model itself, could be calculated annually based on updated data, and keeping in mind that we're not looking at a single year when measuring revenue adequacy. We are talking about long-term revenue adequacy, however the Board ultimately decides to define it.

We used a six-year period in our illustrative analysis, but the Board could also substitute the task force's recommendation as well.

BOARD MEMBER OBERMAN: Dr. Caves, I just had one question. When you were doing your chart, did you compare the results of your benchmark test to what the results would look like if a three benchmark were applied to the same?

MR. CAVES: No.

BOARD MEMBER OBERMAN: Thank you.

MR. CAVES: Yep.

VICE CHAIRMAN FUCHS: One last question. The rate chart, you know, showing that rates are going down over time. That chart, that was included in the testimony, doesn't control for private cars, for system cars?

MR. KALT: Are you talking about the alligator chart?

VICE CHAIRMAN FUCHS: Yeah, I mean it's very impressive, but.

MR. KALT: Yeah, it's actually giving you average rail rates, paid to Class I railroad is my understanding.

VICE CHAIRMAN FUCHS: But it doesn't control for a commodity mix or for private or system cars. So, to the extent that captive shippers are moving more to private cars, and the railroad is taking on more competitive traffic, it doesn't have that much insight for actually what we're here for, which is you know, relates to captive shippers.

MR. KALT: I would agree with you. I would agree with you that it doesn't have insights to captive shipper because that is inherently an issue-specific, shipment-specific analysis. It's unfortunate that that's the case, I guess, but I'm trained as an anti-trust economist, I can't just broad brush things.

VICE CHAIRMAN FUCHS: Right, of course, of course. Okay, thanks.

BOARD MEMBER OBERMAN: Could I just say one thing I'd like to follow-up on, on the triggering concern. In a rate challenge based on revenue adequacy, if only the shipper who's complaining's rate is at stake, and it's only a small percentage that will even meet the market dominant test, so, you've talk about disincentives to have capital investment and invest in infrastructure and so forth, if they think they're going to be capped.

They are going to be capped on a small portion of the shippers. Doesn't the railroad have an incentive to keep its investments going to make sure it has -- provides good service to all of the other shippers for whom there is competition? I don't understand how a railroad executive says, you know what, they've adopted this new standard over at the Board, I'm going to stop spending money on the rail bed because a couple of shippers may be able to cap their rates. What about all the others.

I just don't understand that concept. But I'm not an economist.

MR. KALT: Well what we find with the research is think of it as the following. There's a segment of my business, say 24 percent, the number that people float around. There's a segment of my business, some things that will be triggered there where I'm going to see greater constraints than I otherwise would.

Some of those will be valid and I'll lose the case as a railroad, and some of them won't be valid because in a proper measure of market dominance, I won't be found to be market dominant and so forth.

But one way or another, there's greater risk and less revenue in that 24 percent part of my business. We're not saying that you just stop investing, but you have incentives to distort your investments. So, for example, if I could make investments maybe in track, in physical equipment, perhaps in other things -- software, whatever it might be.

If I could make investments and they would improve, for example, my performance in the other 75% of my business, I now get closer to triggering this process where I put my 24 percent at greater risk. And that's where the distortion comes from. That's why you see in our literature that's talking about non-core and core markets.

Non-core markets were often left unregulated and to public utility regulation. And so, that's the underlying economics is crossing a threshold at knife's edge, puts a sizeable chunk, in this case, maybe 24 percent, maybe other at risk.

MR. ATKINS: And Member Oberman, this is a really great question. I mean a really great question about how is it that what we do for just a couple of customers who come in will actually have much of an impact on the broader, freight rail network, right? I mean how can that possibly be?

And I would just -- this is an important point to emphasize. The actions that the Board take here, have a magnified effect as they're carried out by the railroads across their system. So, even if just a couple of rate cases decided by the Board can influence how railroads price their traffic.

And I'm going to give you an actual example that your staff is familiar with. After basically two rate cases in the west, the Union Pacific railroad knew what the SAC test was going to say as it came to be gauging its rates on high-density corridors out of the coal market.

And it's well-known that what they did is they shifted their pricing to price it at 180 percent of variable cost. That resulted in a series of cases that were brought when the parties would fight over where 180 percent actually was, because at the time you had numerous adjustments. You didn't really quite know where that was.

Then the Board made some decisions about how it was going to determine 180 and those disputes went away as well, because now Union Pacific could set those rates right precisely at the threshold and avoid any sort of rate cases at the Agency.

And this is an example. I know it may be hard to appreciate just how big of a microphone the Board actually does have. So, when you're thinking in your head there's just going to be a couple people who come in and we offer a little bit of rate relief, how is that really going to have the implications that the railroad is concerned about.

I just hope you realize that when you make those decisions, if you adopt a mechanical approach to ratemaking, the executives, the marketing department, the lawyers, will be advising their clients on how to conform their behavior to the new standards that the Board has set forth.

BOARD MEMBER OBERMAN: No, I appreciate what you're saying, and I'm new enough to measure the impact of what we do is still something I'm learning. I was trying to understand the disincentives to investment part of just providing a revenue adequacy constraint to isolated pieces of traffic, because I still disagree with the idea that it -- as I understand it, that's it's a system-wide freeze.

So, I don't understand how a railroad executive who has all kinds of trains running on their system says well, I'm not going to make capital investments for a piece of it, they're all running on the same system, the same yards, the same software, same new technology and the locomotives pulling different kinds of traffic.

I just don't get where they undermine their entire investment strategy because one or two of those shippers may have a revenue adequacy case. I understand the concept of a trigger, if you really had it, but I don't, with all due respect, Professor Kalt, I just don't see this as forming gas lines kind of a thing. It's just not quite the same. The industry is much more complicated than providing gasoline at gas stations, as I understand it.

So, that's -- I'm trying to apply this trigger thing to the real world.

MR. ATKINS: I think we understand and appreciate your observation. I really do think though, it's going to depend on which of these proposals and what specifically, are you proposing to do?

Because if we take the worst case illustration. We actually put an earnings cap on the freight rail industry, so that anyone who satisfies market dominance, can come in and bring a rate case because the railroads are earning more in their cost of capital, that is going to have a powerful negative effect on investment and you're going to hear from a number of executives from the railroads that will explain to you how they go through their decision-making process for making investments.

But just to a lay person, even like me, Member Oberman, if I have to make a risky investment and I don't have the possibility of earning a significant upside potential on an investment, they're going to have to really justify to their senior management why are you making that investment rather than transferring those revenues back to the owners of the railroad through stock buybacks or dividend payments.

BOARD MEMBER OBERMAN: Buyback question is for the railroad executives to come up here.

MR. ATKINS: Wonderful.

BOARD MEMBER OBERMAN: Thanks Ray, it was a good segue.

CHAIRMAN BEGEMAN: Thank everyone. Obviously, we're going really lickity split here. Our first panel is now concluded, three point some hours later. We are against my instincts, we are going to take a break until 1:15, given that people can't eat in this room. Our recorder needs a break, so we will start at 1:15. Thank you for your patience and your participation.

(Whereupon a brief recess was taken, to reconvene this same day.)

CHAIRMAN BEGEMAN: Okay. We will resume

with Panel 2, BNSF Railway, Montana Department of Ag, National Coal Transportation Association and Western Coal Traffic League. And we will begin with Jill from BNSF.

MS. MULLIGAN: Good afternoon. Thank you for the opportunity to appear before the Board to share BNSF's perspective on the revenue adequacy proposals raised by the Board. I am joined with my colleague -- by my colleague, Paul Bischler, who's our VP of Finance, Controller and also our Chief Sourcing Officer.

We would like to focus our time this afternoon on select areas of interest and concern to BNSF. At issue in the proceeding, is whether the STB should alter its fundamental regulatory structure and begin direct regulation to restrict the overall profitability of railroads.

Sorry, I went one slide too far. For BNSF, the answer to that question is no. BNSF's profitability results from competing aggressively in dynamic markets and earning a reasonable return on that business. The return allows us to reinvest in our network to drive safety and efficiency benefiting our customers. BNSF has done that over a 25-year history.

Our profitability results -- sorry, the historic regulatory balance that the STB has strived to maintain, has encouraged exactly that activity by a railroad. BNSF believes that the STB does that by allowing markets to function by letting competition in dynamic markets set transportation rates and drive service efficiency, and reserving direct regulatory intervention to instances where those circumstances are not present.

We urge the Board to refrain from abandoning its core function of regulating rate reasonableness, and adopting regulations that penalize a railroad for being successful in competitive markets, and mandating rate reductions in order to reduce profitability, regardless of what has driven a railroad's returns.

Unfortunately, the proposals that you'll hear about over the next two days do just that. These proposals require the STB to ignore the source of profitability for a railroad like BNSF. The vast majority of BNSF's revenue comes from competitive traffic. The Board's own measures reflect that.

On the slide, we have charted the last 10 years of the STB's annual RVC greater than 180 benchmark, for BNSF. This annual metric, published by the Board, calculates the annual average revenue to variable cost ratio on traffic that is above 180, the jurisdictional threshold.

As you can see by the chart, this is a remarkably steady metric over time. Continuing to focus on the same population of traffic, moving at rates above 180, over the same period, less than a third of BNSF's revenue has been earned on traffic in this category.

For example, in 2017 less than 30% of BNSF's revenue was earned on traffic above 180 percent. Of that traffic, approximately 50 percent of those moves are not subject to STB jurisdiction, with the biggest category being BNSF intermodal traffic.

None of these metrics fit with the story that you're going to be hearing over the next two days about gross profitability, fueled by years of dramatic rate increase on so-called traffic that's captive. The reality is that BNSF's returns are driven by offering market responsive rates into the competitive marketplace.

We attract business to our railroad that allows us to earn a return that we can put back into our network. The Board should not adopt regulations that are designed to disrupt that cycle. As my colleague, Paul, is going to discuss, to do so would have significant consequences for BNSF.

MR. BISCHLER: Good morning, I guess afternoon now and thank you for allowing me to present. So, I've been at BNSF 20 plus years now, led our accounting and purchasing function as well as various parts of the finance organization that include financial studies.

The financial studies team I've led is responsible for the financial analysis that supports the company's decision-making around whether individual infrastructure, equipment and other capital investments are undertaken. As you can see in the slide here, Jill touched on it, our business model is focused on growing with our customers.

We will invest, if we're able to grow our business, improve our operational efficiency, and receive appropriate value for our services. This enables us to earn appropriate returns, which then creates the incentive for us to further expand and continue this virtuous investment cycle.

So, next I'm going to talk about how we think about our investment decision. So, first, as you know, railroads are unique in that we pay for all our own infrastructure and the key point there is our returns are not guaranteed. Our investment includes, first and foremost, replacing existing infrastructure, but it also includes undertaking projects to increase the efficiency or add capacity to our network through equipment, technology, infrastructure and people resources to meet the service needs of our customers.

In order to undertake expansion or efficiency projects, each individual project at BNSF is required to undergo a rigorous financial analysis and generally requires approval by a cross-functional team of executives. When we prepare the business case for a project, we know the cost of the project with relative certainty.

However, and this is important, we don't have certainty at whether or not our estimates of future volumes, market conditions and costs are accurate. The important point I want to convey is that it takes a long time for us to realize the full benefits of the projects and ultimately get an appropriate return.

So, we won't know for years whether or not our investment decision was a good one. As a result, we generally require return near our hurdle rate. For BNSF, that hurdle rate is in the mid-teens and is a target for what we hope to return. You'll hear from coal representatives today, that business sector is a great example of long-term investment risks faced by BNSF.

The joint line in the Powder River Basin that both BNSF and UP use to serve lines on behalf of utility shippers, was expanded not long ago to carry more than 400 million tons. Yet in 2018, only 243 million tons was transported over that line. That's the challenge with making long-term infrastructure capital investments.

When should I make them? Where should I make them? And can I count on the earnings to occur over a long period of time? BNSF's no different than any other company in that we must invest wisely, and our decision to invest is all about risk and returns.

You can see in this next slide the number of rail equipment incidences as reported to the FRA per million train miles that demonstrates the improved safety and reliability of our railroad over the last 20 years. This has been accomplished because of our investment in infrastructure, technology, our people and innovation.

Today's regulatory environment permits exactly the type of behavior the Board and the railroad customers would want to see from the railroads. We constantly challenge ourselves and support that with investment to make our railroad safer, more reliable and more capable of meeting the service needs of our customers.

The next slide here speaks to our long history of investing to improve and expand our network to the benefit of our customers and the overall economy. Since 2000, we've invested over 65 billion in infrastructure and equipment. Since that time we've replaced approximately 58 million ties, over 15,000 miles of rail, and added more than 45 million tons of ballast.

Adding new capacity, we've implemented 695 miles of double and triple track, constructed 36 new passing sidings, and extended 48 sidings. These projects, along with targeted terminal expansion projects, and signal system upgrades, have allowed BNSF to accommodate business growth on a continuing basis.

Today, our two and a half billion dollar maintenance program is what our entire capital program was not long ago. We also believe that our customer's investments are indicative of their belief in our ability to provide excellent service over the long-term at market responsive rate levels.

We've seen customers elect to build their new facilities on BNSF and expand their existing facilities on us as well. Since 2000, we've increased the volume on our railroad by over 2.1 million units. As can be seen, we will reinvest the business when we have a reasonable degree of certainty that we'll be able to achieve a reasonable rate of return.

A critical factor allowing us to make these private sector investments is that we've had a relatively stable economic regulatory environment conducive to investment. This was referenced earlier in the testimony, but you're all well aware we experienced one of the worst weather disasters in our company's history when severe flooding impacted our network in the Midwest.

We think this provides a helpful example as to why we believe the revenue adequacy calculation doesn't effectively take into account the real world replacement cost of the railroad. Despite spending about 230 million dollars to date, to rebuild the railroad, the historical cost of those replaced assets was about 70 million, less than 30 percent of the actual replacement costs of the impacted assets.

Of course, our book value today on those initially installed assets is significantly lower due to depreciation. It was also referenced in the testimony about bridges not needing to be replaced often. The next couple years we've got 100 million dollars plus bridge that we'll have to replace with a book value that's essentially zero.

The long lived nature of our assets and significant inflationary cost over time makes the use of book value a flawed methodology for effectively evaluating our terms. What often gets confused when speaking about replacement cost is if there is an assumption that when we replace something, the new asset is more valuable than what existed before. That's absolutely not the case.

We maintain the value of our historic assets through our significant ongoing maintenance program. As I mentioned earlier, we spent about two and a half billion in maintenance capital each year, simply to keep the railroad in the same shape it was in the prior year.

Before I turn it back over to Jill, I just want to conclude by saying that for the first part of my career, we were challenged to get appropriate returns. We're in a much different situation today and have worked hard to get there. As a result, we're well positioned to continue to support our customers and the U.S. economy as one of the safest and lowest cost modes of transportation in the world.

It's important the Board get rate regulation right, we understand that. I would just ask that you use caution as dramatic changes in regulatory policy may likely result in unintended consequences that cannot always be determined ahead of time.

MS. MULLIGAN: Thank you Paul. I'd like to turn to the Board's specific proposals. First, the task force proposed definition for long-term revenue adequacy contemplates a review of a business cycle, capturing the ups and downs of a current cycle, which BNSF believes is important.

However, the STB should not completely ignore current circumstances, to do otherwise is to regulate by looking in the rearview mirror. This is particularly important when the industry is facing softness and uncertainty in key markets, such as a continuing systematic decline of coal shown on this chart.

Second, despite what you may hear, it simply defies logic that BNSF does not compete to secure coal tons. On the left side of the chart you can see the precipitous decline in gas prices over the last 10 years, and on the right the resulting significant loss in market share that coal generation has seen to gas plants.

It's a punishing competitive environment. WCTL and NCTA's written testimony ignores the role of gas as a fundamental constraint on rail rates. And I believe they also hope that the Board continues to do the same by refusing to consider the very large role that product competition, here gas, plays in limiting railroad rates.

In fact, at times BNSF has entered into

gas variable deals with rail rates moving down in response to falling gas prices in order to retain coal volume. As long as the Board continues to ignore product and geographic competition, it is handicapped in understanding the competitive markets that BNSF participates in.

Turning to the other proposals. The task force RIC and bottleneck revocation proposals are a sharp step away from the Board's statutory mandate to allow markets to function and to govern rail rates. And when competition is not present, determine reasonableness rates reflective of market outcome.

Of key concern to BNSF, is the fact that the core purpose of the two proposals appears to be guaranteeing better rates than a shipper would obtain through market forces. Moreover, those rates are being driven to below-market levels, based directly on how successfully BNSF competes to secure business in dynamic markets, many of which are not subject to STB jurisdiction.

To put a fine point on it, under the task force RIC proposal, when BNSF's successful in securing business away from truck, an inherently pro-competitive act, the result is expanded rate freezes on BNSF's regulated traffic. If the Board were to implement either of those proposals, the result is that every shipper, regardless of competitiveness of their markets, will want to be directly regulated by the STB in order to receive a preferential below-market transportation rate.

The result will be significant disruption to both transportation and commodity markets, creating winners and losers, including between shippers, wholly divorced from market outcomes.

In summary, it's important that the STB get rate regulation right. That means allowing competitive markets to determine transportation rates and drive service efficiencies, while providing effective oversight, when those market forces are not present.

The approach that the Board has taken has fostered the ability of the railroad, like BNSF, to invest at a high level in infrastructure, technology and innovation. Concerns about levels of rates should continue to be addressed through individualized analysis that maintains the appropriate regulatory balance.

BNSF has supported rate reasonableness reforms that ensure that stakeholders have access to effective, appropriate rate oversight, and we understand that there are concerns that the Board's existing mechanisms don't fully accomplish that. In our recent final offer rate review submission, we did identify our support of specific proposals to enhance the STB's existing rate mechanisms.

I believe the AAR's also recently outlined options to the Board members which BNSF is fully supportive of. The Board should continue to focus on improving rate reasonableness methodologies, not on the development of a revenue adequacy constraint that market realities, economic principles, and the Board's statutory charge do not require or support.

Thank you again for the opportunity. We'd be happy to answer questions.

MR. COCCOLI: Good afternoon. My name is Zach Coccoli. I'm the Deputy Legal Counsel at the

Montana Department of Agriculture and I'm here today representing the Montana Wheat and Barley Committee. The Montana Wheat and Barley Committee is an exclusively grower-funded organization, representing the marketing research and grower education needs of Montana's wheat and barley industry.

Today's proceeding and all the work of the Rate Reform Task Force is especially exciting and encouraging to Montana's 10,000 farmers who work tirelessly to produce annually over 150 million bushels of the world's finest wheat and barley.

It is said that the world passes through Montana, but we are proud of our own contributions to the world food markets, and value the nearly four billion dollar industry that agriculture represents for the economic health of each and every Montana community. Of course, access to the world's markets would not be possible without an efficient transportation system, and we thank the Burlington Northern Santa Fe Railroad, for their hard work throughout the many seasons of Montana, and their continued investments in safety, efficiency and customer service to our shippers.

I wanted to be clear that Montana Wheat and Barley's participation in these proceedings is not a criticism of the work BNSF is doing across our state, as much work has been done to build and maintain those relationships. But rather, a new opportunity to understand the business needs of each institute and further explore the proper regulatory role of the Surface Transportation Board in today's modern shipping environment.

Montana agricultural producers support the STB's efforts to develop more affordable, accessible and practical procedures for handling both large and small rate disputes. We stand in favor of proposals to shift the burden of proof for proving reasonableness, increasing transparency of railroad operations as they pertain to rate setting, and increasing the involvement of Surface Transportation Board experts.

It is worth recognizing that Montana is very captive with no navigable waterways, and over 800 miles and mountain passes between central Montana and the nearest port, competitive truck or barge options simply do not exist. However, if a permanent market dominance designation is not workable, the Montana Wheat and Barley Committee supports the task force's proposal to set a list of criteria that once plead, will lead to a finding by rule that the complainant has made its prima facie case of market dominance over the traffic.

The notion that trains originating outside of Montana in areas where competition exists experience a lower price shipping option, despite comparable shipping distances, continues to fail to satisfy any notion of economic fairness to Montana's agriculture industry.

Although we recognize the inelasticity at play in our situation, the Lerner index, which measures railroads' monopoly power as a markup ratio above marginal costs, is higher for grain shipments than any other commodity and is rising. Yet, if the goal of rail regulation is to allow price differentiation to occur, to achieve revenue adequacy, the Montana Wheat and Barley Committee supports the new definition of the revenue adequacy constraint, including a determination of long-term revenue adequacy at not less than five years, and the establishment of a rate increase constraint.

Limits on differential pricing, for long-term revenue adequate carriers just makes sense and is in line with Congress's intent. Where railroads consistently earn over time, a return on investment above the cost of capital.

It is less clear whether the task force's bottleneck or Simplified Stand-Alone Cost changes would have a measurable affect on Montana's shippers, but the Montana Wheat and Barley Committee supports any efforts to improve and simplify that methodology.

A more hands-on approach by the STB, into the process for setting and adjusting tariff rates on captive ag shippers, would provide a substantial check on market dominant price structures, and a much-needed assurance of fairness to the agricultural producer.

One additional meaningful regulatory change involves shifting the burden of proving reasonableness of a rate to the railroad. For example, for the Three-Benchmark process to be effective, the regulation must first determine when it should be up to the railroad to demonstrate that its rate is reasonable.

If the revenue to variable cost ratio for a contested movement is greater than the average RVC for a comparable move, then the burden of proof should fall on the railroad, not the shipper, to demonstrate that a rate is reasonable. And movements should be compared by commodity, load characteristics and car types to ensure a level playing field across all rail users.

No industry should receive preferential treatment from a railroad to the detriment of another industry. And the proposed revenue adequacy constraints should reduce the shipper's role in exerting unreasonable, downward pressure on the price paid for grain at the elevator.

The Montana Wheat and Barley Committee supports further development in measured application of recommendations to this end. In some circumstances, it maybe beneficial for the STB to instigate such cases themselves, on a provisional or limited scope basis, as new methods are applied to present practices.

Along with mandatory disclosure requirements to automate and expedite portions of the discovery process, the STB should consider scenarios where it will be willing to exercise investigatory authority and to what degree. Any mechanism, to assure fairness, outside of formal rate case proceedings, is welcomed.

The Montana Wheat and Barley Committee respectfully requests that the Board continue to give due consideration to those shippers, like the Montana farmer, removed from nearly all aspects of the railroad's operations, but entirely dependent upon it for their livelihood.

When deciding how to account for railroad revenue adequacy in rate reasonableness determinations, where to streamline market dominance concepts, and when to conduct final offer rate review, the ongoing efforts of the STB to learn from history, engage openly with stakeholders, and conduct objective analytical decision-making informed by accurate information, instills a renewed level of confidence in the outcome of the Board's rate reform efforts.

Like the task force, the Montana Wheat and Barley Committee does not wish to undermine the rail industry's financial health and long-term viability. However, we support the STB's openness to new regulatory structures and ultimate decision authority.

The STB is again encouraged to exercise its investigatory powers to access information, otherwise not available, and review it from a new and objective perspective. Any effort to simplify or streamline rail rate case proceedings and provide greater ease of access to information is encouraged. Rail rate challenges and prolonged rate cases under any test are not the preferred avenue for Montana ag shippers, but it's critical for the shippers of Montana that the Surface Transportation Board provides adequate assurances that rail rates remain fair and reasonable.

Montana grain producers welcome STB oversight into our industry, should it wish to further examine this distinctly captive shipping environment. In the meantime, the Montana Wheat and Barley Committee, along with the Montana Department of Agriculture, will continue to collaborate directly with BNSF to better understand their financial and business considerations for long-term viability while seeking out new market opportunities and cost savings efficiencies. Thank you for your time and the opportunity to appear in front of you today.

MR. WARD: Chairman Begeman, Vice Chairman Fuchs, Member Oberman, my name is John Ward. I'm Executive Director of the National Coal Transportation Association. Our organization consists of electric utilities, coal producers and entities that produce, repair and manage all facets of railcar components, parts and systems.

Our members have invested heavily in the ownership, leasing and control of fleets of railcars, which they provide to the railroads in unit trains, about 250 cars. These fleets represent about 45 percent of the coal cars in service in the eastern U.S. and close to 90 percent of the coal cars in service in the western U.S.

Today, coal represents, as a commodity, about a third of the carloads originated by Class I railroads. I'd like to use the brief amount of time that we've requested today to counter a narrative that's being constructed outside this chamber, in op ed forums, and letters to Congress. Critics of this and other current STB proceedings, have alleged that they are the result of, and I quote, "Activist policymaking, perhaps nudged by a select group of powerful shippers seeking to take advantage."

And that proposed changes here, "Would risk the massive gains to consumers from reforms enacted over the last four decades." Well, coal transporters today would no doubt like to be powerful, the reality on the ground today is quite different. Many of our members are recovering from bankruptcies, and all of them are facing withering regulatory pressure and competition from other highly subsidized energy sources.

The exaggeration that proceedings like this constitute a return to pre-Staggers Act prescriptive ratemaking that spells doom for railroad financial stability is laughable to those of us in an industry where the goal of our regulatory opponents is to eliminate us entirely.

Let me be clear, the coal industry wants our railroad partners to be financially healthy and operationally efficient. But our presence here and in other STB proceedings places us in the company of an incredibly diverse pool of shippers who have testified that they have not received improved service as the railroads have clearly improved their profitability through the aforementioned regulatory reforms and strategies, such as precision scheduled railroading.

The fact that the vast majority of coal shippers are captive to railroads is apparent on its face. Few other options exist for transporting millions of tons of an essential commodity long distances over land. Accordingly, coal shippers have long viewed railroads as an essential partner, investing many billions of dollars of their own capital, to maintain rail as a viable option to transport coal.

These investments extended beyond the purchase of modern train sets to include fast loading and unloading systems, multiple loop tracks and batch way load out systems. Furthermore, mines and utilities organized to meet railroad schedules on a 24/7 basis, and maintain large and expensive stockpiles of products at both origin and destination.

All of this capital investment exists at no cost to the rail carrier. NCT requested only five minutes today because we want to be respectful of your time as you consider the highly technical issues of revenue adequacy. I'm not a lawyer or an economist, nor can our members afford to hire lawyers and economists at this time.

That is precisely the point. Our industry, and many others, need practical solutions that don't cost millions of dollars and years of time to obtain relief when providers of our only practical transportation option engage in the kind of rent-seeking that they now accuse us of seeking.

In conclusion, please let me reference NCTA's written comments filed earlier in this proceeding and also express support for the comments made by the Western Coal Transportation -- Western Coal Traffic League and the Freight Rail Customer Alliance. As you make decisions in this matter, we respectfully request that you keep in mind principles of reciprocity, accessibility and procedures that allow the expeditious resolution of disputes. Thank you very much for your time and consideration.

CHAIRMAN BEGEMAN: Thank you. Betty? Kelvin?

MS. WHALEN: Good afternoon. My name is Betty Whalen, and I'm the Principal Fuel Specialist for the Lower Colorado River Authority, based in Austin, Texas. I'm also the President of the Western Coal Traffic League, an association of major consumers of western coal and western rail transportation that is very familiar to the Board.

WCTL members ship and pay the freight for over 100 million tons of coal per year. And we are the only organization that focuses primarily on the transportation interests of utility coal consumers and the ratepayers. I am joined today by WCTL counsel, Kelvin Dowd.

Whether they are investor-owned utilities, municipal authorities, or public power agencies, all WCTL members operate under mandates to provide reliable energy to their ratepayers at a reasonable cost. For electricity generated from coal, the cost of transportation is a major component of what ultimately is paid by consumers in their monthly bills.

Responsive rail service at reasonable rates is essential to serving a public interest in reliable and affordable energy. WCTL was an active participant in the Board's revenue adequacy proceedings in 2014-2015, and I personally was part of a WCTL delegation that met with the Rate Reform Task Force in June of 2018 to discuss how the Board should implement the revenue adequacy constraint under its Coal Rate Guidelines.

In my position at LCRA, I've also been involved with issues related to the rail transportation of coal for many years. Based on my experience, the major railroads' perceived poor financial health historically was used to justify higher rates on coal and other shippers who depend most heavily on rail service.

I also understand that in the guidelines, the Board made clear that once a railroad earned adequate revenues, that kind of differential pricing would no longer be allowed. Back in 2014 and 2015, WCTL presented considerable evidence to the Board showing that for many years, the heavily concentrated rail industry had shown strong profit growth, lower operating ratios, and a ready ability to attract and retain capital investment.

Our position is that the time is right for the Board to adopt a meaningful and effective approach to provide captive shippers the protections they were promised under the Guidelines. While captive coal shippers may constitute a minority, it has been my experience and that of other WCTL members that the STB's policies and regulations regarding rates on market dominant traffic, have a meaningful impact on the railroad's overall rate structures, as there are only four major rail systems in the U.S. today.

And the opportunities and incentives for concerted or parallel pricing are significant. So, all of us at WCTL have an interest in the outcome of these hearings. The Rate Reform Task Force report earlier this year partially endorsed one of WCTL's proposals in the prior proceeding. However, we have serious concerns with respect to other aspects of the task force recommendations which Kelvin will address.

On behalf of WCTL, we appreciate the opportunity to share our concerns with the Board. I'll give it over to Kelvin.

MR. DOWD: Chairman Begeman and members of the Board. I'm Kelvin Dowd, I'm counsel to the Western Coal Traffic League, and I join President Whalen in thanking you for the opportunity to present our views on the Rail Reform Task Force's recommendations on revenue adequacy.

In Ex Parte number 722, WCTL presented a complete proposal for enforcing the Guidelines' revenue adequacy constraint, which under the Guidelines is labeled "The first rate constraint." And those proposals included a presumption of revenue adequacy based on consecutive years of return on investment in excess of the industry cost of capital, an option to demonstrate revenue adequacy, using recognized alternative measures of railroad financial health, a rate increase constraint for market dominant revenue adequate carriers, and the preservation of existing regulatory remedies under the Guidelines in the Board's Simplified and Three-Benchmark approaches.

The task force's recommendations echo the League's proposals in certain ways, including a multi-year measure of revenue adequacy and the use of a rate increase constraint, as the principal remedy for shippers who can demonstrate they are subject to market dominance.

However, in key respects, the task force's proposals fall short of providing captive shippers with the rate protections that they are due under the Guidelines. Those shortcomings are detailed in the League's separate written statement, and I would like to summarize them briefly here.

On the subject of measuring railroad revenue adequacy under the Guidelines, we agree with the task force that it should be a multi-year analysis, and the League would be willing to extend its proposed four consecutive year presumption, to five years as the task force suggested.

However, other elements of the task force's proposal should not be adopted. First, the task force would have revenue adequacy under the Guidelines determined solely on the basis of the Board's snapshot test of return on investment, compared to the cost of capital. This squarely conflicts with established Board precedent, including most recently, the 2018 decision in the Consumers Energy case. Affirming decisions reaching back to 1986, the Board in Consumers held that while the ROI COC test was relevant, it should not be the sole determinant and a captive shipper should have the opportunity to present specific and alternative evidence of a carrier's revenue adequacy.

As the Board knows well, the question of how best to measure the railroads' cost of capital is a contentious one. And however one comes down on the issue, the current approach cannot be considered the final word. As a matter of reason, the Board should not put undue weight on its annual snapshot.

As a matter of law, the Board should reject this component of the task force's recommendation. Second, by endorsing an ever-shifting measuring cycle, the task force invites biases and distortions that would threaten the effectiveness of the revenue or adequacy constraint.

This is not the first time that the Board or its predecessor has considered expanding and contracting study periods under the auspices of replicating a business cycle. In the 1990's, the ICC wrestled with the problems resulting from measuring railroad productivity, using different length measuring periods and ultimately settled on a fixed period, so that no particular change between years would be given too much or too little weight.

Additionally, in this case, the Coal League showed in its written statement that the returns on investment of the major Class I railroads do not necessarily correlate closely to general economic trends as reported by the National Bureau of Economic Research.

For example, while the general economy contracted significantly during 2008, the ROIs for BNSF, UP, NS and CSXT all increased significantly over 2007 values. Taken together, the distortion and bias risks, coupled with serious concerns regarding accuracy, argued strongly against the task force's proposed floating study period, and in favor of a fixed period where the ROI, COC test serves as a presumption.

But where consistent with Board precedent, the question of an individual railroad's revenue adequacy under the Guidelines, remains a matter of individual evidentiary showings. The Coal Rate Guidelines are clear that once a carrier achieves revenue adequacy, its captive shippers no longer should bear the economic burden of differential pricing.

In ex parte number 722, WCTL proposed a straight forward method for implementing this constraint. A revenue adequate railroad would only be permitted to increase a captive shipper's pre-existing rate by a reasonable measure of actual railroad cost inflation. And we proposed the use of the RCAF after adjusted for productivity.

The task force report recommends a rate increase limitation as well. However, its limit only would apply to some captive shippers, and its implementation would require a potentially complex and contentious series of calculations that easily could leave deserving captive shippers without meaningful relief.

The task force proposes to determine a revenue adequate carrier's present value surplus of net operating revenue, over required returns, measured over varying time periods. Then allocate that surplus over an undetermined, but very large number of commodity service groups, using the maximum markup methodology, employed under the Stand-Alone Cost constraint.

Whether a particular captive shipper's rate would be constrained would depend on the relationship of its rates revenue to variable cost ratio, to the threshold ratio for its commodity service group. In addition to building in multiple layers of easily disputed evidentiary findings, the task force's approach conflicts with the Guidelines focus on the reasonableness of individual rates and is squarely at odds with the only court-approved precedent concerning implementation of the revenue adequacy constraint.

The task force would permit continued differential pricing on captive traffic by a revenue adequate carrier. And it would tie a shipper's rate relief, not to the revenue adequate status of its serving railroad, but to the level of rates paid by other non-complaining shippers who happen to fall within the complainant's defined commodity service group.

The Coal Rate Guidelines carved out a very specific and limited exception to the rule that revenue adequate railroads would not be permitted to engage in further differential pricing. The railroad had to show the need for additional revenues, the specific harm that it would suffer if it could not raise those revenues, and the reasons why captive shippers were the only available source for those revenues.

The task force's proposal ignores this mandate and opens the door to continued differential pricing by revenue adequate carriers. It is inconsistent with the central tenets of the Coal Rate Guidelines and should not be adopted. In contrast, the remedy proposed by the Western Coal Traffic League hues closely to those Guidelines and is both effective and easily administered, and we continue to recommend it to the Board.

As an alternative remedy, the task force proposed that the Board relax its bottleneck rate rules where the bottleneck carrier is revenue adequate. As a threshold matter, the League agrees that this should be an alternative, though non-exclusive remedy worthy of the Board's consideration.

We submit that the rate increase constraint, as proposed by the League, should be the principal option for implementing the revenue adequacy constraint. Properly designed, however, the task force's conceptual bottleneck proposal could afford an effective second avenue of relief.

The Board's current policy, which the Court of Appeals made clear, was predicated in significant part on balancing the perceived revenue inadequate status of the railroads with a need for rate protection on captive shippers. Requires that in order to compel a railroad with exclusive control over service to a particular destination, to establish a separate rate for use in combination with an upstream competitor.

A shipper first must demonstrate that the dominant carrier has engaged in anti-competitive conduct, or failed to provide adequate service under the Board's competitive access rules. This proof burden has amounted to a nearly insurmountable barrier for captive shippers to clear, leading to a perpetuation of closed bottlenecks and corresponding monopoly pricing.

While the task force did not suggest specific steps to open up greater opportunities for bottleneck relief, WCTL submits that one effective reform would be to eliminate the competitive access proof requirement in cases where the bottleneck railroad is revenue adequate.

It is true that the Board carved out something of an exception to the full competitive access requirements in circumstances where a shipper can secure a contract with an upstream carrier for service from the origin to the bottleneck interchange.

However, over the past 20 years, it's been the experience of many WCTL members that the western railroads, in particular, have little interest in negotiating such contracts. Apparently out of a concern that if one did so, it would invite retaliation in markets where that carrier controlled the bottleneck.

Therefore, in addition to liberalizing the evidentiary requirements for bottleneck relief when a railroad is revenue adequate, the Board should consider making separate bottleneck pricing available without regard to whether a shipper has first secured an upstream contract. Such a policy would promote increased competition and streamline the regulatory process in those cases where the bottleneck rate is set at an unreasonably high level.

Finally, the task force proposes that the Board restore the simplification convention for calculating road property investment under the Simplified Stand-Alone Cost methodology. According to the task force, this change would make Simplified-SAC more accessible to more shippers.

The Western Coal Traffic League does not oppose the task force's recommendation, so long as using the simplification convention is at the option of the complaining shipper. We can easily imagine circumstances where reliance on average RPI costs from previous cases could yield higher stand-alone costs and a specific analysis of the actual route over which the challenged rate applies.

So, a complainant might be willing to incur the additional litigation expense to pursue a better outcome. In other cases, of course, the cost-benefit balance could tip the other way. The key is to leave the determination to the individual complaining shipper.

In closing, I would like to emphasize again a key point made by the League in its filings in ex parte number 722. The revenue adequacy constraint as proposed by WCTL will only apply to that narrow class of captive shippers who undertake to file formal rate complaints, are able to demonstrate that they are subject to railroad market dominance, and are able to carry the burden that the defendant carrier is revenue adequate.

If successful, those shippers also would secure nothing more than an inflation-adjusted limit on further increases to established rates. Despite what was argued by some of the railroads in ex parte 722, and what we've already heard a bit of this morning, the adoption of an efficient, effective and substantive revenue adequacy constraint will not threaten future railroad investment, financial health or service reliability.

Instead, it will breathe timely life into a key element of the Coal Rate Guidelines for the deserved benefit of captive shippers and in the case of WCTL, the electric ratepayers that their members serve. We thank the Board for the opportunity to appear today and we would look forward to your questions.

BOARD MEMBER OBERMAN: Thank you all. I'll just have to start anyway with a couple of questions. Jill, the -- does BN take the position that the railroad adequacy proposal in the Rate Reform Task Force is prohibited by our statute?

MS. MULLIGAN: So, to break that down a little bit. I think that the -- starting with the rate proposal and actually both of the proposals.

BOARD MEMBER OBERMAN: Well take the RIC, not the other one.

MS. MULLIGAN: Take the RIC, sticking with the RIC first. Okay, so that proposal, I think that it would be inconsistent starting with the statutory focus on allowing competitive markets to determine rates. Because as I understand that proposal, the idea that you are taking a -- you're deciding that a rate is going to -- you're going to iterate a rate, a maximum level rate by a commodity group.

And the reality of what you're doing in that practice is you are taking an overage that's run by a railroad across its entire enterprise, which for BNSF is competitive markets, not regulated by the STB in large part. And your taking that overage and then you're allocating it to the subset of captive shippers that may have absolutely no connection whatsoever to that overage that's being allocated.

For us, we think that that's just a fundamental misstep in terms of what the Board's appropriate, and I think grounded in the statute what the role is, which is looking at individualized rates, looking at whether that rate, number one, meets the standard of market dominance.

And then two, whether a reduction is

appropriate based on where that rate falls in terms of competitive forces. And there are some instances where the Board may look at that and say, there's something that we need to do there, but that should be in reference to what competitive forces would result from in that specific market for that specific rate, which I think for RIC is really disconnected from that.

BOARD MEMBER OBERMAN: Is there some specific statutory provision which would bar us from employing that, that's really what I -- I mean there's so much in the statute, that is broad and rhetorical and has policy aspects to it, but I'm trying to figure out if there's something that --

MS. MULLIGAN: Yeah.

BOARD MEMBER OBERMAN: Because the contention earlier today was that somehow, well the word was untethered, but I don't know if that means we're barred.

MS. MULLIGAN: Yeah. And I think there's two ways to think about that. I think number one, if you just went right back to the statute, I do think that the starting premise that appears all through it is the idea that competitive markets should be the starting point. And where those markets are present, that the Board cannot and should not insert themselves into that environment.

But I also think, too, you have this statute that's interpreted for decades and decades by the STB in terms of what is an appropriate framework to accomplish what is also I think, a statutory requirement, which is looking at individual rates and determining whether those individual rates are in fact reasonable.

And I think that when you start doing something that is enterprise wide, and looking at the return across an entire enterprise, then you are really divorced from that core concept that I think you can support in the statute and in the case law.

BOARD MEMBER OBERMAN: Well, it's interesting because the RTP that we've all quoted this morning, subsection 6, about maintaining rates at revenues, you know, which do not exceed the amount necessary to maintain the rail system, would seem to me to contemplate the overall performance of the railroad, it talks about the system, not just the lane that the shipper is challenging it on, as a way of measuring the rate.

And it would seem to actually support the -- Mr. Dowd's point and others, that any shipper who is captive, who proves market dominance, and I -- so, by definition it's not a competitive situation, before they're eligible, should have their rates protected, you know, if they're above the level of revenue adequacy.

So, I am just trying to figure out why this approach and what's laid out in the Coal Rate Guidelines somehow is barred by our statute. I don't see it. And if it's there, I'd like somebody to point it out to me other than I understand there's a broad policy argument but that's -- first we've got to find out if the statute authorizes it.

MS. MULLIGAN: Yeah. I do think you have to consider both of those together. But I also do think that, you know, the -- I don't read section 6 the same way that you do. But I also read section 1, 2, 3, and 4 before you get to 6 that talk, and you have to imagine there's a reason why you go through 5 sections talking about the role of competition, the Congressional directive, in terms of there is really a core principle in terms of what the STB should be doing.

And that's a real role for you all too. That's not meant to say there's nothing to be done, nothing to do at all. And that revenue adequacy is something that you should never think about. Of course, it's something that you could consider and think about. I think it's this idea of taking that step beyond and saying there's a core structure that we think is supported by the entirety of ICCTA, and the RTP and other provisions, that talks about the Board's role in regulating individualized rates, and that that is going to somehow be set aside entirely in favor of a constraint that is just really triggered exclusively to an overall revenue, without any reference to the individual shipper, what is their competitive environment and is their rate reasonable for the service that's being provided to them.

BOARD MEMBER OBERMAN: Well, but the individual shipper has to show market dominance, so there is reference to the individual shipper. If they're going to pursue the remedy that's being proposed.

MS. MULLIGAN: The -- so, I think there's a couple things there. I think you may have heard in my testimony. I think the NSF does think that the market dominance review that the Board does ignores very large parts of competition that are huge parts of the markets that we're in.

So, putting that aside though, I think that there's a -- perhaps a tendency to take a sort of comfort from the fact that we say, okay, we're going to create this draconian, potentially, you know, extremely disruptive methodology, but don't worry, because we're going to do a market dominance, so that no one gets -- so, there's a very large number of people who get in.

I think a couple things, going back to what I first said, which is the people who are getting in are not necessarily all related to the thing that you are focused on, which is the overall return of the network. But then also, I think there's a little bit of a notion of okay, there's a small enough group that's potentially impacted by this.

The reality is that that may be. I mean I did show our sort of percentages on our network. We do have a very, very large amount of our traffic that is competitive. And so, the issue is though that one, I will say I'm not sure that you get market dominance, right, so putting that aside though.

But two, even if you say that it's a small category of folks, those are shippers who are in complex markets and there's implications in terms of our ability -- I think Paul mentioned, our ability then to say okay, how do we engage in investment in their traffic when the message is we cannot earn a market-based return on that traffic.

But then also, that is hugely disruptive in terms of the shippers' relationships in their own markets, in terms of creating a shipper who gets the benefit of a below-market rate, and then is competing with other shippers who may not be on a revenue-adequate railroad, or is on one, one year, and not on the next. I mean I think it's really stepping into a range of interference in a market that the STB has been very cautious about, and I think appropriately so, in terms of policy, but also, I think under the statute too.

BOARD MEMBER OBERMAN: By the way, isn't there a court decision some place, or was I just dreaming, that says you can't rank order the 15. Some sections of the RTP that all get equal.

MS. MULLIGAN: It is true. Because I say that I was thinking about it. But I'd also say you're not supposed to pluck a single one and say that that tells you what to do, yeah.

BOARD MEMBER OBERMAN: No, no, agreed. One final thing. I don't know if you may have already done it, but if you haven't are you going to submit those slides?

MS. MULLIGAN: Yes, they are actually in the docket now.

BOARD MEMBER OBERMAN: Oh, they are. Oh, okay.

MS. MULLIGAN: Yeah, yeah, but if not, feel free to reach out.

BOARD MEMBER OBERMAN: Yeah, no I'd like to have them. The one quick question, Zach, your proposal that the Board ought to consider shifting the burden of proof to the railroads, is that limited to railroads which are revenue adequate? Only then?

MR. COCCOLI: Yes.

BOARD MEMBER OBERMAN: And, do you have any authority, or do you think it's needed, to show that that shift in the burden of proof would be consistent with the Administrative Procedure Act where the plaintiff normally has the burden?

MR. COCCOLI: I do not have the specific reference to provide at this time.

BOARD MEMBER OBERMAN: Do you think that's a concern if we wanted to do it, what would be our authority to shift that burden of proof?

MR. COCCOLI: I think the regulatory

authority overall is to provide for reasonable rates. And equitable access to the rate dispute methodology would provide cover for shifting that burden in the case of the Montana shipper who's already one step removed from the negotiation and the rate setting process. I think more direct engagement by the Surface Transportation Board could be appropriate.

BOARD MEMBER OBERMAN: What do you mean, one step removed?

MR. COCCOLI: The Ag producers that I represent that I'm referencing, are not per se the shipper.

BOARD MEMBER OBERMAN: Oh, I see what you mean. You're talking about removed from the grain elevator or whatever.

MR. COCCOLI: Correct.

BOARD MEMBER OBERMAN: Yeah, okay. Thank you, that was helpful.

VICE CHAIRMAN FUCHS: Jill, AAR's testimony mentioned that the task force is kind of conceptually on the right path by exploring simplifications to simplify SAC. Would you concur that you know, simplifying RPI is a worthy thing to consider?

MS. MULLIGAN: Yeah, I don't think we have an issue with that. I think that it doesn't feel like the right framework to say that that's something that would be an appropriate simplification just because of revenue advocacy, but yeah.

VICE CHAIRMAN FUCHS: Right, the Board can just do that.

MS. MULLIGAN: And I think it's something that could be explored in terms of options to simplify. Where I started a little bit with is the idea that sort of somehow is going to be the penalty for revenue adequacy.

VICE CHAIRMAN FUCHS: Right, right, I'm only talking about the concept itself.

MS. MULLIGAN: So, I think we're agreeing, yeah.

VICE CHAIRMAN FUCHS: Yes. And do you have any issue, maybe Mr. Dowd and Ms. Whalen laid out the possibility of the shipper's discretion about whether or not to use, you know, a simplified RPI.

Do you have any issue with that?

MS. MULLIGAN: You know what, I honestly -- we could be okay with that. It's not something I think I've run fully to ground, but could be something worth exploring going forward. I wouldn't close out the opportunity at this point.

VICE CHAIRMAN FUCHS: And one thing that I also picked up was you know, in the definition of the timeframe for long-term revenue adequacy, you know, there's one -- a couple, a few different approaches.

MS. MULLIGAN: Yes.

VICE CHAIRMAN FUCHS: In terms of the number of years, whether or not you include a recession, and then whether or not you have a presumption and allow for other evidence. Is there anything conceptually wrong with allowing for a presumption, assuming Mr. Dowd is describing such that the Board has a standardized definition, but a lot of additional evidence in any adjudication?

MS. MULLIGAN: Yeah, I mean I think there's a couple ways to think about that. I think that some of the proposals are that you are revenue adequate if the STB calculation says you are. But then if you're not, then shippers can come in and show the evidence. So, I don't know that it's actually proposed as sort of a two-way street where you can kind of argue both sides of that as proposed.

I think there's -- and then I also think the important question is how are we going to use it. If the idea is that you are going to use it as a very sort of you pass this line and therefore, things start happening that you rail, and you shipper have you know, are part of what you are doing in your everyday business, then I think that you do need a significant amount of confidence in the measurement.

I think that we've talked about replacement cost, not because we want to launch off on something because we've been told no before on that several times. But launch off on how do we do replacement cost to incorporate it into your revenue adequacy calculation? But because it also helps to understand look, there are things that make this not be absolutely perfect mechanism, which should cause us to pause and say, okay, is it then appropriate to launch off in a whole other regulatory structure because of what it says?

The -- and we would say no, but so I think in terms of what the Board uses it for, of making sure they understand trends of the industry, making sure they understand long-term, what's happening in the current environment. The revenue adequacy calculation is informative in that way and something like the replacement cost amount, would that be a fatal flaw?

But if you were going to start using it as a here, you are going to fall off this cliff now and the way that you engage in your business in the competitive environment, what's that?

CHAIRMAN BEGEMAN: That's how we would describe it.

MS. MULLIGAN: But if that was the case, then I do think that you absolutely would need other factors, including replacement costs as part of that.

VICE CHAIRMAN FUCHS: And you know, Mr. Ward referenced kind of the like and I just, you know, I think it's really great that -- and I was talking about SAC and potentially use of comparison groups and streamlining Three-B. And I think both those get at the fact that you know, when you look at our 15 rate review processes, it's difficult to be satisfied.

And so, would you concur that you know, putting aside the rhetoric, that we have a problem with our regulatory structure right now?

MS. MULLIGAN: I think that there are certain shippers who feel like they are outside of the Board in terms of an option for help. And we understand that, we take that seriously, because we do think that having that backdrop of the Board and having that feel effective to shippers is important.

I think for us, it is the most important areas is for small shippers who don't have the same sorts of resources as bigger shippers have, and don't necessarily have the same sort of market presence that bigger shippers have.

VICE CHAIRMAN FUCHS: Right.

MS. MULLIGAN: So, for us it's really -- I think there is further simplification that the Board could do. We think it should be appropriately tailored to the issue that you're trying to fix.

VICE CHAIRMAN FUCHS: Right, right.

MS. MULLIGAN: Which seems to really be, there is a section of shippers who feel like that the Board is not accessible to them because of complexity, because of costs, that sort of thing.

VICE CHAIRMAN FUCHS: And turning to Western Call and CTA, you know, you having a presentation of competing with natural gas and you know, I think it was said a number of times how that is really what they would hold up as an example of product competition that's not included in the market dominance test.

And I think when the Board made that determination, it's because you know, issues of product and geographic competition are very complex and maybe are outside the Board's typical expertise. And please, someone correct me if I don't -- my shorthand is not the correct interpretation of that. So, what do you say to someone who says, listen, you know, they're saying that they're competing fiercely with natural gas. Isn't that the prototypical example of product competition, and why would the Board ignore that? It could go to either party.

MR. WARD: I'm not sure I understand the point of the question exactly.

VICE CHAIRMAN FUCHS: So, maybe from western coal, a product competition is something the Board doesn't consider whether or not someone is market dominant, and you know, being a set number of times, that natural gas is an example of product competition and understanding the complexities of considering that and the Board's expertise. Conceptually, is there a problem with that, or you know, is it just a practical issue and are those practical issues insurmountable?

MS. WHALEN: I think it's both. For example, I'll speak for LCRA. We have three coal plants. We cannot co-fire gas with them. So, it's not like gas is cheaper than coal this week. We're going to switch to gas.

VICE CHAIRMAN FUCHS: Right.

MS. WHALEN: And then next week it flips

and we're going to switch to coal. So, I would say from a practical standpoint and conceptually, unit by unit basis, you can't say that they compete. Now if you have capacity in your portfolio and you have gas, then you may shift some of your generation one way or another, but it's not a one for one competition.

And then as well, you've got areas where like the central part of the United States up north. I mean they are very heavy coal because you just don't get gas up there. So, I would suggest that gas may have an influence in the overall electric generation market, but as far as causing a shift one way or another with coal shippers and our need to have coal on the ground and burn, I would say no, I think there's -- it's a little bit of a faulty comparison.

MR. WARD: I would just add to that, the presence of gas in the market, you know, the transportation is on a completely separate platform. You know, our ability to compete against gas is affected by the reasonableness of the rates that we're able to obtain from many of our members, the only transportation option that's available to them.

So, it's important for us to be having rates that are not a penalty to us to enable us to compete against resources that are transported through entirely different mediums.

MS. MULLIGAN: Then, maybe if I can just add to that. Because I do think I actually agree with you. Our point is that the gas price does actually limit our ability to charge a rate because even if you're not a utility that has the ability to flex up and down and use gas versus coal, the reality is if we price our transportation too high, we lose out to gas, which doesn't touch our railroad.

So, there is a built-in penalty if we do actually get our rate too high in terms of not being able to move the coal because it doesn't move. Because it's like on the same cost curve as gas, and there's complexities to that, I don't mean to make it overly simple, but I do think it's something that's very real for us.

VICE CHAIRMAN FUCHS: Sure, but Jill, I maybe, interpreted some of your statements as saying that the Board ought to consider the role of gas in adjudicating the market dominance.

MS. MULLIGAN: Yes, no, I think that's right. And for exactly the reason that I do think it does influence our ability to charge rates, yeah.

BOARD MEMBER OBERMAN: On this subject though, is it on, I'm sorry. Aren't there other factors that determine the competitors of gas, such as environmental regulation and --

MS. MULLIGAN: Yeah, I mean it's not --

BOARD MEMBER OBERMAN: In other words, if there are environmental issues, lowering or raising the price of shipping a ton of coal, it may not have an effect at all, but if somebody is going to invest in a gas plant. I mean that --

MS. MULLIGAN: And it's also I don't mean to say that gas is the only thing out there too. I mean you do have wind. You have other types of electricity that falls along the grid that we also potentially compete with. The -- I think the point is that there is actual real forces out there and historically, what the Board has said is that's just going to be irrelevant to what we do. And I think that does mean that when you're talking about a coal environment, or even on the grain side, when you're talking about grain captivity and not thinking about the fact that there is geographic competition there, that really does just mean that you're not -- if you're making decisions, regulatory decisions on that basis, then you're not doing so with a full view of the competition.

MR. DOWD: I'd like to add just a little bit of context to the subject. Because what I'm hearing is something that seems to be narrowly focused on this question of whether gas competes with coal in the generation market. And that's not really the issue.

When the Agency made the policy decision that it was no longer going to consider geographic and product competition, that was predicated in large part on the complexity and the time and the expense that was associated with what under the regulatory regime is supposed to be a threshold determination.

In those areas of the energy market where gas or wind or renewables or purchased power, directly competes with coal, those are not the coal movements that come before your agency. Because in those circumstances, the parties negotiate their way to a resolution. And the result is some sort of a contract, which is outside the scope of your jurisdiction.

The movements that come before your agency are the ones where they have no other recourse, because no one in their right mind signs up for 5, 6, 7 million dollars and three years of litigation unless they have no other place to go.

So, when you consider it in the context of who's actually bringing the cases before the Board, the agency's prior determination that we're not going to make it even more expensive and more complex by inviting fanciful theories about geographic and product competition makes a lot of sense.

VICE CHAIRMAN FUCHS: And I think you're spot on in terms of what the Board said, and I just want to make sure I point it. You said fanciful theories, but it's not necessarily a fanciful theory, its geographic does exist, it's just too complex for the Board to consider and it's not worth it on the threshold determination given the fact that you mentioned, right.

But that competition itself does exist in the marketplace.

MR. DOWD: In those circumstances where it is not a fanciful theory.

VICE CHAIRMAN FUCHS: Right.

MR. DOWN: Those customers are never going to be coming before your agency.

VICE CHAIRMAN FUCHS: And could -- but here's the one thing, and you know, just play devil's advocate. The same could be said for all forms of competition, right, where if there's barge competition or truck competition, then those are the types of things that wouldn't come before.

So, how do you differentiate that type of competition from other types of competition? The complexities at issue, I agree with you entirely that that's what the Board said. But the point about because there's that form of competition those rates won't come, well then that applies to everything else that we consider under market dominance, doesn't it?

MR. DOWD: Well not in the same way.

VICE CHAIRMAN FUCHS: Okay.

MR. DOWD: Now, I was involved in the Consumers Energy case.

VICE CHAIRMAN FUCHS: Sure, right yeah.

MR. DOWD: And we had a pretty interesting market dominance argument. In that case it was all about alleged transportation competition.

VICE CHAIRMAN FUCHS: Right.

MR. DOWD: But usually, usually transportation competition is easier to assess because you have an economic piece and you have a physical piece, and you can pretty much get to the answer fairly easily.

VICE CHAIRMAN FUCHS: So, it really boils down to the complexity relative to what it's worth.

MR. DOWD: Yes. I think that's a major part of it, yes.

MS. MULLIGAN: And if I could just I think the important part of this too is also that I think we started talking about market dominance because of the idea that, you know, we may have these proposals that come, but be comfortable about it because there -- you know, there's going to be a process on the front end that sorts through the traffic and says I am really going to narrowly focus on those where it's appropriate, and those where we should feel comfortable in terms of taking those over edges, and doing something.

And I think unfortunately that's just not where the Board is in terms of their current process for market dominance.

CHAIRMAN BEGEMAN: Not quite sure where I want to start. Don't worry, I'm not going to go at length. But I think I will just kind of start my commentary based on what you mentioned Mr. Ward, and I'd say maybe Patrick kind of returned as rhetoric, rather, you know, press rhetoric, various things. And so, starting with sort of what you said as you were speaking to us. I'm going to ask all the railroads. I didn't ask this of AAR, but you know, one of the interesting rhetorics I read a bit ago is

that the
FCC and the STB are obsolete.

And I was kind of happy to be in conjunction with the FCC as far as being grouped with that agency, but I'm curious from BNFS's perspective, is the Board obsolete?

MS. MULLIGAN: No. I don't think so at all. And I think, you know, as part of my conclusion, I think I did endorse very much that there is a really valid role for the STB in terms of you know, making sure that where there are instances where the market forces aren't present, that they are there and that they are viable in terms of -- as an option and a path forward for the Board.

So, I think absolutely we do think that there is a role for the Board and it's an important one and it needs to be properly shaped, and you know, we are in like I said, a very competitive environment and so I do think it can be a narrow role, but I do think it's an essential one.

BOARD MEMBER OBERMAN: As the oldest member of the Board, I didn't take it personally.

CHAIRMAN BEGEMAN: Certainly, any other of the panelists are welcome to comment on that, but I don't know that it was generated from a shipper perspective. I'm certainly not saying that BNSF generated the commentary. So, back to you Mr. Ward. You're my focus. Again, based on something you said.

So, I'm going to pivot to other panelists. You know, you indicated you're not in a position and your members aren't in a position to hire lawyers and economists, et cetera. And I certainly can understand that. You know one of the reasons that this Board is really trying to find new methodologies, improved approaches, is because you know, the SAC prospects are extraordinarily expensive and time consuming.

And you know, this agency has long been trying to find a better approach, specifically, for smaller shippers. I know that a previous Chairman is sitting behind me and he was reading some of his testimony for Congress and he said -- addressing the small rate cases was his top priority.

And so, you know, it was a worthy priority then and it's just as worthy today and I appreciate that my colleagues are -- we're all in agreement that we do want to make meaningful, wise, useful change. We're not looking to turn the clock back, but we are looking to carry out what the statute tells us we are to be doing. So, thank all of you for any effort that you will help us to do that.

So, Mr. Dowd, you know, you had mentioned that you thought that the task force got a little bit of it right, but you were pretty unhappy with a number of things, and you wanted to make sure that for example, that there had to be an undertaking to file a formal rate complaint, et cetera.

And to me, let's see, and then revenue adequacy wasn't just a snapshot, but you know, sort of -- I would say maybe what you went through as far as your additional evidence with the Consumers case, you wanted that opportunity to really litigate every little aspect.

And my concern about that is then you have Mr. Ward who doesn't -- he doesn't want to pay for expensive lawyers and economists. So, how do you -- you can't really have it both ways.

MR. DOWD: Well, I think.

CHAIRMAN BEGEMAN: We've been trying to simplify.

MR. DOWD: I think that -- well, our basic positions on the task force is recommendations are predicated on our interpretation of the law, our interpretation of prior precedent. So, you know, when we look at the implementation of the revenue adequacy constraint, that is part of the coal rate guidelines. It's one of the four constraints adopted in the coal rate guidelines.

The coal rate guidelines in turn, is a methodology for adjudicating rate complaints which can only be brought upon a showing of market dominance. So, as we see the revenue adequacy constraint, it lives within the context of the complaint process instead of bringing a stand-alone cost presentation, you bring an adequacy presentation.

However, just as you've attempted through

Simplified Standards and through 3 Benchmarks to come up with more streamlined and less expensive alternatives to constrained market pricing. In the revenue adequacy context, that's why we advocated presumption. So that, you know, if Mr. Ward has a carrier that fits within the presumption, doesn't have to put on a case that their revenue adequate, it's right there, you know, in their qualification under the presumption.

So, it would be a simplifying convention that could be applied by a complainant that did not have the resources or didn't feel the need to make a larger case for the carrier's financial health. So, we don't see them as in conflict and mutually exclusive. They're more -- it's more a question of can you have a simplifying convention that can make a standard and more complex approach simpler in appropriate circumstances.

CHAIRMAN BEGEMAN: Did anyone have any views they wanted to offer us regarding ACC's benchmark method at this point?

MS. MULLIGAN: I mean I think that AAR

covered it in pretty good detail. I think, you know, for us, I think it has a lot of the same issues as the general sort of top-down regulations just generally on overall returns being applied to individual rates.

I think the other thing, and I will not claim to understand it. I've now tried to read it twice and listened through it the third time, but I think there's at least a couple things. I do think that one of the things to think about is how they have defined competition in there. The fact that they -- I think one of their charts showed that they think that rail traffic, only 5 percent of it is actually competitive with truck.

Which just sort of to me, said we're really kind of often, a world that's not at all, you know, connected to the one that BNSF is in terms of you know, how prolific truck competition is and as evidenced by our intermodal business.

I think the other thing too is that what it really -- like I said it's extremely complex, and so the idea that it is sold as something that could be a simplification just doesn't hold together for me. But I do think there is a concept in there that's fairly simple which is it seems like it's a methodology of averaging, it's more complicated because there's regression in it, but it's a methodology that seems to be taking your traffic below 180 and using it to drive above 180 down to 180.

So, I mean I think that it does it in a very sophisticated econometric way, but that to me seemed to be the sort of output of it, is that it's really, and I think in fact, a lot of the different areas that it identified, it was either a freeze or a reduction down to 180 for BNSF. So, that would be very concerning.

And I think also concerning for the reasons that Paul talked about it in his testimony, it is designed to get a rate. While they talk about it as being a market competitive rate, I don't think that that's really what comes out of it for the reasons that the AAR talked about.

But it's also, you know, as we talked

about one of the concerns. Where it connects to our business is the fact that if we can't earn a market level return on the business that would be subject to one of these different rate methodologist, then that really connects back to what Paul was talking about in terms of our ability to do forward looking investment.

And it materially increases the risk to the investment when it's being done for traffic that's subject to a methodology like that.

CHAIRMAN BEGEMAN: The beginning of your testimony you made it clear about less than a third of your traffic in '17 was subject to our jurisdiction, is that what you said?

MS. MULLIGAN: So --

CHAIRMAN BEGEMAN: They moved up rates above greater --

MS. MULLIGAN: So, it's actually, of all of our traffic, one third of it is above 180.

CHAIRMAN BEGEMAN: So, the rest --

MS. MULLIGAN: The rest below the jurisdictional threshold. And then within that we do have, you know, intermodals is a category of that too. So, even in the traffic above 180, there is traffic there that is actually competitive and exempt from STB jurisdiction too, so.

CHAIRMAN BEGEMAN: And do you happen to know, and it's fine if you don't know it, but of the portion that is not under our jurisdiction, to what extent is it because the Board has exempted those commodities? You know, all of it?

MS. MULLIGAN: So, I think I'm not so sure I understand the question. What I would say is that for all of our commodities, we have traffic that is above 180 and below 180. So, we have intermodal traffic that's above and below. We have grain traffic that's above and below. And so, it's a mix and that's in large part because we're in a lot of diverse markets for that traffic, including there's diverse markets within the ag world.

So, but I do think there is a lot of distribution in that.

CHAIRMAN BEGEMAN: Well, let me ask it. It's not a different way, it's actually a different question. In terms of the commodities that move above 180, so under our jurisdiction is there a predominance of the type of commodity that is? Is it coal and is it grain? It just, is there a certain, like a couple of --

MS. MULLIGAN: Yeah, no, I think I get what you're asking. No, no, the reality is we have like I said, intermodal traffic, not regulated. That's also above 180 and there would be grain, there would be coal traffic in there too.

And I think part of it when we do the market based pricing so we're not kind of doing cross base pricing, so you know, it's -- you wouldn't have sort of natural clusters in terms of the RVC, so I mean the market means that we have a distribution. It's a distribution that we think is, you know, reflects the competitive nature of our traffic in terms of how much of it is in that below 180 category. But I don't want to go too far down that because I do not think that you know, and obviously actually really tells you about the individual market that a customer is.

I think the point that I was trying to make is there's a sort of story of these regulated commodities. We are, you know, taking rates up and up and up. And if that was the case over the 10 year, I think you would see a different trend line of what the Board measures. That was the main point there.

CHAIRMAN BEGEMAN: And then I guess my last question for you is you had mentioned that you thought, and I may not get this quite right. I was writing it quickly, but you think that the Board can consider and think about revenue adequacy?

MS. MULLIGAN: Yeah.

CHAIRMAN BEGEMAN: And do what with those thoughts? What does it inform?

MS. MULLIGAN: Yeah, I think probably you're getting a lot of answers of what you can't do.

CHAIRMAN BEGEMAN: Yeah.

MS. MULLIGAN: And I do think there is, you know, I still think that.

CHAIRMAN BEGEMAN: I don't think we could do anything based on Mr. -- the AAR's testimony.

MS. MULLIGAN: Yeah, I mean I think in terms of a wholesale new rate constraint that comes into existence because the test has shown a certain number of years of an overage versus an underage. I don't think that that's something the Board should do, and I don't think it's consistent with the statute and the case law.

I do think that RY and cost of capital, I think those are relevant metrics for the Board to look at to understand the industry. And I could see that if you were getting to a point where you had railroads that had multiples of cost of capital being earned and returns that you would want to understand that.

And I think that's -- and also you also frankly, have a directive to ensure that we don't become revenue inadequate, so there's, you know, there's reasons that this is a relevant metric in the industry and in the Board.

I think that it's something like it's a data point that I think is fair to be looking at and even when the railroads were revenue adequate, you guys may even consider doing something along the lines of a new Christianson report, or something like that to say you know, data helps us understand what we should potentially look at and talk about. I don't think it should lead to some very dramatic change in how you regulate, so I think it should be informative in terms of how you approach.

And I also understand you would potentially feel a lot of pressure when you have multiple railroads, revenue adequate for prolonged periods of time to make sure that your rate reasonableness mechanisms do work. And so, I do think that's also part of why the Board is appropriately focused on you know, it's existing methodologies to make sure it's accessible to all of the stakeholders.

But that doesn't mean that there should be something automatic that takes the Board away from looking at the specific circumstances of that -- of a shipper, of the market that they're in, you know, determining whether it is in fact, a failure of market power and then taking action on the basis of that.

CHAIRMAN BEGEMAN: Kelvin, if I could ask you, and I'm asking you this because you know, you've been involved in Board matters for a good long time as Western Coal Traffic League has as well, and you -- you participate in so many of our proceedings and thank you for that.

Sort of I guess if you could maybe fill me in on some distant past. So, when constrained market pricing was announced and there's revenue adequacy and there's management efficiencies and SAC. Was it -- did the railroads always say revenue adequacy, that's a ridiculous constraint? I mean for me it was the first time I think I recall hearing that was during the 2015, the proceeding, EP 722 proceeding in the hearing.

But that doesn't mean it wasn't -- you know, perhaps I don't know what happened from the previous many years prior to that. So, if you could enlighten me if you happen to know, or of course, revenues weren't -- necessary revenue adequate for such a long time maybe it just didn't come into be a concern by the industry.

MR. DOWD: Well, sadly I can remember that far back. The guidelines, you know, were adopted in 1985 as the result of what was a multi-year effort by the then Interstate Commerce Commission to give regulatory effect to certain statutory mandates, revenue adequacy, the command to hold rates to reasonable levels in the absence of effective competition, and also the so-called Long-Cannon Factors, directing the agency to look to see whether the railroads were maximizing their opportunities from competitive business before increasing rates in captive business.

And you know, the agency went through a number of years of proceedings and comments and hearings and so forth, trying to come up with a methodology that would give effect to those statutory commands. Constrained market pricing was largely promoted by the railroad side. Professor Baumol, you know, was there, the principle champion in that regard.

And the notion of revenue adequacy as the first constraint was non-controversial at the time that it was adopted. Whether that was because none of the railroads were perceived as revenue adequate, or whether it was because it was so obvious that no one wanted to dispute it, it was not contested.

What was contested was how are you going to do stand-alone cost and what's the burden of proof going to be and all of that. So, and one interesting and somewhat ironic point in that regard was in those days the carrier's position was the reason why we have to be able to differentially price the captive traffic over here is because we have all this other competitive traffic over there where we can't earn a high enough return.

It's worth carrying because it covers its variable cost, and it makes a contribution, but we can't earn enough to be overall adequate, so we have to be permitted to differentially price the captive traffic.

And the irony is that what we are hearing today is well, you shouldn't allow the captive shippers to get any benefit from revenue adequacy that may be a consequence of all this other traffic over here. Because -- the shippers were exposed to differential pricing because of that traffic over there.

VICE CHAIRMAN FUCHS: Would you say the contention in the first panel from AAR is that when SAC limits the ROI cost to capital, using replacement costs. Let's say we did revenue adequacy using replacement cost. Their point is that the only way railroads would be ROI over the cost of capital, is because their competitive traffic covers more than the replacement costs. Is that basically, is that your understanding of what AAR was contending in the first panel?

MR. DOWD: Well not entirely. I think I did hear them say that when you have a rate set under the stand-alone cost constraint, it is set at exactly the revenue adequate level.

VICE CHAIRMAN FUCHS: Right.

MR. DOWD: So, if you only had two kinds of traffic, one was SAC and then everything else and you were revenue adequate it must be because you were running more of the other traffic.

VICE CHAIRMAN FUCHS: Right, right.

MR. DOWD: I'm not sure that life actually works that way, but I think that's what they said.

VICE CHAIRMAN FUCHS: And is that what you're referring to when you say that it's kind of switching the argument?

MR. DOWD: Well, what I was pointing out was that during the 1980's when differential pricing was being promoted as an essential component of the coal rate guidelines, the argument was the inability to earn satisfactory returns on competitive traffic should justify higher rates and captive traffic. And what we're hearing now is that the fact that there are higher returns on competitive traffic, shouldn't allow the captive traffic to get any benefit, and I just find that to be ironic.

VICE CHAIRMAN FUCHS: Very quickly. Mr. Bischler, when BN loses an asset. Are there assets on BNSF's line that if they lost them, they wouldn't replace or if you lost them you wouldn't replace?

MR. BISCHLER: I haven't seen that. It's

a network business obviously and so if we lose an asset, we're going to replace it. And so the coal loop is a great example of that example, so in my career I haven't seen it.

VICE CHAIRMAN FUCHS: Does anyone have any comments on the deferred taxes issue about including that in the investment base? We haven't talked about it yet at all today, but it came up a few times throughout testimony.

CHAIRMAN BEGEMAN: Alright, we're going to conclude the panel so that we can leave before the NASA folks push us out of the room at 6 o'clock. Thank you all very much. Greatly appreciated. We will now go to Panel 3 and begin with the first witness, Mr. Awad.

MR. AWAD: Yes. Hello everybody. My name is Hussam Awad. I'm the Senior Vice President of the Procurement and Supply Chain for Indorama Ventures in North and South America. I'm here with Phil Rine who is Indorama's Assistant Vice President for Logistics.

I would like to take a minute to sincerely thank the Board for having this hearing on a matter that is extremely important to us and other shippers. Presently Indorama feels it has no recourse when a rate is unreasonable which happens in the majority of the time. We commend the Board for attempting to find better ways to challenge a rate in this proceeding and in the final offer rate review and market dominance streamlined approach proceedings.

I will take a few minutes to introduce Indorama and give some background on rail issues we've been experiencing, specifically with the Norfolk Southern. And then Phil will discuss our comments on the matter at hand.

Auriga Polymers is an affiliate of Indorama Ventures. Indorama and its affiliated companies, Auriga, Starpet, Alphapet, Indorama Venture Oxides & Glycol, Indorama Ventures Olefins, Indorama Ventures Xylenes & PTA, Enterprise Indorama P.T.A. Montreal and Indorama Ventures Mexico, have active relationships with all the Class I railroads and numerous short line railroads. The following is a brief description of the Indorama operation across the world.

Indorama Ventures Public Company Limited, listed in Thailand stock exchange, is one of the leading petrochemical producers, with a global manufacturing footprint across Africa, Asia, Europe and the Americas. The company's portfolio comprises of PTA, PX, NDC, PIA, PET, fibers, packaging, specialty chemicals and olefins.

Indorama products serve major fast-moving consumer goods and automotive sectors, examples are beverages, hygiene, personal care, electronics, tire, and safety segments. Indorama has approximately 19,000 employees worldwide and consolidated revenue of almost 11 billion dollars in 2018. The company is also listed in the Dow Jones Sustainability Index.

The headquarters of Indorama is in Bangkok, Thailand and it's operating in about 31 different countries. Indorama has 15, more specifically the United States, we have 15 manufacturing facilities in the U.S., Canada and Mexico, serving over 200 customers in 45 states and 18 trans loading sites.

Over the past decade, Indorama has

invested in greenfields, brownfields and acquisitions in North America with the most recent being the acquisition of custom polymers PET recycling facility in Athens, Alabama.

In addition, on August 8th, 2019, Indorama announced the 2.1 billion dollars acquisition of Huntsman's World-Class Integrated Oxides and Derivatives Businesses with large operating sites in the U.S. Golf Coast as well as in India and Australia. The transaction is expected to be completed and closed by first quarter of 2020.

Furthermore, on August 4th, just recently we announced acquisition of Green Fibers, which is a recycling facility in California. You can say based on this, Indorama is one of the fastest growing chemical companies in the world and we are ranked 28th largest chemical company in the world.

As we have testified before the Board previously, Indorama has seen dramatic increases in the cost and difficulty in shipping rail, specifically via the Norfolk Southern, due to changes in tariffs and operations over the past 19 months.

One of our affiliate companies, StarPet, in Asheboro, North Carolina, had significant financial operational impacts.

With the October 2018 tariff change from 2 free demurrage days to 0 free demurrage days, StarPet has been invoiced over $392,000 with no end in sight. This demurrage cost covers the last 13 months versus what we have previously $855.00, yes $855.00 over 20 months, between February 2017 through September 2018. We feel that the NS tariff structure is built with no possible way for shippers like StarPet to completely avoid demurrage. This confirms our thinking that demurrage has become a revenue stream for NS.

To be more specific, with zero free days, cars are placed overnight and are on demurrage the same day after placed construct statute. Furthermore, the NS has removed one of the two trains that worked the switch on the service, the StarPet site which builds the train between 5 and 6 a.m. with no changes that can be made once the StarPet group arrives to work.

Even if StarPet does request the cars

between 3 and 4 a.m. before the train is built, NS cannot guarantee that they will have our cars on the train. There is no time to react before demurrage begins which means NS has effectively build in demurrage charges to our daily operational cost. Even though we just received a new structure for service in the last couple of days, so we're trying to evaluate the new structure that we were just informed about the service to the facility.

Transit times continue to be inconsistent, making it impossible for StarPet to make plans that avoid demurrage or embargo. ETAs also change from initial ship date during transit time either from origin or junction, making it a moving target and effecting our demurrage/credit structure in addition to not being able to effectively plan our production schedule.

StarPet has sent numerous emails to NS personnel asking about bunching cars by NS only and only on NS track. While NS acknowledged the bunching, there was no explanation or relief due to the bunching which is not caused by StarPet or its' suppliers, with the most recent bunching issue affecting raw material cars, feedstock coming into the sites as we speak, during this week.

The only changes NS has made either added to our cost or were moved to another category, like a SIT yard, storing transit yard. And the cost to move one car equal around 17 days of demurrage charges. This does not offer StarPet any relief. It just moves the expense to a different bucket. NS has recently announced additional changes to NS6004-D effective April 2020, that will likely further increase their demurrage revenue from shippers like StarPet.

Furthermore, NS has started acquiring volume commitment with liquidated damages in any 12 month contract. We have not experienced this from any other railroad as the time of this writing. With the nature of the PET business, the plastic business that we're in, most of Indorama's customers do not sign 12 month contracts, so we are unable to commit to a specific volume, only that if we maintain the business we will ship on the NS.

Unfortunately, NS is unwilling to agree to those terms and has put some of our contracts on 90 days renewal with little or no negotiation, which is again, not practiced by any other railroads that we know of. We are basically advised that our rates will be in most cases.

During our journey in North America as Indorama, we have grown the most with NS by either greenfields, brownfields or acquisitions, and therefore, Indorama does value our relationship, with NS, past and future and we are hopeful that they will give the Board's policy statement serious consideration that will result in a more fair and reasonable tariff structure.

I will now turn it to Phil to go over the subject at hand.

MR. RINE: Thank you Hussam. Good afternoon and thank you again to the Board for the time, energy and interest you have invested in working to streamline this process. As you heard in Hussam's testimony, Indorama has been having some difficult conversations with the NS lately, with little to no result, and has a very strong interest in having the Board establish regulations for revenue adequacy constraint process.

And also, in the market dominance streamline approach in EP 756 and in the final offer rate review process in EP 755, as discussed in our comments by Indorama in those proceedings. Indorama commends the Board for taking an interest in promoting policies that remove barriers to accessing regulatory protection remedies, and is extremely pleased that the Board is having this discussion about the revenue adequacy constraint.

In the interest of time, I will summarize my written testimony and will be more than happy to answer questions by the Board once the panelists testimonies are complete. On April 25th, 2019, the Regulatory Reform Act issued a report that recommended, among other things, that the Board consider policy changes regarding revenue adequacy.

The Board asked interested persons to provide input to the RRTC's recommendations regarding railroad revenue adequacy. The Board specifically asked participants to address the following RTF recommendations in the written testimony at the hearing.

Definition of long-term revenue adequacy, rate increase constraint, bottleneck changes, simplified stand-alone costing. I will address each of these points in order presented by the Board. Definition of long-term revenue adequacy. The first recommendation the Board asked Indorama to address is the definition of long-term revenue adequacy.

As noted, the RRTF recommended determining long-term revenue adequacy by looking at the annual determinations over the shortest period of time, not less than 5 years. That includes both a year and once the recession began, and the year that follows a year in which a recession began.

Generally, Indorama is supportive of this approach, but suggests broadening it to ensure it captures all revenue adequate carriers by adding the right to submit additional verbatim evidence on revenue adequacy in the STB determined range around the cost of capital calculation that would take into account the inexact nature of the process.

In making a decision on long-term revenue and adequacy, the Board should consider that most economists and financial analysts, presently, do not consider any Class I railroad to be revenue adequate. In fact, CSX in May of this year, had a stock price to 80, increasing from a price of 54, excuse me, 14 in December of 2007.

Moreover, CSX's operating ratio in 2018 reached an all-time low of 58.7 percent. However, the Board recently, in a revenue adequacy constraint rate case, found CSX not to be revenue adequate despite this obvious good health.

While CSX was close to being revenue adequate in the Board's annual determination during the present business cycle, it never achieved that standard which resulted in this confusing finding of revenue adequacy -- inadequacy, despite the railroad's skyrocketing stock price and record low operating ratio.

Indorama urges the Board to use this proposed test, but it should add in two additional parts. First, Indorama suggests that the Board also permit additional verbatim evidence of revenue adequacy, or inadequacy to be submitted by the parties in these cases. We believe the Board should reevaluate how it could possibly find a company like CSX to be revenue inadequate despite receiving ample additional evidence of its extremely good financial health. Otherwise, the revenue adequacy constraint may lie shallow, like the stand-alone cost constraint penalty does, presently does, excuse me.

One way to ensure that railroads are considered to be revenue adequate when they are earning a return just below the cost of capital standard, is to create a range around this number of 2 percentage points. Therefore, if the Board determined the cost of capital to be 12 percent over the business cycle, a railroad that earned 10.5 percent would still be considered long-term revenue adequate.

This approach is justifiable because the cost of capital determination is merely an estimate. Auriga again commends the Board for having this discussion about a standard for when a railroad is considered to be long-term revenue adequate. However, it urges the Board to consider all provided competent evidence when reaching this result and to provide some flexibility in making this determination by establishing some type of cost of capital range when deciding whether a railroad earned the cost of capital over a business cycle.

The rate increase constraint, as noted, the RRTF recommended considering a rate increase constraint for long-term revenue adequate carriers, which would identify a point beyond which further application of differential pricing would be unwarranted. The RRTF reasoned that the purpose of this proposal is to maintain reasonable rates where there is an absence of effective competition and where a rail rate provides revenues which exceed the amount necessary to maintain the rail system and to attract capital.

Indorama again asked the Board for this opportunity to -- thanks the Board for this opportunity to discuss this recommendation which provides a form of relief for rail shippers when long-term adequacy is found. The RRTF explained that this constraint is an identification of the point to which the existing application of differential pricing is enough.

However, in applying this constraint, excuse me, I see I'm out of time, may I have 5 minutes?

CHAIRMAN BEGEMAN: Four.

MR. RINE: Four. However, in applying this constraint, the Board would not rebate any money to shippers, and would not reduce the rates shippers are currently paying beyond the level identified. Moreover, carriers could continue to charge their existing rates to their existing customers.

The constraint would impose no change on their existing rate structure for shippers who's rates exceed the rate increased constraint carriers would be forbidden to raise -- in raising non-contract, non-exempt rates, by more than the rate of inflation measured by the RRTC. Long-term revenue, adequate carriers would be free to raise their non-contract, non-exempt rates below the threshold, but only up to the threshold, not beyond it.

No constraint would be enforced as to commodities or services that are exempt pursuant to a contract. The threshold level would vary based on the category of transportation and would rise and fall each year as the carrier's revenue above the long-term revenue adequacy threshold rises or falls.

In other words, the Board would prospectively constraint long-term revenue adequate railroads from raising rates, but would not provide a shipper any relief from an existing, unreasonable rate prospectively or retrospectively.

While this constraint would be an extremely useful tool for shippers to help them control the unreasonable rate increases which seem to have to become a matter of course in the rail industry, it would not solve the existing or past problem of unreasonable rates.

As a result, Auriga urges the Board to adopt this constraint and also to make competitive access more available to shippers as discussed in the following section. Bottleneck changes -- as noted the RRTC recommended considering suspension of the Board's bottleneck protections as applied in long-term revenue adequate carriers. Indorama applauds this proposal, and only asks the Board to take one further step by also making reciprocal switching available to shippers by using a more lenient standard as applied to long-term revenue carriers.

As background, competitive access refers to the inner railroad competitive arrangements under which railroads participate and through routes with other railroads. This offered shippers joint rates on such routes, uses other railroad terminal traffic facilities and switched cars to the service of other railroads to and from track sightings where shippers are located.

A thorough route is an arrangement under which a shipment is transported to its ultimate destination by two or more railroads in succession. One means of competitive access is available to a shipper and is at issue in this recommendation, is through route under 49 USC 10705 which is subject to the bottleneck protections.

Indorama believes the RTF's recommendation to make a through route more available when a carrier is found to be long-term revenue adequate is indisputable within the Board's statutory power. We believe the Board should not stop here, changing the standard for bottleneck alone would be a great first step, however, this remedy would not be as useful for shippers as it would be for others.

As the Board's noted, if the shippers obtained this access, it would still have to bring a rate case to obtain relief on the shorter captive portion of the route. Of course, the hope would be that shippers would not have more negotiating power due to the availability of this remedy. But as the Board knows and is the point of the RRTF report, bringing a rate case is not a simple matter and might render this proposal less effective.

I will jump to my conclusion here. Indorama, once again, thanks the Board for taking this important step to define when a railroad is considered to be long-term revenue adequate, and to determine which regulatory action should then occur. As discussed here, Indorama supports the recommendations RRTF listed in the notice, but also seeks a slight broadening of the proposed long-term revenue adequate standard, and the addition of reciprocal switching changed to bottleneck protective change, with the imposition of these recommendations for a revenue adequate constraint and the rules proposed under the final offer rate review and market dominance streamline approach, Indorama believes the Board will be able to regulate the railroad industry in the manner Congress intended.

As a result, Indorama asks the Board to take these next steps to bring back some balance to a regulatory scheme that has been less effective than necessary to protect rail shippers. Thank you for your time today.

CHAIRMAN BEGEMAN: Thank you. Next, we'll hear from NS.

MR. RINE: Thank you for the extra 4

minutes.

MR. FRIEDMANN: Good afternoon. Chairman Begeman, Vice Chairman Fuchs and Member Oberman. My name is John Friedmann. I'm Norfolk Southern's Vice-President Network Planning and Optimization. And I'm responsible for Norfolk Southern's operating plan.

Previously, I spent approximately a decade as Norfolk Southern's Vice President of Strategic Planning. My testimony concerns the potential impacts on Norfolk Southern's greater uncertainty with the level -- with the removal of the bottleneck protections. Meaning that future investments may be too risky, even if current traffic levels justified expansion. Even absent traffic diversions, service for all customers in the area would be degraded because Norfolk Southern would lack economic certainty to make investments in the line.

Today, the density of the traffic supports six through trains per day to and from Norfolk Southern's hub in Birmingham, and numerous locals provide a daily service to all customers along the line. Diversion of anchor customer traffic would not only rob the line of density and degrade service for other online customers, it also would lessen Norfolk Southern's ability to provide effective interline service from its Birmingham hump yard.

You, as Board members, should be concerned with the overall impacts to the rail network of the bottleneck recommendation put forward by the rate reform task force. There will always be individual shippers who advocate for change in hopes of advancing their own parochial interest.

But this proposal would have significant consequences for the efficient and effective operation of the rail network as a whole, affecting both the companies represented here and countless other shippers who are not appearing at the hearings. When viewed through this lens, it is clear that the Board should not move forward on changing the bottleneck decisions in a way that will degrade the railway. Thank you.

MR. SAPPINGTON: Good afternoon and thank you for the privilege of speaking before the Board today. My name is David Sappington. I'm Professor of Economics and Director of the Public Policy Research Center at the University of Florida. I've also served as the Chief Economist at the Federal Communications Commission and my research over the past 40 years has focused on the design and implementation of incentive regulation.

My primary message today is a straight forward one. I respectfully urge the Board to refrain from imposing explicit earnings regulation in the freight rail industry. Such regulation would be contrary to trends in other industries around the world to the Board's current progressive regulatory policy and to basic principles of regulatory policy design.

A key principle of regulatory policy design is that regulations should only be imposed where competition fails to adequately discipline suppliers. This is the case because regulation is unavoidably costly and imperfect. Consequently, competition is the preferred form of industry governance whenever competition can discipline industry suppliers effectively.

A related principle is the mimic competition principle that Professor Kalt talked about this morning. Namely, that in settings where regulation is, in fact, needed to substitute for competition, regulatory policy typically should be designed to replicate the disciplinary forces of competition.

In the Board's current policy, encompasses both of these important principles. In particular, the policy allows competition to discipline suppliers of freight rail services where it can do so effectively. As when railroads and shippers voluntarily negotiate mutually advantageous contracts, or when rates are less than 180 percent of measured variable cost.

The Board's current policy also replicates competitive discipline appropriately where regulatory intervention is deemed to be necessary. In particular, the policy protects shippers that lack effective competition by restricting rates below the stand-alone costs of an efficient supplier of the relevant rail services.

This policy replicates competitive forces, which typically compel the supplier to set prices at or below the level of its rival's costs. And by comparing rates to the cost of an efficient supplier, the Board's policy can implement even more stringent requirements and challenges that a railroad would face in an actual industry setting.

By employing the stand-alone cost test, rather than explicit earnings regulation to protect shippers, the Board's policy avoids a fundamental drawback to explicit earnings regulation. The draw back is that such regulation limits a supplier's incentive to innovate and to reduce its cost.

The diminished incentive, of course, arises because cost reductions increase earnings, which trigger more stringent price constraints. Consequently, under explicit earnings regulation, the regulated supplier is penalized for reducing its cost and so cannot reasonably be expected to focus its efforts on doing so.

But this is only one of many drawbacks to explicit earnings regulation. Additional drawbacks include the following three: First, in addition to limiting incentives to reduce cost, explicit earnings regulation also limits incentives to innovate and to engage in new product innovation coming up with new and better quality services.

Again, the reason is exactly the same when you're near or at your so-called adequate level of earnings, your opportunity to earn greater earnings is limited, regardless of how valuable a new service you might be able to create for shippers, so that's another important drawback to explicit earnings regulation.

Another important drawback is that because cost and earnings are difficult to measure accurately, and there's certainly a lot of contentions, as we've heard this morning, about exactly how you measure costs. Because of these difficulties in measuring costs, there's always the risk when you do adequate revenue adequacy type regulations, that you've not pinpointed exactly what costs, and therefore earnings are exactly.

But if you err on the side of over -- under estimating costs, or overstating earnings, you run the risk of the firm not being able to attract the capital it needs to continue to invest and serve its shippers well.

A third drawback to explicit earnings regulation is that because these costs and earnings are difficult to measure accurately, particularly when only a portion of the firm's services are subject to regulation, the implementation of earnings regulation would be complex, time-consuming and contentious.

Earnings regulation is particularly pernicious when it is applied in asymmetric fashion. When regulation limits earnings to a so-called reasonable level, but entails no provisions to allow earnings to increase when they fall below this level, then a regulated railroad has very little incentive to undertake ventures that involve even a small amount of risk.

Under asymmetric earnings regulation, a successful venture provides no financial reward and an unsuccessful venture imposes financial penalties on the railroad. In essence, the railroad is placed in a head's you don't win, tails you lose situation.

And when a railroad cannot gain, but only lose from risky ventures, it will naturally decline to undertake them, regardless of the perspective value that these ventures might hold for 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 competitive markets where successful innovation typically generates large financial rewards.

In light of the many well-known drawbacks to explicit earnings regulation, regulators in other industries around the world have been turning away from such regulation for many years now. In the electricity sector for example, regulators have adopted various forms of what's known as performance-based regulation under which a firm that delivers exceptional performance in the marketplace is rewarded financially for doing so, precisely as it would be in a competitive market.

It is important to note that the Board's current regulatory policy encompasses the key features of practices that are viewed as innovative and progressive in other industries. For example, the stand-alone cost tests avoid linking authorized prices to a railroad's own cost, thereby providing strong incentives for cost reduction.

The Board's current policy also avoids explicit earnings regulation, and so allows a railroad's financial returns to vary with its performance in the marketplace, just as under performance-based regulation. The Board's current policy thereby provides incentives for railroads to promising, yet risky, innovative activities that can be of substantial benefit to shippers.

Consequently, the Board's current policy can reasonably be viewed as being on the frontier of innovative regulatory policy design. Additional earnings regulation would move the Board's policy away from the frontier precisely in the opposite direction that regulatory policy has been proceeding in other industries.

The movement away from earnings regulation in other industries, reflects a growing recognition of the fallacy of a common myth about earnings regulation. The myth is that a regulator serves customers well by systematically precluding a regulated supplier from securing anything more than what might be deemed an adequate level of earnings.

The corollary of this myth is that regulators have failed to protect customers adequately if the regulated firm secures more than adequate earnings. Fortunately, there is a growing recognition among regulators around the world that this myth, and its corollary are not only false, but fundamentally misguided.

All parties can gain. Regulated suppliers and their customers alike when suppliers are motivated by the prospect of financial reward, discover innovative ways to operate more efficiently and to better serve 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 customers.

In closing, I again respectfully urge the Board to refrain from imposing earnings regulation in the freight rail industry. Explicit earnings regulation entails many well-known drawbacks. Its implementation would stifle innovation in the industry and would threaten to reverse the substantial progress the industry has experienced since the passage of the Staggers Act.

The Board's current policy constitutes enlightened, progressive regulation that embodies the key principles of sound regulatory policy design, and that reflects trends in other industries. My sincere hope is that the Board's future regulatory policy will continue to be so enlightened, and that the Board may resist any pressures it may face to return to the largely discredited regulatory policies of the past. Thank you.

CHAIRMAN BEGEMAN: Thank you. Olin?

MR. CHIRUMBOLE: Chairman Begeman, Vice Chairman Fuchs, Member Oberman. My name is Frank

Chirumbole and I'm the Vice President of Integrated Supply Chain for Olin Corporation. I am accompanied today by our outside counsel, Peter Pfohl.

Olin thanks the Board for holding a public hearing on this important topic. As the Board moves forward with revisions to its rate-making processes, we urge you to recognize the challenges that face captive carload shippers such as Olin, and that you will use this opportunity to devise a meaningful, but practical, revenue adequacy constraint that will restore some balance between captive shippers and their carriers.

Olin is the world's largest chlorine company and the world's largest epoxy manufacturer. We ship over 47,000 railcars annual in North America. You encounter our products every day, mainly chlorine and caustic soda, as they are used in a variety of applications, including water treatment, aluminum manufacturing, wind energy application and many others.

Olin's manufacturing sites are all captive to their respective carriers. As a result, we have seen rail rates continually escalate at levels above inflation with negligible improvements in service. The current state of rail regulation encourages monopolistic behavior that has negative ramifications for Olin and our customers.

Reasonable regulation changes will benefit the long-term health of the rail industry, as well as all rail reliant U.S. manufacturing. In order for railroads to grow, they also need their customers to be successful and many of their pricing strategies are limiting the growth of their customers businesses, including Olin.

Before getting into the details of this proceeding, I want to share Olin's experience in challenging unreasonable rates. As you know, Olin subsidiary, Sunbelt, pursued a stand-alone cost rate case, which the Board decided in 2014 and reconsidered in 2016.

Sunbelt narrowly lost its case, despite demonstrating that the revenue over variable cost ratio for the movement was nearly 500 percent. Chairman Begeman, in that 2014 decision, you said --

and I'm paraphrasing, "The Board has a duty to ensure that shippers have a viable means to challenge a rate, and that the Board should ask whether the SAC process can provide a meaningful gauge of rate reasonableness for carload shippers."

It's Olin's view, that that is not a viable process for us, or any other carload shipper. This is supported by the fact that no carload shipper has ever obtained rate relief under the SAC process. Given this history, Olin is pleased to see that the Board is seeking comments on the rate reform task force proposal to implement a revenue adequacy constraint.

Olin's written comments provide more detail -- a more detailed explanation on our position, but the critical points are as follows: One -- the Board should rely on a usually ascertainable 5 year analysis to establish a presumption that a railroad is revenue adequate.

Trying to sort out so-called business cycles is difficult, and the assumption that the cycle is indicative of revenue adequacy has not been proven out by the task force. From Olin's point of view, knowing that there is one clear standard, provides a degree of certainty that is valuable to us and other shippers.

Two -- the revenue adequacy constraint should protect shippers, rather than invite complexity. The task force proposal will lead to costly and complex filings, covering topics such as the net surplus operating revenues, which shippers should be clustered together, and how to apportion those revenues using the maximum mark-up methodology process.

We encourage a simple application that assumes a revenue adequate carrier is earning adequate revenues, unless the railroad can prove otherwise. Assuming the carrier is revenue adequate, future rate increases should be limited to actual productivity adjusted railroad costs.

Three -- Olin urges the Board to allow a shipper to provide additional evidence to demonstrate that a carrier is revenue adequate. Given the Board's annual revenue adequacy determination is somewhat mechanical, it lacks qualitative and additional quantitative elements.

Four -- a key issue with the proposed revenue adequacy constraint is that it provides no means for rate reduction or reparations. A shipper would need to pursue a rate case separately, and that is why Olin strongly supports a simplified approach, such as the final operate review proposed by the task force.

I want to draw the Board's attention to two other issues that greatly impact the effectiveness of any potential revenue adequacy constraint. First, the Board's view of revenue adequacy relies almost exclusively on its determination of the railroad industry cost of capital. Olin believes that the Board's cost of capital procedures produces inflated numbers, versus how the railroads and Wall Street view the industry's cost of capital.

For example, the Board's 2018 cost of capital determination was 12.22 percent. BNSF's Executive Chairman, Matt Rose, speaking at the

Railroad Financial Corporation's 2019 Conference, put today's real world cost of capital at about 7 percent.

The Board's cost of capital calculation is 70 percent greater than the industry's and Wall Street's view of the figure. Olin urges the Board to modify its procedures to better reflect the real cost of capital for railroads.

Second, the Board needs to address the fact that many lanes are bundled in private agreements and the railroads make it essentially impossible to challenge a single lane in that situation. This is because the railroads require that all lanes under a bundled private contract, be taken to tariff in order for a shipper to bring any case before the STB.

Olin urges the Board to incorporate protections against these unreasonable rate bundling practices, as well as rate gaming by the carriers. We provide further details on our position in the comments we filed in the Board's final offer rate review proceeding.

I want to touch briefly on the comments submitted by other parties in this proceeding. Not surprisingly, the railroads have adopted a "Just Say No" strategy here. And I won't begin to argue the details of their theories. But I will say that the rate issues driven by a lack of the competitive market are real and tangible.

The revenue adequacy constraint is not a blunt instrument meant to pound down the future earnings of the industry. Instead, it provides an additional means to check the rate increases of market dominant carriers. Under the task force proposal, the constraint is only available if a shipper files a case and proves that the carrier has market dominance. Even then, the carrier still has to be long-term revenue adequate before any constraint would even begin to apply.

Olin supports a robust and highly functional rail network. But there must be some reasonable limits. Chlorine car rates of more than $30,000 per railcar and R over VC's of over 1,000 percent are not reasonable. We hope the Board finds a fair equilibrium as it implements this constraint.

As for other shippers, there are obviously a mix of views on the specifics, but one thing that's clear -- the board must do more. The American Chemistry Council has proposed implementing a competitive benchmarking methodology as essentially a substitute for a revenue adequacy constraint. It may be a useful, additional tool, but we understand that even if the Board were to consider it, it may take far longer to implement than the revenue adequacy constraint.

Thus, Olin urges the Board to proceed here first. So, in summary, Olin's key recommendations and issues are: One -- use of simplified approach for the determination of revenue adequacy, which would include a five-year analysis period. B -- the ability for shippers to submit other supporting evidence to demonstrate the carrier is revenue adequate, and the use of a standard that provides for limited cost base increases and avoids complicated surplus revenue and MMM type analysis.

Number two -- the Board should modify its cost of capital determination to better reflect the real cost of capital for railroads.

Number three -- the task force provides no path for rate reductions, or reparations through the revenue adequacy test. And those need to be included as part of the Board's ongoing rate review proceedings.

And four -- the Board needs to address the rate bundling issues and the fact that moving from a private contract to tariff, is a strong deterrent to bringing a case before the STB. Thank you again for the opportunity to appear before you today.

CHAIRMAN BEGEMAN: Thank you very much. Patrick?

VICE CHAIRMAN FUCHS: Maybe starting with NS. The period by which long-term revenue adequacy is defined. Not asking you to weigh in on whether or not that revenue adequacy should be used as a constraint or just a measure of the economic health of the railroads, but just in terms of the period. What do you all think and what does the academic literature support as the most relevant and justified time period?

MR. SAPPINGTON: I wish that I could be of help on that, but I really can't. Very, extremely good question. It's just one that's not my area of expertise. Norfolk Southern just asked me to talk about earnings regulation and the rate increase constraint.

VICE CHAIRMAN FUCHS: Let's go there.

MR. SAPPINGTON: Okay.

VICE CHAIRMAN FUCHS: So, I had the opportunity to review a lot of your research and it was enlightening to say the least. One thing that you put forward and is -- on price cap regulation, generally. You know, you said such a price cap regulation plan can provide a substantial incentive to innovate and reduce operating cost with low risk, allowing the firm excess profit or forcing the firm to suffer financial distress.

And you compare it -- and I notice in your remarks today you compared some things in the electricity industry, but then you kind of compared that to the telecom in which you said, you know, price-cap regulation is often considered a superior form of economic regulation generally, rather than a superior form of regulation in selected settings, and you were talking about why it hasn't been adopted in the electricity sector.

So, I guess I kind of pose the same question. Stepping away from the issue of rate of return aspect within revenue adequacy, just price cap regulation generally, does it have a role in the railroad industry? What do you see as the trade-offs there?

MR. SAPPINGTON: The benefit of price-cap regulation comes about because it doesn't link the firms, because it doesn't directly regulate earnings. What it says to the firm is here's a reasonable price trajectory, and as long as you can live with that price trajectory, we're not going to change it when we see your earnings being relatively high or relatively low. So, it provides all the right incentives for the firm to minimize its costs and to innovate.

Now, in the railroad sector, that is

essentially what the SAC test does. The SAC test says the price, and what's really nice about the SAC test, is it does it on a customer by customer basis. Here is the price cap on the amount you can charge to that particular customer. And what that cap is, is based upon not your cost, but the cost of an efficient supplier.

So, I view the SAC test very much as a price-cap constraint, but one that's different from the typical one in the telecom or the electricity sector, primarily because it focuses on the right price for an individual customer, whereas in more generally what we tend to do with a price cap constraint is to say okay, as long as on average your prices aren't going up too rapidly, everything's fine.

I don't think individual shippers would like that very much because that allows the firm a tremendous amount of flexibility to raise some prices and lower others, as long as on average, prices aren't rising too rapidly. And that's more amenable to an industry where you've got lots of homogeneity among customers.

But when you've got rate variation among customer's cost and needs, the price targeted to the individual customer makes more sense.

VICE CHAIRMAN FUCHS: Thank you. And Mr. Friedmann, can we turn to kind of bottleneck versus reciprocal switching? And there's a Christianson report, not that I'm asking you to be familiar with it. It was cited a couple times earlier, are you, okay.

So, but one of the things that that report said was that you know, when evaluating the, "suite of open access," their words, they said that, "The reciprocal switching in terminal agreements, you know, will be the least costly in terms of a loss of economic efficiency and most likely to promote a competitive response among railroads." And they said, "To the extent the competitive responses result in traffic increases, static efficiency launches may be overcome.

There could be a gain in economies of densities if volumes increase." And they're comparing that to bottleneck. So, it was meant as a basis of comparison where reciprocal switching was actually better from an economist perspective compared to bottleneck. What is your view on that? Understanding you're fiercely opposed to both, but choosing or looking at the two, what do you see as more economically harmful to NS from your perspective?

MR. FRIEDMANN: Well, I think what you have to think of in both cases is they introduce a level of inefficiency and risk into the system that's not present now. And both provide a disincentive to investment, a likelihood of causing congestion or other operational disruption.

So, I think that both, from an operational perspective, can look very similar. But they each bring in a level of network deterioration, in terms of efficiency and operation, as well as a lack of incentive to invest.

VICE CHAIRMAN FUCHS: Do you view switching as Christianson did? As some of those negative effects that you're describing, do you view that as a little bit more attenuated or lower with reciprocal switching relative to bottleneck?

MR. FRIEDMANN: Well if you take reciprocal switching, and I will use reciprocal switching in the contest in which its used today, which are generally long-term arrangements between carriers, most of which have constrained geography and a history behind them.

Those tend to be fairly stable arrangements. I would not say that reciprocal switching, in terms of being proposed as a solution to perceive competitive problems necessarily mirrors the practice that's here today. But in terms of if the Board were to take action on either, I'm not suggestion a position, I know that you are against both. I just -- you don't perceive that NS would -- there'd be any difference in the cost to NS or the effects on NS between a bottleneck thing as contemplated by the RLTF, or say reciprocal switching is contemplated by the Board's proposed rule in the matter?

MR. FRIEDMANN: I'm not qualified to talk in terms of the whatever it's called, the revenue impacts of it for example.

VICE CHAIRMAN FUCHS: From an operational standpoint, yes.

MR. FRIEDMANN: Never have to meet a rate. But from an operational impact, they would both have the potential to -- and likelihood, to cause similar disruption congestion and loss of efficiency.

VICE CHAIRMAN FUCHS: Do you have a view on that directly? Anything, yes?

MR. CHIRUMBOLE: No, in my view of that is I just look at it this way. Whether that's a real reason or not, it eliminates an opportunity to look for a competitive rate when you cannot go to a different destination because of that excused. Now, I don't mean that to mean it's not a valid one, but I don't have competition. And so, I'm looking for anything that will give us some ability to get lower rates.

VICE CHAIRMAN FUCHS: Right.

MR. CHIRUMBOLE: And that just doesn't happen. I'm prohibited from doing it.

VICE CHAIRMAN FUCHS: I hear you. And sir, you mentioned that SAC's just doesn't work for --

MR. CHIRUMBOLE: Yes.

VICE CHAIRMAN FUCHS: And, you know, the Board's out to put out a proposal. You know, we have an alternative with 3B, AAR put forward some indication of a willingness to work on a comparison group approach. Obviously, ACC has put forward a competitive rate benchmarking, which setting aside the competitive threshold issues, when you actually look at controlling for different things, it's starting to look like a little bit of a comparison group in a sense, right?

The regression of being, you know, a sophisticated comparison group. I guess I'm wondering if you all have any thoughts on whether or not you know, a comparison group approach as you know, has the potential as a mechanism for potential rate relief, either improvements to 3B or entirely new comparison group approach.

MR. CHIRUMBOLE: Well, relative to where

we stand today, any of these hold some promise. One concern we have with the comparison group is what if the whole group is out of line already?

VICE CHAIRMAN FUCHS: Right.

MR. CHIRUMBOLE: And so, now you're limiting increases on an already high rate.

VICE CHAIRMAN FUCHS: So, what do we do about that?

MR. CHIRUMBOLE: Final offer rate review. We need a rate -- a new simplified rate case approach. That's why we mentioned that in our testimony.

BOARD MEMBER OBERMAN: Let me pick up on that. I have more than a three second delay.

CHAIRMAN BEGEMAN: The railroads do.

BOARD MEMBER OBERMAN: Could be they're handling the whole system, here right? Frank, what in the final-offer procedure, if you -- if the comparison group are all high, then what -- you have to use some mechanism to prove your -- to be convincing in the final offer you make. Well, what approach would be workable? The one that ACC has proposed, because that's a comparison group.

MR. CHIRUMBOLE: I'm trying, it's been a while since I've read that thorough, the task force report. But there is an ability to present evidence -- I think it's broader than just the comparison group. You're not limited by it. It's literally a negotiation, if I recall. Is that right?

BOARD MEMBER OBERMAN: Well, you have to have been making your offer the way this is designed. You have to back it up.

MR. CHIRUMBOLE: Right.

BOARD MEMBER OBERMAN: You can back it up any way you want. We didn't -- at least in the proposal, we didn't say you must choose one mechanism or another. So, what I'm wondering is what mechanism would you choose to persuade the Board to pick your final offer as opposed to the railroad's if it isn't a comparison group?

MR. CHIRUMBOLE: No, we haven't thought through that to that point, but we -- the concept, we want to pursue it because anything that simplifies the approach is going to be --

BOARD MEMBER OBERMAN: Mr. Friedmann, I have a -- I wanted to follow-up with a few questions for you. On the Mobile line that you spoke about, you said there are 65 customers. I can't read my own writing. 3 of the customer's account for 80 percent of all of the traffic on that 250 miles, is that right?

MR. FRIEDMANN: Approximately 70 percent.

BOARD MEMBER OBERMAN: I'm sorry. Well I wrote down that 15 - some number of customers account for 15 percent of something. Could you?

MR. FRIEDMANN: One, I just can walk through it again quickly, if it would be helpful.

BOARD MEMBER OBERMAN: Okay, please do, yeah.

MR. FRIEDMANN: Okay. The Mobile line is 250 miles long, 71 percent of the line's carloads are handled on the last 15 percent of the miles. And on that segment, 3 anchor customers account for 80 percent of the traffic.

BOARD MEMBER OBERMAN: On that 15 percent of the --

MR. FRIEDMANN: The miles, yes.

BOARD MEMBER OBERMAN: Okay, that's -- you were going so fast I was taking notes and then I couldn't figure out what I was writing.

MR. FRIEDMANN: So, I was trying to be respectful of the time.

BOARD MEMBER OBERMAN: No, no, I appreciate that. Listen, I've learned to listen to Patrick, so I should be able to listen fast. Of the 65 customers on that line, how many of them are in a market dominant situation?

MR. FRIEDMANN: I don't know. I would say that of the 65 customers, the vast majority are solely served by Norfolk Southern.

BOARD MEMBER OBERMAN: And the 3 customers that account for 80 percent of the last 15 percent of the miles, are those are market dominant? I assume one of them is Olin.

MR. FRIEDMANN: All 3 customers are solely served by Norfolk Southern in terms of rail, although all of them make use of water as well.

BOARD MEMBER OBERMAN: Is one of those the

Olin plant that we visited in McIntosh?

MR. FRIEDMANN: I wasn't with you when you came to McIntosh.

BOARD MEMBER OBERMAN: Well, you know where McIntosh is. I'm just trying to picture because I have a concrete picture of how many -- what they ship out. That is the Mobile line, right?

MR. FRIEDMANN: It is, yes. They are.

BOARD MEMBER OBERMAN: I mean I'm just going to guess there isn't anybody. They must be one of the 3 biggest. If you've got bigger ones than Olin, then it seems to be that's a pretty big customer.

MR. FRIEDMANN: There are larger customers on.

BOARD MEMBER OBERMAN: Okay. Let me switch to Professor Sappington for a minute and then I'm going to come back to you, Mr. Friedmann. I don't mean to be flip about this, but you said in your testimony, that the proposed rate revenue adequacy methodology is bad for both sides and that your idea of incentive regulation benefits both shippers and railroads.

And I'm really wondering why, if that's really correct, all of these shippers are in here saying they don't agree. I mean, do they need to take your course? I mean what's?

MR. SAPPINGTON: There are many possible reasons. I believe Mr. Atkins brought one up this morning. The shippers clear have an obligation to pursue the best interests of their shareholders. That includes finding ways to keep the rates that they pay for rail services and other inputs as low as possible.

One way to do that is to come to the Board, who has the power to set those rates. Another would be to challenge, according to the SAC test, for example, this particular venue may be cheaper for them to do that. And I certainly don't condemn them in any way for doing so. They're pursuing the best interests of their shareholders, but it's what you would expect to have happen, even if they were actually quite pleased with the rates they're getting, it doesn't hurt to ask for lower rates still.

BOARD MEMBER OBERMAN: No, but if you were correct that the overall system would ultimately benefit shippers, it would be better for their shareholders too, if they perceived accurate -- if they agreed with what your argument is, wouldn't it? I just don't understand, there's a disconnect here.

MR. SAPPINGTON: Okay.

BOARD MEMBER OBERMAN: You're saying the methodology you're urging is better for everybody, including the shippers.

MR. SAPPINGTON: Right.

BOARD MEMBER OBERMAN: Which would mean it would be better for the shipper shareholders. They don't see it that way. So, I mean why do we have this disconnect?

MR. SAPPINGTON: Well, maybe I would just respectfully ask that you ask that same question to them, and ask whether they do believe in fact that the best way to regulate is to say to the railroads that no matter what you do to serve our interest, that you're going to be held to exactly a fair rate of return.

In other industries, regulators have exactly that same question and I don't know why they changed their mind explicitly, whether all constituents came together and argued the same point of view. But what they have found, and it's been demonstrated empirically, is that when you do depart from that strict standard, everyone does end up being better off.

There are gains in the industry, many of which accrue to the customers and some accrue to the suppliers also.

BOARD MEMBER OBERMAN: Alright, I think part of the problem, Professor, maybe that I don't understand the task force revenue adequacy proposal to be one which says to the railroads no matter what you do, you're going to be held to this rate of return. So, maybe they don't see it that way either. Let me ask you this question.

You referred to the SAC test in a way that sounded to me like the SAC test is utilized by others, for regulating other industries, I gather it does apply to telecommunications in some ways?

MR. SAPPINGTON: Not that I'm aware of. I don't believe the SAC test itself is used in telecommunications.

BOARD MEMBER OBERMAN: Is it used anywhere other than railroads?

MR. SAPPINGTON: I'm not aware of it, no. Partly because we -- again, the point is the nature of the customers. As I understand it in the rail industry, there are relatively few large customers and so, you need to specify, target your regulation to the idiosyncratic needs of that relatively small number of customers. In other industries there are thousands, if not millions, of customers roughly similar, and so sort of a blanket regulation applying to all of them makes more sense.

BOARD MEMBER OBERMAN: Well, I understand. I took it -- maybe by inference the way you spoke about it that maybe there were some other industries in which we could compare the results of the SAC test. But it doesn't -- I didn't think it was being used anywhere else.

MR. SAPPINGTON: Not explicitly in that form, but in related forms in which you do try to use, as your standard, the activity of an efficient firm as opposed to measuring the cost of the firms that you're actually regulating directly.

BOARD MEMBER OBERMAN: Well, okay, but that doesn't necessarily involve, in other settings, the rebuilding of an entire firm, does it, with engineering studies and so forth, that's the problem.

MR. SAPPINGTON: Well, what you are trying to do in all these different forms of regulations is to figure out what relevant costs are and, ideally, efficient costs and hold the regulated suppliers to that standard. They have to meet, they have to perform as an efficient firm would, or they're going to suffer financially. So, we're having that same basic standard imposed across the board, but exactly how we do it varies across industries.

BOARD MEMBER OBERMAN: Well, you could use that same description really of a utility-style regulation too. And that isn't something that anybody's proposing. So, I mean in terms of efficiency and holding a firm to efficient costs, that underlies a utility concept as well.

MR. SAPPINGTON: Right, but then there's also on top of that, usually there's the rate of return constraint which says that not only do you have to operate efficiently, but if you do, or operate even if they operate extremely efficiently, you can't make more than what we deem to be an adequate level of earnings. And that's the source of the -- what empirical research has demonstrated is really what constrains industry performance.

BOARD MEMBER OBERMAN: Let me switch over. I want to get to this cost of capital that you mentioned Frank. I took a look at -- I don't know if it was your -- somebody actually cited the most recent article that captured Matt Rose's talk, was that I think it was in yours.

So, I took a look at it. It only tells us 7 percent and I don't know where that came from, or what he bases it on. Do you have any understanding of how -- at least whatever you think of our formula, there was a formula, so everybody knows how we got to 12 percent. How do you get to 7?

MR. CHIRUMBOLE: Yeah, and again, I'm only quoting the fact that they're talking in front of Wall Street people about a different number than the number that the Board all calculates. And I'm just saying we ought to resolve that. Because it would obviously, unfairly would limit the revenue adequacy constraint if we're using an inflated number.

BOARD MEMBER OBERMAN: Well, I mean we're calculating a high number pursuant to a regulatory setting in which, you know, we have to conform our activities within our statute. What business people and stock traders on Wall Street come up with is at least in that sense of it, that's just their perception from a rate of return.

I'm just wondering how this 7 percent, is it based on actual performance in the market or where it came from.

MR. CHIRUMBOLE: And I don't know the answer to that. I don't. You know, that's something we can get our financial people to look at and if we need to talk about that, that's fine.

BOARD MEMBER OBERMAN: Well, they're doing it. So, this leaves me to, and I want to ask.

MR. SAPPINGTON: Mr. Oberman, can I address it?

BOARD MEMBER OBERMAN: Yeah, go ahead.

MR. SAPPINGTON: I just want to follow-up on the important question you asked before about the SAC test being used elsewhere. Again, I'm not sure if that exact terminology is used, but I have been thinking more about the telecommunications industry. And it seems to me they faced a problem similar to the one you're facing here, which is that they needed to decide how costly it was to provide service in rural regions where there weren't many suppliers who wanted to supply the service.

And so, they had contentious hearings about exactly what it would cost to supply this service in rural regions where no one really wanted to supply the service because the regulations were in place that you had to keep rates low. And the costs were just much, well above those regulated rates. So, no one wanted to serve those regions, so the question was, well how much do you have to pay someone to provide the service at those artificially low rates.

And so, what the industry did over time, they came together and essentially built a model that both the regulatory staff and the industry participants agreed upon was sort of a reasonable way to look at the cost of supplying this service. And I don't think they used the word SAC or stand-alone costs, but they distinguished between greenfield operations and brownfield operations, basically if you're starting from scratch to build your network to serve these customers, that's what they talked about with greenfield.

Brownfield was like it had some of the network structure in place, but you needed to extend it. So, the concepts are very similar, even if they don't use exactly the same terminology. And I would just recommend perhaps, to have your staff take a look, if they're not already familiar with what the FCC did there. It's called the hybrid proxy cost model. And I was very impressed to watch this process go on where the parties from the industry all came together and essentially worked together over time to develop a model of what it would cost to provide this service.

And I'm wondering if the same type of exercise might not be beneficial in the rail industry. I think that would reduce the cost to all of understanding what goes into these models, and if you can come up with some general guidelines and what's a reasonable model that could facilitate the regulatory process and bring down these costs that I'm hearing about being so observant in an actual SAC hearing.

BOARD MEMBER OBERMAN: I'm hardly an expert, but it strikes me that the fundamental infrastructure building of the railroad is so vastly different from stream, you know, fundamentally you're doing a telecommunications set-up. I don't know if that comparison is going to be that instructive, other than the fact that the industry and its customers -- and the regulators work together, that's always good.

But other than that, I don't know what there is to learn, but maybe our economists will help us out.

MR. SAPPINGTON: I agree. I wouldn't want to suggest that model is one you could just import here by any means. But it's more of a process that I was suggesting might be useful to follow-up on.

BOARD MEMBER OBERMAN: I'd like to ask both John and Frank if you would comment on this in any order. I have been very much puzzled by the -- on the cost of capital measurements. That's why I asked -- questioned Frank about how close to the real world our ability to calculate cost of capital is, and I know there are complaints about the inaccuracies of it.

But there's an aspect of this in the railroad industry in particular, that has confused me. And so, I want to raise this with each of the railroads other than BN, which is -- doesn't have public shareholders. As I look at NS's performance in the last 6 years, and I'm looking at some numbers that were compiled from your public disclosures, John.

Just going in 2018, you have a gross operating revenue of 11 and a half billion, and net revenues of just under 4 billion, and just under 2 billion of CapEx, and 2.7 billion dollars of stock buyback. And that pattern was very similar over the 5 years before that.

So, you had almost, not quite twice as much, net revenue as you actually spent on CapEx. And then you used the rest of it, and I gather with -- had these stock buybacks. So, as I understand our standards under revenue adequacy, the rates are supposed to be set to make sure you have enough capital and that you can attract capital. And I don't see NS having difficulty attracting capital, since you have way more net revenue than you needed for your actual capital expenditures, at least over the last 6 years, and you were able to use a lot of it for stock buybacks.

So, without getting into the debate about whether stock buybacks in general are a good or a bad thing, gathered years ago, they weren't allowed at all and now the rage on Wall Street. In our setting -- in the captive shipper's setting, under our statute, to me a shipper is supposed to pay a rate that allows you to cover your capital and make a reasonable return, at least that's what the revenue adequacy standard is about under the coal rate guidelines.

But I don't see anywhere in the statute that a shipper is also supposed to pay you enough for stock buybacks. And ultimately, that would -- if that were not allowed, that would affect cost of capital and it would go into the whole calculation of who's revenue adequate.

So, can you enlighten me on why you need to charge rates to shippers above what you need for your capital expenditures at a reasonable return, trying to get you also into the billions of dollars of stock buybacks? And then, and Frank, I'd like your observations on that as well, but whoever wants to go first.

MR. FRIEDMANN: Well unfortunately, my answer is going to be fairly short. Aside from the fact that I'm aware of very few, if any, industries that are as capital intensive as railroads or any that are asked to take their entire net revenue and put it back into a year's worth of CapEx, I'm neither a financial expert, nor an expert on the statute. So, I'm probably the wrong guy to even guess at that.

BOARD MEMBER OBERMAN: Alright. We'll have to find somebody who is. Frank, do you want to?

MR. CHIRUMBOLE: And I can't say that I've studied NS's annual report deeply recently, but my comment would be if they have that kind of money or are able to get that kind of money to invest in the network, that their cash flow has to be pretty healthy. And I realize we can debate what the right cost of capital number is.

My only statement would be they seem to be financially healthy to me. Railroad stock price has been up. They're buying it. They're buying it back. I understand they have cash to do that. It's just that, you know, almost a layman's observation.

But back to what the right cost of capital is. I only brought up that quote from Matt Rose to say there's a disconnect. Frankly, any application of a cost of capital number as part of this revenue adequacy is going to be better than what we have now. So, I mean I'm not going to make that a major point in our mind over whether or not we would support this. But we just wanted to point that out.

I will also add that our cost of capital is not 12 percent, it's lower than that. It's not as low as theirs, but it's lower than that.

BOARD MEMBER OBERMAN: Well, it just has struck me that the better performing the railroads are, and the higher their stock prices, the higher -- under our formula, the higher the cost of capital, but the irony is if the purpose of a cost of capital measurement, in our regulated setting, I don't mean in other industries, is to make sure that the railroads have enough capital to be financially sound, the irony is that the more sound they are, the more difficult it is for a captive shipper to challenge their rates under our -- and so there's something inversed, unless I just don't fully comprehend how this capital market works, and that's entirely possible.

MR. CHIRUMBOLE: I'm not familiar enough with that calculation to answer, so.

BOARD MEMBER OBERMAN: Yep. Go ahead Patrick.

VICE CHAIRMAN FUCHS: A question for Mr. Rine's lot. You know, thinking about the bottleneck proposal. I think you mentioned reciprocal switching in your testimony as well. Say the Board acted on either of those, what do you expect could be the specific competitive response, you know, from railroads? How would that change in your view? You can say in general terms or specific terms, anything with your rate or service.

MR. RINE: That's the connection also with our comments about -- that's also in conjunction with our additional request for competitive switching?

VICE CHAIRMAN FUCHS: Yes, either switching a bottleneck if there were facilities that the Board were to mandate, you know, one of those two competitive access remedies, I guess. You know, what do you think that would do for your rates or for your service, and wherever it would be.

MR. RINE: Well, we have facilities in Canada.

VICE CHAIRMAN FUCHS: Yeah.

MR. RINE: And we enjoy the opportunity there to negotiate with both Canadian carriers. And that's not some comments made that specific switching, for example, is a long-term proposition. We've not seen that. We've had some short-term, one-year, two-year contracts, and we could go back and forth.

And there is leverage there for us as we negotiate to enjoy lower rates. And one thing I might mention too, the term head to head competition hadn't been used today while I've been here, but that's the focus that we see that's missing. And we talk about competition, the lack of competition.

I'm one of those elderly men in the audience. I've been around for a number of years, and I was here before deregulation. I was here for Staggers. I've appeared before the Board a number of times, and I recall back when Conrail was being divided up between NS and CSX. I served on the Conrail transaction team and appeared before the Board.

And I was asked a question by the Chairman at that time, if it was true what the railroads would say if the Board did what the shippers were asking, and that was not to break-up Conrail. But the railroad said they were going to go broke, or if they didn't get a merger approved, the railroad would go broke. And it's part of the public record that Conrail officials stated at the time, the last two years Conrail, were the best revenue years in the history of Conrail.

And where there were three competitors competing for business, that the shippers were enjoying rates around 20 percent less. And where there were two competitors, the rates were somewhere between 12 to 14 percent. And I testified that we saw that, we saw those numbers. So, if you have someone like Conrail, that had two of the best years, and they were revenue. I don't know if they were considered revenue adequate. I think they were considered to have two of the best years, and they had head to head competition.

That we struggled with understanding why the railroads would say that they would go out of business, you know, they could compete, and they competed vigorously. And so, back in those days we had four railroads in the south. We had three in the north. We had Conrail, CSX, NS, we had BNSF, Santa Fe, UP & SP, and a lot of combinations there, okay.

So, when we drive out competition, that head to head competition, what we have left is what we have today. And anything you do that will drive competition, and that's a struggle for a shipper. What we're looking for is a competitive rate that we can include into a competitive selling price.

We compete with our customers, you know, because we have competitors on the other side. We're shipping customers we're shipping to. But on this side, when we're captive to railroads, we have one dictating rates to us. There's virtually no competition. There are no negotiations. That's where we're at today, very little negotiations.

And when you look at Indorama, one of the fastest growing companies in the world, and the contribution that we are making. As we mentioned 2.1 billion dollar acquisition. We've bought multiple facilities around the world and it's a struggle and you hear response as well.

When we look at their shipments, their shipments are not affected. Our bottom line is affected though. You know, because just because they keep passing on rates to us, doesn't not mean that we're not absorbing that, taking less profit, less profit, less profit. Ultimately, it affects our business.

VICE CHAIRMAN FUCHS: And I guess maybe the proper term is the task force performing protections. Do you have any view on that if there were either the bottleneck changes proposed by ROTF or you know, reciprocal switching as contemplated by 711, do you have any, you know, perspective on what you would expect to see when it comes to written service?

MR. CHIRUMBOLE: Our view is it might be

helpful, but it requires the railroads to compete and they haven't shown that they want to.

CHAIRMAN BEGEMAN: Okay, it's my turn. It's my turn, it's my turn. It will be profound, I assure you. John, the submissions of the other carriers, or at least one other carrier, cover bottlenecks to quite an extent, such as what you did, and one of the things that I have found missing from the testimony that I've read or that I've heard so far, is I'm hearing why it -- losing your long haul, your full route to another carrier, why that is not a good thing from your perspective.

But I'm not hearing anything about the fact that you also could be receiving, you know, service, or you know, customers from the other bottleneck carriers that might be in the same situation where someone wants to go to you and leave them. So, could you help fill in some of those blanks? It's not -- it wouldn't be, you know, a one-way street, or it seems like it would be an opportunity should a carrier want to take it and as Frank just said, and actually do some competition.

Again, it's not for the entire route, so I understand there would be trade-offs, but we've been in a few settings where we've kind of been left with an impression that the railroads don't want to compete, so here's your opportunity to tell us something different.

MR. FRIEDMANN: I think one of the things the railroads work hard at is trying to maximize the efficiency of the network. And whether that's something that's just moving over Norfolk Southern's lines, or a shipment that we have to work with another railroad to get to its destination. And in sometimes, we will short haul ourselves because that is the most efficient route.

There are shipments for example, from around the Mobile area that are headed to the panhandle of Florida, alright. It doesn't make a lot of sense to drag those up all the way to Birmingham and bring them back. You know, we will work that, but --

CHAIRMAN BEGEMAN: But that's at your choice, not at the shipper's choice, right?

MR. FRIEDMANN: Yeah, and what we're trying to do is maximize the efficiency of the network so that we can in essence, provide a viable efficient quality service for all of the shippers.

And the concern we have is that what may be good for one particular shipper is bad for the network. It may be good for us, for example, as a particular carrier if we are the receiver of that. But one thing I have seen is that interchanges are the weak link in the transportation network.

So, adding more interchange events naturally degrades efficiency. And the quickest way into a service crisis is wild unpredictable swings of volume. And so, from an operating perspective, which is what I'm here talking about today, those are the things that we try in the case of interchanges, to carefully manage. Or in volumes, do our best to predict and minimize the risk with.

MR. CHIRUMBOLE: Can I make a comment about that? In a scenario where the bottleneck protections were eliminated, and a lower price was available to a shipper, causing the original fare to short haul themselves, the originating carrier can remedy that by lowering their price to keep it on the long haul route. That doesn't happen.

The excuse is put up there well, it's going to mess up our network. Well, if you lower the price and keep it on your network, the network should be fine. That's what's not happening.

BOARD MEMBER OBERMAN: I would just like to follow-up on this question. All day we've been hearing from Professor Sappington and Professor Kalt mimic competition. Considering mimicking competition, which is that allows deficiencies in the SAC test, or whatever other mechanism we're trying to mimic competition.

Isn't loosening up the bottleneck and competitive switching rules, a way to get actual competition? I mean everybody says the best way to control rates is not for us to set them, but for the market to set them through competition -- a sentiment with which I agree. So, I understand you're saying that there's a cost of the efficiency in the network if you have to have an interchange, although as Frank points out, you can avoid the interchange by just having competitive price.

So, we're talking about two competing interests. But it seems to be difficult for us -- for the railroads to come in here and say let competition set the rates, but where there's a chance to have more competition, don't make us do it. And I share Ann's sentiment, we've seen at least two concrete situations that I'm aware of where railroads, there's some evidence that they have a chance for competition and are consciously avoiding it.

So, we're getting really mixed signals on this, and I find it very troubling. So, I don't know if you want to comment on that or just let it be, yes sir.

CHAIRMAN BEGEMAN: Patrick, comment on this.

BOARD MEMBER OBERMAN: I'll ask Patrick.

VICE CHAIRMAN FUCHS: No, no, isn't the difference, and please correct me. But isn't the difference the way SAC mimics competition, it brings the rate down to the stand-alone cost, which is what would be the competitive rate in a contestable market where a hypothetical entrant can come in and take the traffic. But if you have actual competition, that is forced by the Board, it lowers the price down to incremental costs for long-run marginal cost.

So, the difference is when you impose actual competition, you take the carrier, and the carrier can't make a contribution to the fixed cost, whereas which is what the SAC fills in and allows for those fixed costs. Isn't that the difference?

MR. FRIEDMANN: Well, I would also say that one, the SAC test is really a test, if I interpret this right, designed to constrain pricing, alright, that in the end has no operational impact.

At the same time, if you adopt any of the operational remedies that you've discussed, especially in a capacity-constrained environment like we've got on the Mobile line, there is that inefficiency that you're introducing, not only to the shipper that benefits, but the shippers who are basically the casualties.

VICE CHAIRMAN FUCHS: But I think to Frank's point, it would be that you would lower the rate in that situation to avoid that inefficiency, but it's just that if you wanted to keep that traffic, you would lower the rate probably, below stand-alone costs, and that's the difference.

MR. FRIEDMANN: Well, either way the network is more soft, okay. You could say, you know, I don't want to -- if we lowered the rate because I want to avoid it, that means there's less chance of investment there, less new capacity, less solution for operational issues.

VICE CHAIRMAN FUCHS: Right.

BOARD MEMBER OBERMAN: I'm really having trouble with this. You are arguing for monopolistic pricing, so you could have more money. I mean you're either going to have competition set the rates or you're not. I'm really getting kind of -- and Frank, do you want to weigh in on this?

MR. CHIRUMBOLE: I might have said I guess in that scenario if the rates weren't going up 5 percent every year, then I might believe you, but why does it need to go up 5 percent every year if the original rate was what you needed to support your network. Are your costs going up 5 percent a year? Mine don't go up 5 percent a year, so.

VICE CHAIRMAN FUCHS: I think the difference is -- and I'm not saying I feel one way or the other about the policies that we're discussing. I think that the difference is that, you know, when you have economies of scope and density, and you have you know, an average cost that falls with more production, sometimes the most efficient outcome is for one firm to serve that particular plant and they differentially price to cover their fixed costs.

And that's going to be above what you would see in a purely competitive market. And that's, I think, the difference, is that if we had forced competition everywhere the argument is -- and I'm not weighing in on any particular policy, but I think the argument is that carriers wouldn't be able to differentially price enough to cover their fixed costs.

And so, you know, our regulatory framework absolutely allows currently for carriers to differentially price when they have market power to cover their fixed costs.

BOARD MEMBER OBERMAN: Well, but maybe so, but then let's not engage in the facade that what we're doing is mimicking true competition. We're doing something else. You know, as I understand the history of this industry, which I'm just getting into, we were overbuilt, and so in 1980, the Congress said we've got to have rationalization, and a great deal of that has gone on to everybody's benefit. I don't think there's any doubt about that.

So, nobody's quarreling with the general benefits of the Staggers deregulation. But now we're at a point where there's so much rationalization, there's very little, from what I understand, and Mr. Rine talked about it, and other shippers, actual competition and I think you're almost conceding it on the 250 mile Mobile line, John. And now you're saying don't go any further, or we won't be able to have enough capital.

And if you're right, then we have to have some other mechanism, but let's not call it competition. Because you're saying if you have too much competition, your prices will be too low and you won't be able to have enough for capital, so let's call it something else.

That's sort of the problem I'm having with it. I listen to all this mimicking competition. That's just a facade. If there's a difference between mimicking competition and real competition, then the mimic is not a very good mimic. So, let's deal with some other concept and maybe we'll make more progress.

MR. FRIEDMANN: Perhaps the distinction that you're trying to make, Commissioner Oberman, is a difference between short-term and long-term competition. They are both forms of competition, but in the short run you may gain some more competition by the bottleneck change that is being considered.

But I think the point that's being made is that in the long-term though, that opportunity to have that competition may disappear entirely, because it will no longer be profitable to invest the resources that are currently there, but may not be there long-term.

BOARD MEMBER OBERMAN: That may be so, but I'm sort of responding to Patrick, who is way more knowledgeable about this than I am, if the stand-alone test is building in some ability for beating capital costs that wouldn't be there if there was actual competition, then let's just not pretend that we're trying to have rates set according to some competition concept to the SAC test, because we're doing something else.

I don't know what it is, but it can't be if it's different than actual competition, then it isn't mimicking it. That's all I'm saying. And it's -- I don't think productive to pretend that we're doing something that we're not. It may lead to a different way of making sure railroads have enough funds, but I just find it frustrating, particularly, since throughout our statutes, our mandates from Congress, they have as much competition as possible.

But here, I'm being told not to have too much competition, or we won't have enough money, so.

MR. FRIEDMANN: I think the answer may come down to the point that Professor Kalt made this morning about the way in which competition works in different ways in different situations. So, in a situation where it really is only efficient to have a single supplier, what you're competing for is for the right to be the sole provider of that service.

Whereas, the other type of competition I think we're talking about now, is where you already have two railroads situated to supply service to the same shipper.

CHAIRMAN BEGEMAN: Okay, so we actually could keep talking past 6 o'clock. But I don't want to short change the last panel. I just have two things. How ironic, I'm going to ask at this point. So, NS, is the Board obsolete in your view?

MR. FRIEDMANN: I don't believe so.

CHAIRMAN BEGEMAN: Alright, that will give a lot to add to my talking points in my letter, thank you. And finally, to Mr. Awad and to Phil, thank you. I do have questions that I'm not going to be able to ask you. Same for you, Frank, and also you, Pete. But I just want to make a comment to all of you in the audience.

All you railroads that are listening, but although this is not a demurrage hearing, and at first, I thought maybe you were confused that it was May again. I appreciate the fact that you came and told us it was going on from your perspective with demurrage since we had that period in May and since we've made -- there's proposals. Just a very short time ago, we received replies on our proposals, and I will say, I was pretty troubled by some of the things that I have read that are similar to what you just said to us. And I hope that the railroads are reading all of the different replies and, you know, maybe we'll have to have one more round of commentary of he said, she said, he said, she said, they said, because there are some real extreme allegations that a couple of the filers have said on behalf of their members. And I also want to acknowledge as what the Board has said in some of their proposals, I mean, some of the railroads really have heard concerns and have acted on them, I mean, NS, you got rid of that congestion fee. You've done various things that we cited, but again, I think there is a lot more work to be done. And so I hope you all take that as being duly noted and we'll go to the fourth panel.

MS. GAINEY: Thank you, Chairman Begeman, Vice Chairman Fuchs and Member Oberman. My name is Kathy Gainey and I'm counsel at CN. With me today is CN's Vice President and Treasurer, Bernd Beyer and CN's outside counsel Matt Warren. CN appreciates the opportunity to testify today as to the importance of predictable regulatory framework that supports CN's ability to invest in its network, equipment and technology, to provide safe and reliable service to our rail customers.

CN's network is unique in that it touches three coasts of North America. We move a wide variety of commodities across Canada and the United States and to ports that reach markets across the globe, maintaining and expanding our 19,500-mile network requires significant ongoing investment. Mr. Beyer is going to chair how CN's invests her safety and rail customers. These investments maintain CN's current network and improve network fluidity, increase capacity and build resiliency. He will testify about our concern that the revenue adequacy proposals in the Surface Transportation Board's Rate Reform Task Force report would increase regulatory uncertainty.

Such increased regulatory risk could make it harder for CN to compete with other industries for capital and financial markets and to make the rail industry -- and will make the rail industry a riskier investment and much less attractive to investors.

Such increased regulatory uncertainty could also increase the risk for CN to pursue new investments in its network and equipment. And with that I'll turn it over to Bernd.

MR. BEYER: Thank you Kathy. Good afternoon Chairman Begeman, Vice Chairman Fuchs and Member Oberman. As Treasurer of CN, I work daily to ensure that CN's capital investments benefit our network and our customers and that they make sense from a financial standpoint.

CN invests heavily in its network and equipment. Those investments are vital to providing freight rail service to our customers, to promoting network fluidity, and to building resiliency. Unlike many other transportation modes, a railroad must build, maintain and expand its private network at its own cost.

CN's investment decisions are driven by safety and customer service. Our ability to make smart, long-term investments in our network and equipment is critical to our ability to provide good service for our freight rail customers.

In 2018, CN invested 52 percent of its operating income into capital investments. Viewed differently, approximately 72 percent of CN's net income was reinvested into the business. CN is on track to outpace those numbers for 2019 with an expected capital investment envelop of 3.9 billion Canadian dollars across the network.

As you can see, more than 40 percent of that investment has been in CN's network in the United States. CN's investments are good for safety and rail customers as they tend to reduce cost cycles, increase asset utilization, increase capacity and network fluidity and drive service and growth.

We also invest to maintain and rebuild existing infrastructure, fulfill federal regulatory requirements and expand the company footprint. In 2019 alone, CN has invested in each of those areas. CN has improved network fluidity by constructing new sidings and siding extensions.

Such sidings expand mainline capacity, eliminating key pinch points, improving fluidity and build resiliency. Sidings facilitate efficient train operations by allowing a train to cross another in a rolling meet in CN's mostly single track network in the United States.

Key investments include new siding projects at the international border in Rainia, Minnesota and double track in northern Wisconsin, outside Superior. CN is also investing capacity and facilities to respond to customer demand in Tennessee, Illinois, Wisconsin and Minnesota.

CN also expanded its fleet of railcars.

In 2018, we added nearly 1,000 cars to our center beam fleet, and over 600 boxcars to rejuvenate as a fleet starting our first product in metal customers. CN is also acquiring 1,000 new generation high-capacity grain copper cars over the next two years to replace aging equipment and meet the growing needs of our grain customers.

And by the end of 2019, we will have accepted delivery of 140 new, high-efficiency locomotives for a total investment of approximately 500 million. This was CN's largest locomotive purchase since 2012. This improves the reliability of our locomotive fleet.

CN's acquisitions of cars and locomotives supports CN's rail service for our customers. CN has also made investments to comply with federal regulatory requirements. Our continued investment in positive train control, or PTC, will result in a planned investment of a total of 1.5 billion.

As of November 2019, CN has met the regulatory requirement to operate PTC on all 35 of its U.S. subdivisions required to be equipped with

PTC. This PTC mandate has required CN to make a massive commitment of capital resources that are not available for other important investments in its network or equipment.

CN has a long history of investing in the United States by expanding its footprint. We are celebrating the 10 year anniversary of our acquisition of EJ&E. To purchase and integrate EJ&E, CN invested hundreds of millions of dollars in infrastructure improvements. This acquisition allowed CN to reduce overall delivery times by approximately 24 hours and directly benefit customers whose freight moves via the Chicago terminal.

Since the acquisition of EJ&E, CN's trains now move twice as fast through Chicago. CN also invests in technology to innovate for safety and customer service. CN is excited about a number of technological innovations driven by our research and development that has the potential to enhance the safety and environmental impact of railroad operations.

For example, in 2018, CN unveiled a new design for central beam cars, which reduces undesired train separations by 67 percent, enhancing safety for all customers and our crews. CN has a patent on this technology and has shared the design with the industry.

CN is also partnering with -- CN has also partnered with a company to develop CanaPux, an innovative and safe way to transport extra heavy crude. The extra heavy crude is blended with polymer to form a solid pellet that can be transported to global markets using the same infrastructure as coal or petroleum coke. At the end of the journey, the pellet can be re-liquefied, and the polymer can be separated and reused.

CanaPux pellets are not volatile, do not burn, do not pose a risk if involved in a derailment. CN is also investing to improve safety and reliability of investing in autonomous track inspection program, and automatic car inspection portals. Over time, these investments will allow for earlier detection of track and car defects to increase safety and enable repairs to be scheduled proactively before an urgent defect arises that requires track or cars to be taken out of service for repairs.

Performing track and car inspections at track speed will enable CN to detect defects without impacting network fluidity, meaning that CN will be able to get product to our customers more safety and more efficiently.

CN is excited about the opportunities these and other advanced technologies offer. These investments use strong operating metrics which reflect the strong service CN offers to its customers. CN's investments improved dwell, car velocity and network speed.

The proposals that are being discussed today are coming at a time when demand for freight rail transportation has decreased. There's also uncertainty regarding trade, tariffs, and the contracting of the North American manufacturing sector. Increased regulatory uncertainty would further increase risk. It is incumbent upon the

Board to develop policies that mitigate, rather than exacerbate the risks that a railroad confronts in making decisions about investment in its network and equipment that will benefit freight rail customers.

Added regulatory uncertainty could heighten the risk of investment in the railroad, by also increasing the risk for the railroads in pursuing new investment in its network and equipment. This could result in fewer capital projects. In the long term, regulatory uncertainty could negatively impact network fluidity, customer service, and the overall competitiveness of freight rail as a transportation option in the United States.

CN is particularly concerned that the revenue adequacy suggestions in the Rate Reform Task Force report, being considered by the Board, could make a railroad like CN a riskier investment and thus less attractive to investors.

Changes that increase regulatory uncertainty and risk, including proposals that could affect a railroad's ability to earn a return on its investment, could discourage such investment and make it harder for CN to compete with other industries to raise necessary capital in financial markets. That capital is necessary for CN to invest in its network and equipment, to provide rates for a service for its customers, and CN is concerned that the effects would deteriorate CN's ability to invest. Thank you.

CHAIRMAN BEGEMAN: Alright, CP?

MR. WITTEBROOD: Good afternoon Chairman Begeman and Vice Chair Patrick Fuchs and Commissioner Oberman. My name is Tyme Wittebrood, and I am the Director of Regulatory Finance for Canadian Pacific.

I'll just give you a little bit of context. The Regulatory Finance team for Canadian Pacific acts as the primary interface between our business and our regulators. We provide guidance and analysis to our regulator, or sorry, to our business in order to -- I should take my glasses off.

We provide guidance to the business and to the regulators to ensure that we operate effectively within the regulatory framework and we provide data and analysis to our regulators in order to allow them to develop and implement the regulations.

We are not research economists, rather we deal with regulatory environments from a practical perspective. Similar to the experience in the United States, the Canadian regulatory environment for railroads began to move towards deregulation in the late 1960s with the passage of a new National Transportation Act. With this legislation, the industry moved towards market based rates and the legislation prohibited setting of rates that do not adequately cover a railroad's costs.

As in the United States, the results were overwhelmingly positive for railroads and shippers alike. While there are many similarities between the regulatory environment in Canada and in the United States, the Canadian experience has been somewhat different. And I wanted to come here today to provide some observations from the Canadian environment from the Canadian perspective, which may inform these proceedings.

But first, I would like to illustrate fundamental flaws in the existing methodology with revenue adequacy that renders it inappropriate as a tool for implementing a top down rate constraint.

The use of book values for calculating return on investment, is itself improper. Book values do not represent an accurate view of the replacement cost, or the current market value of an asset. This is especially true of long lived assets such as railway track, and ballast, locomotives, bridges and buildings. These assets may have been purchased decades ago in a time when prices were much lower.

Land, which does not depreciate at all, may have been acquired more than a century ago. Prior to CP's acquisition of the DM&E in 2008, CP's U.S. operating companies showed less than 7 million dollars of land assets due to that book value.

At that time, we operated just over 4,500 miles of track in the U.S. In the following year, when the DM&E acquisition was added to the books, the U.S. track mileage increased by nearly 80 percent, to just over 8,000 miles, but concurrently, the book value of the land increased by nearly 10,000 percent, to 664 million dollars.

Of course, the reason that the newly acquired land represents approximately 100 times greater book value per mile is because they were stated to their modern values when they were acquired. Let us say hypothetically, that CP generated 7 million dollars of income, strictly from its land assets in both the year before the DM&E acquisition and again in the year after.

So, in the first year that would represent approximately a 100 percent return on its investment. But in the second year that represents slightly more than 1 percent return and so this state of affairs demonstrates the distorting effect of using book values when attempting to use them in an economic study.

The true value of a company's assets to the business is the value that these assets would fetch on the open market today relative to their income generating potential. So, for example, if the liquidation value of an asset exceeds its income generating potential, then a prudent business manager would be expected to sell that asset.

And therefore, if a regulator constrains an industry's return on investment according to the book value of that investment, this will likely lead to chronic under investment. New capital will be deployed in non-regulated demands where it is likely to generate returns based on its true value.

This is not mere economic theory. And in Canada, the railroad industry has recent experience with this phenomenon. The Canadian railroad industry is subject to a regulatory rate constraint called the maximum revenue entitlement which sets an average price ceiling for the export of grain traffic.

The regulator determines the price ceiling annually according to a price inflation index. And this approach does a particularly poor job of reflecting the investment and certain long-lived assets such as the covered hopper cars that are predominantly used to transport grain products.

Therefore, an unintended consequence of the MRE has been to prevent the railways from being able to recover adequately the cost of investing in hopper cars. As a result, Canada's hopper car fleet continues to age and suffer from underinvestment.

Finally, in May of 2018, recognizing that Canada's hopper car fleet was becoming unreliable and inefficient, the government passed new legislation that allowed the Canadian regulator to recognize specifically the cost of investing in new hopper cars as an adjustment to the index.

And within a few weeks, both CP and CN, sorry, CP and CN announced hopper car purchase programs totaling more than 600 million dollars Canadian. So, this experience clearly demonstrates the broad-based regulatory constraints on revenue will lead to under investment.

The RRTF proposal for the rate increase constraint promises that the effect of the regulation will be limited. However, when one walks through the practical implications of managing such a program, from the perspective of both the shipper and the railway, it quickly becomes apparent that the ultimate effect of the program will be far reaching.

For example, customers who are under

contract will know whether or not their rates will be subject to the RIC if and when their contracts expire, and we would expect them to use that information during negotiations in order to insist on rate increases that fall short of the RRTF requirement. If not, then a customer could threaten to go off contract in order to make use of the RIC protections.

And that's simply to say that contract rates will be subject to the RSC practice, even if not in theory. From a railroad's perspective, once the railroad is subject to the RSC, then every action it takes to improve its earnings will contribute to the next year's surplus.

This in turn, will lead to a tightening of the RSC's grip. And every time that the railroad considers making an investment or an operational change that would lead to greater efficiency, this should be expected to generate higher earnings, which would lead to subsequent years' overages and surpluses, and therefore every investment opportunity will be evaluated as to its ultimate impact under the

RIC.

We see a similar effect in Canada under the MRE regulations. Under the MRE, there is no direct way for a railway to increase the amount of revenue that it may earn for a given volume of traffic. But the railroad may recoup over time, certain investments made in grain handling facilities.

Therefore, every potential investment that affects the grain network is evaluated as to its impacts under the MRE. Investments that can be recovered through pricing under the MRE are likely to go forward and those that cannot are not likely to go forward because there is no way for the railroad, sorry -- the railroad to adequately recoup its costs.

The RIC proposal does not appear to offer any way for the railroad to recoup the costs of its investments. Arguably, anything that the railway does to improve its earnings under the RSE constraint, will eventually be returned to shippers by way of ever-tightening rate constraints.

In conclusion, revenue adequate test is

not robust enough to use as the basis for applying sweeping economic regulations that attempt to manage the economic health of an industry that is crucial to the North American economy.

Further, as testified by others at this proceeding, such economic regulations would be contrary to the STB's mandate and would have unintended consequences, including distorting a railroad's ability to attract and invest capital. Thank you very much.

MS. SAHLING-ZART: Good afternoon. Chair Begeman, Vice Chair Fuchs and Member Oberman. I am Shelley Sahling-Zart, Vice President and General Counsel of Lincoln Electric System, the municipal electric utility in Lincoln, Nebraska. And I currently serve as President of the Freight Rail Customer Alliance or FRCA.

FRCA is an alliance of trade associations that in turn represents a diverse group of more than 3,500 electric utility, agriculture, chemical and alternative fuel shippers. In addition, I'd note that I had the honor of serving on the Railroad

Shipper Transportation Advisory Council of the STB for 6 years.

FRCA thanks the Board for holding this hearing on revenue adequacy and for providing the opportunity for us to address the related proposals in the Rate Reform Task Force report. We'd also like to thank the staff who served on the task force. While there may not be unanimity regarding the recommendations, FRCA certainly appreciates the work to advance the ideas and provide the framework for additional discussion.

In the 31 years that I've been participating in these kinds of discussions, we've been discussing pretty much the same topics and the same issues for 31 years, and it's nice to have some concrete ideas on the table to perhaps talk about something different for the next 31, though I won't be here that long.

FRCA supports most of the proposals in concept, but believes there are some much needed improvements. FRCA strongly believes that there needs to be a viable and effective revenue adequacy constraint as part of the Board's oversight, by statute rates, as we've discussed today, are required for captive shippers to be reasonable.

The Board's only partially effective rate constraint to date has been SAC. SAC works for only a small group of shippers as has been discussed at length. I can attest, from personal experience in the Western Fuel's case, that even where SAC is utilized, it is slow. It is expensive.

For most shippers, SAC and the existing alternatives don't work at all. FRCA recognizes that railroads need differential pricing to cover their cost and serve as many shippers as possible. But once railroads recover their cost and achieve revenue adequacy, allowing further unrestrained rate increases does not guarantee further infrastructure investment, but rather, in our opinion, punishes captive shippers.

The ICC recognized and established this principal in 1985. Measuring revenue adequacy based on whether a railroad's return on that investment exceeds the cost of capital, can be a reasonable approach, but other measures should be considered. But to the extent that the Board relies on return on investment and the cost of capital, both must be measured accurately.

For instance, return is not measured accurately when it ignores railroad tax savings in 2017, 9 billion dollars. And, as you heard earlier, accuracy is also compromised when the Board measures the cost of capital at 12 percent and Burlington Northern's own Executive Chairman says the needed return is only 7 percent.

FRCA believes the measurement period should be a fixed length, and that 5 years is sufficient. Trying to capture the business cycle is an exercise in futility, as illustrated by the experience with the RCA of productivity adjustment. Varying the length of the measuring period causes different years to receive different weights and produces distortion.

5 years is long enough to smooth out most troughs, and an even longer averaging period makes the constraint less reflective of current and recent

conditions. FRCA agrees that a rate increase constraint should be a key element of revenue adequacy constraint.

Once a carrier achieves revenue adequacy, the carrier does not generally need to impose further rate increases on its captive traffic, in excess of changes in its costs in order to remain revenue adequate. Unfortunately, the Board's proposed rate protection would apply only to some captive rates; that's a pretty big step backwards from the protection adopted in the coal rate guidelines that applies to all captive rates to a revenue adequate carrier.

MMM is a useful mechanism for allocating rate reductions, but the revenue increase constraint does not reduce rates, it merely limits future increases. The protection should apply to all movements where a carrier has market dominance, unless the carrier makes a specific showing that the higher rates should apply to an individual movement.

The Board's proposal is also unduly complicated in that it relies on system average URCS cost, which are inherently imprecise as was also discussed today and explained previously by the TRB.

FRCA also supports the proposed suspension of the bottleneck rate protections for revenue adequate carriers. Bottleneck relief may solve most of the issues with competitive access. A carrier that is revenue adequate should be expected to compete. Also, a carrier subject to bottleneck rate relief will still have other protections, such as market dominance and SAC.

FRCA also supports allowing a shipper to use the simplified road property investment analysis in a simplified SAC case against a revenue adequate carrier. However, as was also discussed earlier, that should be at the shipper's option and the shipper should be allowed to make a full road property investment showing if it so chooses.

A shipper should not have less protection because it's served by a revenue adequate carrier. The Rate Reform Task Force indicated that for revenue adequate carriers, simplified SAC should be replaced by incumbent network cost analysis, or INCA, something we haven't discussed much today.

At this time, FRCA does not support elimination of simplified SAC for revenue adequate carriers, but FRCA does look forward to learning more about INCA. It's an interesting concept. Unlike the revenue increase constraint, INCA appears to have the potential to reduce rates, while avoiding an expensive replacement cost analysis.

So, that's one we'd like to have more discussion about and pursue a little further. To conclude, the proposals are significant and helpful and FRCA greatly appreciates the attention that the STB is giving these issues, but modifications are needed to the recommendations, but it's a good framework for that start. I look forward to responding to any questions you may have.

CHAIRMAN BEGEMAN: Thank you Shelley, Kent?

MR. AVERY: Good afternoon. I'm Kent Avery. I'm VP of Commercial for PBF Energy. PBF is an independent refiner. We operate 5 refineries in the U.S., 4 of them are on the east coast, 1 is on the west coast. I'm going to be brief today, because I don't think there's anything, I can say that hasn't already been said.

And frankly, I'd like to -- what's that? Frankly, I want to get to the questions because you know, these two Canadian roads up here, they're the darlings of Wall Street and they've had some form of regulation up there as far as competition is concerned. So, I'd really like to hear from them about what's working and what's not.

Also, we're a member of AFPM and AFPM's going to talk tomorrow and a lot of the points are going to be covered there. So, I don't want to stand in between us and a cold beer. So, we'll get to the questions here in a second. I do want to just say a couple things.

My testimony was originally about bottlenecking, okay, but again there's been enough said today, and I don't care what you call it, whether you call it reciprocal switching, haulage rights, trackage rights, call it what you want. The gentleman that was up here -- this gentleman right here, that testified before me said it best. We just need head to head competition. This isn't complicated. We just need competition, that's it.

As a matter of fact, I am not in favor of rate constraints if there is competition in significant bottlenecking revisions. And, as Mr. Oberman said here earlier, I do encourage the Commissioners to look at the stock buybacks that these railroads have done, versus the capital they spend.

I'm not sure why you would buy stock back in a company that's not revenue adequate. So, it just doesn't make sense to me. I do want to tell you what it's like to be a captive shipper though. I'm going to give you two examples. In the east we have 4 refineries. The NS railroad serves all 4.

2 of those 4 refineries are open, the other two are closed just to the NS. But really, they're all closed to the NS. The leverage the NS has at the two captive facilities, makes the two open facilities almost closed. They're de facto closed because of all the leverage they have.

In the west, I'm captive to the BNSF railroad. And you know, I've been working for over 2 years with the BNSF railroad on trying to build storage out there. Today, PVF Energy, I don't want to tell you how much we pay in demurrage, it would be a safety issue. Everyone would fall out of their chairs. But it's a lot of money. And so, we've been working with the BNSF for 2 years and said hey, we'll build. We'll build. We don't want to pay demurrage. We know you don't want us in your serving yard. We'll build, let's go look for a place.

We have found 6 to 10 spots, and PVS is willing to build. Okay? The BNSF won't serve it. They're saying that their operating department doesn't like it. They either don't want to switch on the main line, they either can't commit to service within 48 hours of our operation, so what are they doing? I do have a demurrage agreement in place right now.

And that demurrage agreement, Miss Mulligan here, is going to cancel it the first of the year. That demurrage agreement only accounts for about 20 percent of the cars that we handle through there, but it is something. But that's going to be cancelled now.

I just want to point out that we're willing to build. We're willing to do something. We're a captive shipper. I don't have the ability to go to another railroad and say hey, help me with demurrage or storage, and I'll give you business. So, that's what it's like to be a captive shipper.

At any rate, thank you for all the hard work. Thanks for all the work the STB is doing and all their staff. I appreciate the opportunity and I just hope we can come to a happier spot than we are now as a shipping community, thank you.

BOARD MEMBER OBERMAN: Thank you Kent. Kathy, I wanted to ask you this question has come up a few times with others too, but I didn't ask it. Or maybe it was Mr. Beyer. One of the two of you talked about the new proposal the RIC idea and the task force report will bring uncertainty to the rail world, and uncertainty is not good.

Could either of you tell me what would be uncertain about it? Why would there be uncertainty?

MS. GAINEY: And so, to clarify, we were actually not speaking specifically about the RIC or the rate increase complaint. We were speaking generally about the Rate Reform Task Force's revenue adequacy proposal to also include the bottleneck proposal.

But generally, if the STB is going to engage in something that fundamentally changes the regulatory framework in the United States, it's a two-fold concern. First, for CN, in our internal decision-making about what investments on our network are appropriate to pursue based on our expected rate of return, it has additional uncertainty that makes it unlikely in any particular investment that it would be likely to be funded as it is now.

And then our second concern is that the Board's proposals by increasing regulatory uncertainty in the United States with potential for serious implications that would happen, the knife edge, was the phrase used this morning, for potentially long-term, carriers that were deemed long-term revenue adequate.

But that would discourage investors from viewing the rail industry as an attractive investment. And we at CN compete in financial markets for capital with other industries, and we view that as a potentially adverse consequence of the rate reform task force proposal.

BOARD MEMBER OBERMAN: Here's what I don't understand. If a rule was proposed to enact what the Rate Reform Task Force suggests, in terms of the revenue adequacy measurement plus the RIC and so forth. At that point, what would be uncertain? That's all I'm trying to figure out. As compared to the rate relief mechanisms we have now. You'd know what it was, and there'd be an arithmetical formula to determine if you're revenue adequate, so you may not like it for other reasons, but why would it be uncertain? That's what I'm trying to get at.

MR. BEYER: Well, I don't think it's a question whether or not the regulation itself is uncertain. It's more two people have made the point when we make, you know, large investments, we make them on day one based on a number of assumptions about the future. What the future would look like, what revenues might earn under different scenarios and all that stuff.

And as somebody pointed out earlier, it takes you know, it's decayed off return, they have to justify that investment. In a world where you know, we cannot strive to exceed our cost of capital, which is really a requirement to create value for the shareholder, it is much harder to justify such an investment than it is that, you know, if and I think somebody earlier today used an example of an isometric failed curve.

If things go bad, I bear -- would have answered the downside risk. If things go well, well then, I'm revenue adequate and cannot you know, harvest debt if you like, those rewards, but we meant, I think, but we said uncertainty.

BOARD MEMBER OBERMAN: You mean as to whether your investment will pay off?

MR. BEYER: Whether or not the investment will pay off, or that there will be a limited pay-off in an upside, but a full downside if things don't pan out the way anticipated.

CHAIRMAN BEGEMAN: Is there any role at the moment that the Board is playing that is coming into, across I guess your decision-making on a daily, or monthly or yearly basis for your investment. So, right now it's all certain because of all the other regulations we have, it's completely crystal clear, but theirs is -- just with respect to revenue adequacy, that's going to impose uncertainty or things like the examples from what's going on with the Canadian regulators.

There's probably a lot more uncertainty in that sphere than there is here.

MS. GAINEY: We would think the same thing. We would say the same thing with respect to the Canadian regime, when it creates uncertainty in the long haul.

CHAIRMAN BEGEMAN: And yet your operating ratios are the envy of Wall Street and American railroads or U.S. railroads are emulating them, almost all of them, or working to. So, it's kind of hard to grasp what you're trying to tell us.

MS. GAINEY: The increased uncertainty from regulations that make it uncertain whether CN, when we're making a decision whether to invest in an asset like track, that we're going to be depreciating over a 40 year timeframe. If we're not certain that we're going to be able to earn a reasonable rate of return on that investment, it makes CN less likely to invest in that particular asset.

CHAIRMAN BEGEMAN: Wouldn't that apply to any investor?

BOARD MEMBER OBERMAN: Yeah, I mean, isn't that how any type of business makes an investment. You don't know if it's going to work. There's always an element, that's the whole nature of being a capitalist.

MR. BEYER: No, that's fine. But I think an investment is entitled to earn a return above the cost of capital.

BOARD MEMBER OBERMAN: Well listen, I understand that you may not like the mechanism. I'm just trying to figure out why you say it's uncertain.

Because if it's uncertain, and we're trying to consider devising something, then we should try to make it certain. And that's what I'm missing.

If somebody brings a SAC case, that's uncertain because you don't know how we're going to rule on it. So, that's uncertain as well. So, what's the difference? That's all I'm trying to get at. And a number of witnesses have said we're bringing uncertainty into the system. We may be bringing -- I mean if we did it, a mechanism that you don't like, or that you think is harmful, but it would be certain, wouldn't it?

MS. GAINEY: It's -- I'll answer and then Bernd will answer. So, in an individual rate case, whatever the rate case methodology would be, it would just be an individual rate that would be at issue and might be found to be unreasonable. But the rate performance half course proposal has a much broader potential impact, that is uncertain and will not be known until things play out in the future and indeed could change on an annual basis and involve factors like lag.

And change fundamentally, in the United States at least, the carrier's expectation that they would be able to be entitled to the long haul on the freight rail move when it's making a decision about an investment and then I'll pass to Bernd to give his perspective as well.

MR. BEYER: And I don't have much to add to that Kathy. I mean maybe it's -- what I meant by uncertainty, I guess is risk, which maybe can be used interchangeably. And all else being equal, an investment -- two identical investments, one with a revenue adequacy clause and the other one without, is more risky, or more uncertain because I don't know under different scenarios.

BOARD MEMBER OBERMAN: What is it you don't know under the revenue adequacy?

MR. BEYER: Okay, so maybe the better way to put it is the investment is more risky and I'm less likely to do that investment because of the presence of the possibility that if I achieve certain revenue threshold, then I need to share that with my customer, those returns.

MR. WARREN: I think I might be able to help Member Oberman. What revenue adequacy would do is it would take away the up side. So, it's true that all investments have risk. But now, you have a potential investment. It may not work out. You know, the traffic you think is going to be there, may not develop. So, it may turn out that you didn't earn the return on your investment you were expecting.

But maybe you're right. And it will pay off and you will actually earn more on this new intermodal facility that you had, you said you had imagined and now, but what revenue adequacy does -- if you've done that investment and you realize the up side, it's taken away. So, all you have is the risk.

BOARD MEMBER OBERMAN: But that would be certain. It wouldn't be uncertain. You just don't like the outcome, but that wouldn't be uncertain. That's all I'm trying to get at it, is there something wrong with the predictability maybe we could remedy it, but all you're telling me is it just changes the risk measurement.

MR. WARREN: Yeah, I think you're right. Uncertainty may have been the wrong word. It's more certain that it would be bad.

CHAIRMAN BEGEMAN: Are you referring --

BOARD MEMBER OBERMAN: I understand that that's what you think, but at least it's certain.

CHAIRMAN BEGEMAN: Are you referring mostly to the bottleneck portion of the recommendations?

MR. WARREN: I think to both. I think RIC has the same, you know, basic effect, because I think anything that --

CHAIRMAN BEGEMAN: The fact that we call it RIC is really a shock to me.

MR. WARREN: RIC, yeah, I think any methodology that is based on looking at -- oh, certainly. Any methodology that is based on looking at system-wide revenues and system-wide earnings, and using that to decide you know, where the rate cap is going to be, is ultimately you know, one that is going to discourage investment.

Why would you build? Why would you invest in, you know, a new intermodal facility? You know.

BOARD MEMBER OBERMAN: 75 percent of your traffic is not limited. That's one reason. As I understand it, only 24 percent, we were told, is captive and all the rest of it is not regulated. So, the one reason you'd invest in a new facility is that most of your traffic you're going to make -- you're not restricted as to what you can earn. I mean what am I missing here?

MR. WARREN: But well, I think if you've done something on the 75 percent to become more efficient, that's -- you haven't gained anything, because all that is just going to immediately go except the 24 percent.

BOARD MEMBER OBERMAN: Just on an individual rate case. What I'm hearing from the railroads is if this revenue adequacy measure was enacted, you would cut off your noses to spite your face. You would cut off your ability to make profits on the 76 percent of the traffic because one or more of the shippers in the 26 percent might bring a RIC case, so to speak. It doesn't make any sense to me.

MR. WARREN: But I think as it was discussed on some of the earlier panels, the decisions that the Board makes are public decisions that you set the market. So, when the Board issues a decision, I think a lot of railroads could speak to the fact that, you know, it's common for someone to come and say, you know, there's a fact case, you know, and the Board gave 180 percent prescription. I want 180 percent.

And every contract negotiation is based on that, you know, underlying regulatory view.

BOARD MEMBER OBERMAN: Matt, just one thing. But the people who aren't regulated by us are not affected by what we do. So, those market forces wouldn't change, would they?

MR. WARREN: Well, I think that they are affecting every stakeholder in the network is affected by what you do. That discourages investment. It's going to hurt those 76 percent that you know, may not have rates that they're complaining about, but certainly have service that they're very concerned with.

VICE CHAIRMAN FUCHS: With respect to the investment. If some of what's at the effect that you're referring to is some of it because if investment was successful, and bottleneck was opened up, there's the possibility for a lower return than you could get -- what you're saying, there's a possibility just a lower return.

So, such that you wouldn't necessarily, you know, cover the full fixed cost like you would if that person were guaranteed to be captive over the long term.

MR. WARREN: Yeah, I think that's right. You're looking system-wide, but I think railroads, as any business, evaluates a potential individual investment, it's going to be looking at, you know, what's our potential return there. And if you're doing things that are cutting or taking away some of the upside, then that's --

VICE CHAIRMAN FUCHS: Right, so kind of to Kent's point about the Canadian situation with inter-switching. So, I remember reading this article a few years ago, it was an interview with Hunter

Harrison. And so, maybe you can apply that to both railroads, when he was accepting the 2015 Railroader of the Year Award.

And the question that was posed to him was, you know, there's a regulatory situation in Canada. There's some form of open access to a limited extent. You don't seem to have a problem with that. Some of the U.S. railroads are fighting tooth and nail. What's the difference? How's it work?

And he said, it's called inter-switching, to some degree the U.S. is old reciprocal switching pre-Staggers, it's one of the regs that are in place. People don't take advantage of it. People really don't take advantage of it because there's really no need to if individual carriers do their job.

It's kind of something that can be called a lever that you have over here if you need to be used. My view is for years, a lot of railroaders have been scared of the term open access, and I don't know why. What it says to me is all we're going to do is open up more competition with a limited number of players in North America. It's important to keep the competitive balance.

So, where was he wrong?

MS. GAINEY: And I'll chime in and say that we're the U.S. regulatory lawyers, but our understanding is, and to draw a distinction between the two kinds of inter-switching in Canada, there's regulated inter-switching that is in the 30 kilometer zone. And that's been in effect since 1908. It was originally adopted in Canada as a land use policy because Canada did not want to have duplicative rail lines being built in urban areas.

The other kind of inter-switching was recently adopted, I believe in 2016, long haul inter-switching and contracts to regulate inter-switching that has a cost based rate. Long haul inter-switching, the rate is supposed to be based on a market rate or an average of comparable rates.

VICE CHAIRMAN FUCHS: Right.

MS. GAINEY: I understand that there has not been any cases under long haul inter-switching since that's been adopted.

VICE CHAIRMAN FUCHS: Why do you think that is?

MS. GAINEY: I won't speculate as to why that is. I'm just aware that there have not been any.

VICE CHAIRMAN FUCHS: CP, do you?

MR. WITTEBROOD: Specifically, the second question?

VICE CHAIRMAN FUCHS: To Miss Gainey's point about why do you think there hasn't been any kind of long haul inter-switching. Why is that the case?

MR. WITTEBROOD: Well, again I would be speculating. We haven't been -- we haven't been presented with any requests or from shippers that I'm aware of for movements under long haul inter-switching and the CTA recently said that they haven't been presented either with any requests.

I would suspect that the reason is that when shippers and the receiving railroads that they would be negotiating with, when they look at the move, at the end of the day it's the length of haul and the efficiency of the route that drives the decision.

So, they probably look at it and they realize that the rate that they're going to get from the receiving carrier plus whatever inter-switching rate they're going to receive from the CTA, isn't going to be very beneficial compared to the rate they're receiving now, and they're also going to be in court incurring delays due to.

VICE CHAIRMAN FUCHS: Do you think that there's any mechanism or any reason for the incumbent carrier in that type of regime to lower their rate? So, in other words, to make sure that the incumbent carrier rate stays lower than whatever that alternative regime is that you're describing? If for the new carrier, plus the inter-switching rate?

MR. WITTEBROOD: In order to maintain that rate?

VICE CHAIRMAN FUCHS: Yeah. Do you think that effect has taken place since 2016?

MR. WITTEBROOD: I know one instance where we had a negotiation where the shipper brought up the idea of long haul inter-switching. And in that case, we managed to negotiate an agreement that suited all parties by taking over. We took over the long haul portion of that.

VICE CHAIRMAN FUCHS: And can you contrast, compare and contrast, long haul inter-switching relative to bottleneck and relative to reciprocal switching?

MR. WITTEBROOD: Well, the bottleneck proposal, I think it's still fairly vague as to what that means.

VICE CHAIRMAN FUCHS: Right.

MR. WITTEBROOD: So, I kind of interpret that as all inter-switching. Reciprocal inter-switching, I think it's been discussed.

VICE CHAIRMAN FUCHS: A little too graphic in strength, right?

MR. WITTEBROOD: Yeah, it's in the -- the way I think of reciprocal inter-switching, it's short movement. And that's predominantly what we have in Canada. The reciprocal inter-switching that we have in Canada is limited to a 30 kilometer radius, so just under 20 miles.

VICE CHAIRMAN FUCHS: So, to your eye, does long haul inter-switching look much different than bottleneck?

MR. WITTEBROOD: I mean operationally it will probably be similar. In Canada, the regulator has a specific methodology for determining.

VICE CHAIRMAN FUCHS: The access price, right versus relative to the carrier setting the rate and the Board then reviewing it.

MR. WITTEBROOD: Yes.

VICE CHAIRMAN FUCHS: But I guess I'm wondering if Canada can -- and you know, there are some differences in the Canadian/U.S. network, but you know, I would say that Canada looks the most like the U.S. of any country in the world when it comes to the similarities of the rail network.

If Canada can implement a long haul inter-switching that looks like bottleneck to your eyes, then what you make of -- and there have been no cases. What do you make of some of the testimony about the large scale operational effects?

MR. WITTEBROOD: It's very early to say because I'll correct Ms. Gainey. It's actually only since May of 2018, that we've had long haul inter-switching.

VICE CHAIRMAN FUCHS: Yeah.

MR. WITTEBROOD: And so, since we haven't had any cases, we're kind of waiting for that first shoe to drop. And if it does, when it does, we're wondering if that's going to open the flood gates or not, for more cases. So, if that does happen, that could have profound impacts for the network in Canada.

At this point, there's no real evidence one way or the other.

MS. GAINEY: And the regulatory regime in Canada is very different. They don't have a statutory provision that gives the originating carrier a right to the long haul.

VICE CHAIRMAN FUCHS: I'm only asking from an operational, not a legal standpoint. But I take your point.

BOARD MEMBER OBERMAN: I'd like to ask both railroads to comment on the questions I asked earlier about the stock buybacks, and Mr. Beyer, you said you're in the capital markets trying to raise capital. According to the numbers that we have from your public filings for the last few years, just the U.S. portion.

In the last three years you've spent 2 billion dollars on stock buybacks, and you spent 1 billion, roughly, averaging out over the last 3 years per year in CapEx in the United States. So, you spent twice as much on stock buy backs. So, where -- when you say you're in the capital markets, are you out borrowing money to make stock buybacks? And if so, why should rate payers be paying for that in a regulated -- if a captive?

If you're not captive, you can invest as much money as you want, but.

MR. BEYER: Okay. Maybe, if you permit, I can just explain how we think about capital allocation and then I can sort of, from that the answer would flow. I'm not really -- I don't, I can't really think about buybacks in a geographic way. Because if you go to the New York Stock Exchange, or the TFX, it's neither here nor there.

Just to make the point that our buyback budget is significantly smaller than our CapEx budget on a sort of system-wide basis. But regardless, you know, CN is generating operating cash flow, obviously. And then there are three possible uses. What the company can do with that cash flow.

One is to invest it in terms of capital investment or M&A, or so grow the company. The other is to repay debt, or build cash, so kind of manage the balance sheet. And the third one is to return it to the shareholders by way of dividends or share buybacks.

So, the way we go about it every year, is we say okay, what are all the investment projects that the business is proposing, and do they efficiently exceed what we believe the cost of capital is that we require to satisfy the returns of our, you know, debt holder and equity holder?

And once we've exhausted that list, and

that was 3.9 billion, for example, in 2019, a number sufficiently larger than last year, and therefore we actually reduced our total buyback in '19 compared to last year, just as a side note.

So, once we've exhausted that list, well then we say okay, so do I need to borrow, or do I, you know, I want to maintain a certain debt ratio in terms of -- and debt to capital and so forth, to maintain a credit rating that we want to maintain, and that determines how much I borrow or how much I repay debt. And what is left over and returning to my equity shareholder by way of dividends and share buybacks.

Now, I believe that the fact that we are paying a return to our owners is not an indicator of whether or not we are revenue adequate or not. I think our owners invest in us for that to be the case. So, for instance, if we devised an objection off of what the regulation was that whatever cash flow is left over, just exactly covers the CapEx numbers, that was possible. And investor in CN would never receive one dollar, because it would always just be reinvested and therefore it wouldn't be an investment that people would want to make.

And on that basis, we feel that share buyback is a normal part of the business. It's prevalent on the Class I railroads. It's also prevalent among other industries. It's just a mechanism to sort of pay, if you like, the return to the equity holder.

Then there's the question of the dividends, you know, why don't we just only pay dividends? In the end, economically it's the same thing. I'm returning capital to my shareholders.

In the railroad industry, we tend to have a relatively low dividend because we are very capital intensive. So that year after year I can size my share buyback program to accommodate, you know, the economic cycle, but also CapEx needs. Our CapEx program went from, I think, $3.4 billion to $3.9 billion and we reduced the share buyback program to enable those larger investments that we felt were worth doing for the benefit of our shareholders, as well.

BOARD MEMBER OBERMAN: But none of this relates to having you attract new capital.

MR. BEYER: Yeah, I mean we are --

BOARD MEMBER OBERMAN: You don't need to attract new capital?

MR. BEYER: Yes, we are in the fortunate position at this moment that we generate cash, we don't need to fund cash also.

BOARD MEMBER OBERMAN: And that's true, actually, of all of the railroads right now, and it has been for several years. My only question, and this approach that you describe -- and I'm not a business person. But in a non-regulated, non-monopolistic setting, seems to me an appropriate way to run a business.

Our statute gives us standards for what captive shippers should be charged, and they don't, it seems to me, include stock buybacks. It does include allowing you to charge enough that you can run your business and attract capital and make a reasonable return.

But I don't see anything in here when you have the captive shipper situation. I'm not talking about that 76 percent that everybody says is fine. I'm talking about these folks over here or Olin, for example, why should they be subject to a rate increase that is essentially being used to fund a stock buyback that's not making a capital investment? I'm having trouble fitting that program you describe into the statute.

MR. WARREN: Respectfully, Member Oberman, I think that talking about the statute I feel like it's sort of my purview. I mean I think the statute pretty clearly says that you have a duty to assist every railroad in becoming revenue adequate and define revenue adequate in part, among many other things, that where funds are supposed to fund being able to attract or retain capital in amounts adequate to provide a sound transportation system. And I would submit that part of being able to attract and retain capital means being able to provide a return to shareholders that is on the same footing as the companies with which railroads compete for capital. Share buybacks are not just a railroad thing. It is a very common way of returning value to shareholders. And I think it's something that's consistent with the statute. I think giving railroads the freedom to be able to do that is required by the statute.

BOARD MEMBER OBERMAN: I'm sorry, go ahead. No, please.

MR. BEYER: If I may, it's also the concept of covering your cost of capital implies that there is a return that is -- must be available for the equity holders of the company.

BOARD MEMBER OBERMAN: One of the --

MS. GAINEY: And it's not just covering your cost of capital. It's not just earning to the 0.001 percent your cost of capital, it's the potential to exceed the cost of capital. That's what it is that makes CN and any other publicly traded company a good investment for equity and debt investors.

MR. BEYER: And I think the fundamental point is that even if I am not revenue adequate, I could still have share buybacks because it is the concept is that the equity, the return on equity, the -- can't remember now what number it is that the STB is using.

It implies that that somehow has to be crystalized by the shareholder. And the share buyback is one mechanism to do that.

BOARD MEMBER OBERMAN: Well one of the things that makes your investment attractive, is that your stock has been going up through the roof. All of them have in recent years, generally speaking. And again, I'm not asking about a situation in which there would be no stock buybacks.

We're only talking about measuring the rate of increase for captive shippers for that component of what you used for share buybacks, because Coal Rate Guidelines suggest otherwise. And to me, the statute, the RTP suggests otherwise. So, you talk as though I'm asking about whether we should have a system which eliminates all of your revenue beyond your capital expenditure. I made no such suggestion.

I'm suggesting that when we have a -- I'm asking the question of when we have a cost of capital figure that goes into a rate regulatory system, a formula that affects captive shippers, I want you to mark it down in situations, why should they be paying that extra part because they're captive.

In a competitive situation, make as much money as you can, and you will. You are. So, that's what I'm trying to figure out how it relates to our regulatory.

MR. WARREN: I think those captive shippers have got -- have options with individualized cases. And in fact, if they bring a SAC or a simplified SAC case, they will not have to pay any more than the cost of capital, because that's what SAC and simplified SACs do, is they take that unit of the network that's being replicated for the case, and they, you know, take the, you know, appropriate traffic group, in fact the shipper gets to select it, and simplified SAC is easier because you just take everything on the line.

And ultimately, the reasonableness of the rate is judged on whether or not that rate produces revenues that would be above the cost of capital for the replacement cost. It's that -- I think that that may -- that actually may be coming around to SAC and simplified SAC may be the more limited revenue adequacy test that you're looking for, because that's the one that actually makes somebody come in, actually demonstrate that the railroad is earning more than their cost of capital on the replacement cost required to serve them. And if so, provides targeted relief.

BOARD MEMBER OBERMAN: Well, I'm actually not sure what I'm looking for something that complies with our mandates with the Congress and I'm not sure I know what that answer is yet. That's really the purpose of my pointed questions. But two things, Matt, that assumes that the shipper can bring a SAC case practically. Of course, most can't. And two, how do we measure the cost of capital, which is what this discussion is about, directly goes in to what that number comes out to be.

And so, to me the cost of capital under the current formula includes the cost of the share buybacks. And the question in my mind, as it's applied to a captive shipper, is that really the right way to do it given the statutory language. And I barely understand the cost of capital, to be honest with you, but as I understand it, it -- the formula takes into account what's happening in the market.

And just one final thing for Shelley. I don't know that you have any more information than I asked of Frank Chirumbole about Matt Rose's arrival at 7 percent. Do you have any other insight into that number?

MS. SAHLING-ZART: No, I just understand it's a statement he made at a shareholder meeting.

BOARD MEMBER OBERMAN: Thank you. Unless you want to add something more.

VICE CHAIRMAN FUCHS: Matt, could you circle back to a question on the -- in the discussion in the first panel. I just want to make sure I'm fully understanding how you all expect the dynamics to work under a replacement cost approach for revenue adequacy. So, as you pointed out in your SAC test, if the -- using replacement costs exceed the cost of capital the Board just takes it away and gives it out to shippers, is that accurate?

MR. WARREN: Yes, more or less, yeah.

VICE CHAIRMAN FUCHS: And then I asked the question, "well then how can a railroad ever have an ROI over cost of capital," and it was conveyed to me that it's making that on competitive traffic and that's the way I took the response. And correct me -- stop me if I'm wrong. Sorry?

MR. WARREN: No, I think that's right.

VICE CHAIRMAN FUCHS: Yeah, so I guess my question is any time there's somebody who can make a market dominant showing, anybody on that segment. Let's say its 95 percent competitive traffic and that's why the railroad is getting ROI over cost of capital. If there's one -- the 5 percent is in a market dominant situation. They can come in, do a SAC test if it's accurate, and take all the ROI. All the earnings in excess of the investment base, right?

MR. WARREN: Well, they wouldn't take all of them because you know, under -- we skipped in MMM, which --

VICE CHAIRMAN FUCHS: Yes, you know, but they wouldn't get all of it.

MR. WARREN: They would just take part of it to there.

VICE CHAIRMAN FUCHS: They would just take their pro rata share, so whatever, the way it is envisioned is whatever that railroad's earnings over the investment base at a replacement cost is just for the non-market-dominant traffic that was not taken away, right, through MMM where the captive shipper gets whatever their share is based on the R/VC ratio pay-off and exhaustion rates.

So, the point is if we went to a replacement cost basis for revenue adequacy, everything over that threshold would necessarily be all from non-market-dominant carriers, is that kind of the logic behind the position?

MR. WARREN: Well, I mean I --

VICE CHAIRMAN FUCHS: Is that the right way to look at it even?

MR. WARREN: Yeah. I mean I don't know if this is a response exactly to your question, but I think one of the reasons that I don't know that the analogy works perfectly, is that you have cross-subsidy issues.

VICE CHAIRMAN FUCHS: Right.

MR. WARREN: That you have to worry about that aren't just based on competitive versus non-competitive, but are based on segments of the network.

VICE CHAIRMAN FUCHS: Sure.

MR. WARREN: So, you could imagine if, you know, if somebody had, you know, it was a relatively short, you know, movement between a you know, a coal plant and a mine, and you know, on it's own you couldn't have -- you know, on it's own, but the SAC test would support if the rate is reasonable. That shipper then couldn't say well actually, you know, over here there's a -- you know, really high density intermodal line and I want to take it.

And if that's part of my stand-alone railroad too, now all of a sudden like I'm going to you know, have a reasonable rate. The Board has said you can't do that, that's a cross subsidy.

VICE CHAIRMAN FUCHS: Right.

MR. WARREN: So, I think that's one reason why you can't necessarily analogize exactly to what replacement cost system-wide SAC would look like and the outcomes of the individual SAC cases, because you know, SAC is -- it is complicated.

And that's one of the reasons that the Board worked so hard to develop Simplified SAC, which is substantially simpler in many ways, and that's one of the reasons the Board developed 3 benchmark, which is designed to, in some ways, reflect revenue-adequacy principles. It's ultimately not a particularly accurate methodology, we think, but it's certainly simpler.

VICE CHAIRMAN FUCHS: And I guess what I'm driving at is the crux of -- so you have the legal argument as to why revenue adequacy shouldn't be a constraint, and the crux of the economic argument is that because if you have replacement costs in both areas, understanding that there's some issues on the segment basis, the overwhelming amount of earnings that exceed the replacement cost investment base on a system-wide basis, are going to be earnings that are achieved from competitive traffic, not market dominant traffic.

MR. WARREN: I think there's no -- you can't tell. I mean I think you don't know. You've got to do a more targeted inquiry to understand. And I think the other thing, and we'll save this for the first panel tomorrow morning, is I think that there are pretty significant measurement errors in the way that the Board is doing revenue adequacy right now.

And if you actually look at where railroads are standing in the marketplace, I think that leads to some different conclusions about RIC, whether carriers are actually so close to revenue adequacy now.

VICE CHAIRMAN FUCHS: Right, right, right, okay. Thank you.

MS. GAINEY: Patrick, you asked a deferred taxes question of the last panel. Would you like us to --

VICE CHAIRMAN FUCHS: Yeah, that'd be great, that'd be great.

CHAIRMAN BEGEMAN: And then I have a question or two, please.

MR. WARREN: So, we'll talk about this. I mean I do think that, you know, one of the things as you're thinking about you know, your methodology, one of the things you do in the revenue-adequacy annual determinations is that you take all deferred taxes and you subtract them out of the investment base.

VICE CHAIRMAN FUCHS: Right, right.

MR. WARREN: Which is a methodology that I think has been described in some of the comments as one that we don't think is appropriate.

VICE CHAIRMAN FUCHS: Right.

MR. WARREN: Did that answer your question?

VICE CHAIRMAN FUCHS: Yes.

CHAIRMAN BEGEMAN: So, to continue the focus on the railroads instead of the shippers, please excuse us, but you know, it's a real, I guess, kind of benefit or an opportunity for us to ask you questions since you have a different regime in Canada and how things work.

And as you know, there is a pending competitive switching proposal that's -- I'll just say it's pending, and I'd like to get a sense of how, not actually how it works in Canada, but how often are -- do shippers switch? Do they take, and it's not the long haul question. You guys already clarified that that has not been utilized yet.

But do the switches occur hundreds of times a day? Do they occur almost never? It's just that there is leverage that if someone wanted to, they could. And also, in my question, I'd also like to understand how many working interchanges are there?

MR. WITTEBROOD: Yeah, the zonal inter-switching, the reciprocal end switching is a daily activity in Canada. In terms of actual car numbers, I don't have that information. I don't involve myself in the actual operational aspects of it, but it's more than hundreds a day I would say.

However, my understanding is that most of that is more related to physical access than it is to competition in any way. And what I mean by that is because we've had inter-switching since the early 1900's, that has impacted how we developed our networks over the years and so, CN's and CP's networks are largely parallel and for example, in Vancouver, which is where I understand most of the inter-switching occurs. Well, when I say most, it's the definitely the biggest zone, somewhere between 25 and 50 percent I think of the zonal inter-switching activity occurs in the Vancouver area. That's largely because CN has operational access to the north shore of the inlet and CP has access to the south shore. So, what happens is CN and CP respectively carry their line haul traffic into the Vancouver area, and then we interchange it off with our partner/competitor in Vancouver, in order to finish off that -- what we call the last line of access.

In terms of how many interchanges there are, I don't actually have a number. I think it's somewhere in the 10 -- the dozens range, a few dozen. Is that fair do you think?

CHAIRMAN BEGEMAN: You could provide it

for the record, that would be fine.

MR. WARREN: I do think, I don't want to go from memory, but I believe in the Ex Parte 711 record there was some data on the number of inter-switching points in Canada versus the United States. And I think in Canada it was less than 100. Whereas, in the U.S. potentially it would be thousands, which it really was the difference.

CHAIRMAN BEGEMAN: And not to continue on this charge longer because the clock is ticking, but when the competitive switch, I'm sorry, the reciprocal switches, is it at the request of the shipper, or is it that part of this is just how you're getting, I guess, you're almost completing your long haul, if you will, for the shipper.

MR. WARREN: I'm stuck in -- I believe that under the Canadian system the shippers have the right under the statute, which they have had for a few years.

CHAIRMAN BEGEMAN: Really, what I'm trying to ask you and I'm not doing a good job of it, but is it today they want the switch, or is it you know a long time in advance?

MR. WITTEBROOD: It's much more the latter. For most of our customers, obviously they're recurring business. We just understand that this is the origin, this is their destination, they require a switch in Vancouver or under where it happens to be, so, it's much more the latter.

CHAIRMAN BEGEMAN: So, just one last question for and I guess I'll direct it to Kathy, but -- and I'm not trying to gin anything up on the uncertainty, but it was related to that discussion. Did you have the opportunity to meet with the Canadian regulators before they did various things such as their long haul switching proposal, I assume? And did you tell them it would be uncertain?

Or, maybe you're not provided that opportunity. I'm just curious.

MS. GAINEY: We did, and we did. Yes, to both questions.

CHAIRMAN BEGEMAN: Okay, Shelley?

MS. SAHLING-ZART: Can I comment on the uncertainty issue because I spent the day listening --

CHAIRMAN BEGEMAN: I didn't mean to bring that up, sorry.

MS. SAHLING-ZART: Listening to the railroads talk a lot about uncertainty and they're concerned about their profitability and their ability to invest. And I think it needs to be said that captive shippers have those same concerns about their businesses. That's why we're here.

So, what we're asking you for is to provide some balance and to provide us a mechanism where captive shippers, more uniformly, will have a process that they feel they can affordably access that won't take 5 to 10 years, won't take 5 to 15 million dollars to find that certainty. So, certainty cuts across the board.

CHAIRMAN BEGEMAN: So, just I guess I'll have to speed my last question, I hope, and it will be both Team Shelley and Team Kent. You know, the Board has a number of regulatory proceedings pending, a lot of -- some new ones, some old ones, the demurrage stuff matters a lot to me, to us.

The rate reform proposals matter a lot to me, to us. Some, you know, a number of them are pending at this point or proposed and getting comments and replies, and we are also exploring other things such as the you know, what we're talking about today, which again, has nothing -- although the task force has these areas options in their report, none of them are actually Board proposals.

So, I do want to make sure that's clear to everyone. And we're just trying to really get a better understanding of the various different viewpoints, and you all have valid points, or at least most of you do. And I'm not really just referring to this panel, of course.

But you know, if you had to ask the Board for like the one issue that you would wish that we would tackle. You know, my days are numbered. I'm not going to impose and see some type of revenue adequacy constraint implemented and challenged and upheld during my time as a member, and I care a lot about the small shipper case improvements, et cetera, but I'd be -- I'd like to know what your thoughts are.

MR. AVERY: Well, I believe that if you allow -- if you create competition by having each industry the ability to have a choice in carriers, to be able to choose and to be able to negotiate, I think that's going to be more powerful and more impactful and it's going to greatly reduce the need for rate cases, it's going to greatly reduce the need for demurrage and assessorial issues, so.

CHAIRMAN BEGEMAN: I probably should have cabined my question to things that I did not dissent on.

MS. SAHLING-ZART: Yeah, and that's tough without conferring with our membership, but I would say my perception right now is that there are some issues that are going to take a little longer to figure out. I think the most immediate one you can have the biggest impact on would probably be the demurrage and the accessorial charges, and fixing that, especially in light of PSR, but probably close behind that would be the rates.

BOARD MEMBER OBERMAN: When you say the

rates, you mean the final --

MS. SAHLING-ZART: Without looking at the simplified SAC, there's probably several things because different size shippers are going to access different methodologies, right?

MS. GAINEY: Can we answer the question as well?

CHAIRMAN BEGEMAN: No, of course. Doing nothing, I believe, was going to be the answer.

MS. GAINEY: No, actually, it's not. Our view is that the Board should concentrate its efforts in, given your limited time left, on reforming the rate reasonableness methodologies to make sure that small shippers have a way and an avenue for their cases to be heard.

And whether that's through revising the ADR regulations that the Board has, or revising the 3 benchmark methodology.

BOARD MEMBER OBERMAN: I didn't hear a final offer in that list.

MS. GAINEY: We've submitted our comments on final offer.

CHAIRMAN BEGEMAN: Look, thank you so much really, even though you were the last panel, you were just as informative as the first and we really appreciate your input and your participation, thank you.

We'll see you tomorrow at 9:30.

(Whereupon the meeting was adjourned at 5:58 p.m. to reconvene tomorrow at 9:30 a.m.)

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