

Date: December 13, 2019

Case: Hearing on Railroad Revenue Adequacy



Ace-Federal Reporters, Inc.
Phone: 202-347-3700
Fax: 202-737-3638
Email: info@acefederal.com
Internet: www.acefederal.com

SURFACE TRANSPORTATION BOARD

EP 761

HEARING ON REVENUE ADEQUACY

EP 722

RAILROAD REVENUE ADEQUACY

PUBLIC HEARING - LIST OF PANELS

Volume II

Friday, December 13, 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.

Page 2

		Page
1	TABLE OF CONTENTS	
2	Panel V	
3	George Washington University	
4	Jerry Ellig, Research Professor,	6
5	Regulatory Studies Center	
6	Union Pacific Railroad Company, Norfolk	
7	Southern Corporation, and U.S. affiliates of	
8	Canadian National Railway Company	
9	Kevin Murphy, Ph.D., George J.	22
10	Stigler Distinguished Service	
11	Professor of Economics, University	
12	Of Chicago Booth School of Business	
13	Mark Zmijewski, Ph.D., Professor	25
14	Emeritus, University of Chicago	
15	Booth School of Business	
16	Matthew J. Warren, Partner, Sidley	46
17	Austin LLP	
18	Wolfe Research	
19	Scott Group, Managing Director &	47
20	Senior Analyst	
21		
22		

		Page 3
		Page
1	TABLE OF CONTENTS (Continued)	
2	Panel VI	
3	CSX Transportation, Inc.	
4	Sean Pelkey, Vice President, Treasury	141
5	John Patelli, Head of Regulatory &	141
6	Federal Affairs, Associate General	
7	Counsel	
8	Raymond A. Atkins, Partner,	201
9	Sidley Austin LLP	
10	National Grain and Feed Association	
11	Sharon Clark, Executive Committee Member	127
12	Thomas W. Wilcox, Principal, GKG Law	137
13	SMART-Transportation Division - New York	
14	State Legislative Board (SMART/TD-NY)	
15	Gordon P. MacDougall, Attorney for	155
16	Samuel J. Nasca, Director	
17	Panel VII	
18	American Fuel & Petrochemical Manufacturers	
19	Rob Benedict, Senior Director,	
20	Transportation & Infrastructure	209
21		
22		

Page 4

1	TABLE OF CONTENTS (Continued)	Page
2	The Fertilizer Institute	
3	Justin Louchheim, Director of	217
4	Government Affairs	
5	Jeffrey O. Moreno, Partner,	224
6	Thompson Hine LLP	
7	Union Pacific Railroad Company	
8	Cindy Sanborn, Vice President, Network	233
9	Planning and Operations	
10	Michael L. Rosenthal, Of Counsel,	243
11	Covington & Burling, LLP	
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		

1 PROCEEDINGS

2 (9:33 a.m.)

3 CHAIRMAN BEGEMAN: We'll get started in
4 just a minute or two, but in the meantime, just a
5 reminder, everyone please silence your phones. No
6 food or coffee, only water. Make sure that our
7 recorder can hear you, speak clearly. I do try to
8 pay attention to him, and I may be like, so, just
9 sort of bear with us for the benefit of the hearing
10 throughout the day, and again, we'll get started in a
11 minute.

12 We will now start with Panel V. Mr.
13 Ellig, if you'd like to go first. I apologize for
14 those that were not here yesterday. I would like you
15 to give your presentation from the lectern. And
16 then everyone is welcome to -- and we'll hear from
17 each participant, and then we'll ask you questions
18 back and forth, and members of the panel are invited
19 to have a dialogue with each other as well. Let's
20 just, you know, not get too crazy. Okay.

21 I should also say, another -- I apologize.
22 Also, there is a yellow light that will come up when

Page 6

1 you have 2 minutes left of your time. A red light
2 will come up when your time is expired, so if you'll
3 please complete your testimony when you see the red
4 light. I really don't want to cut anyone off, and
5 occasionally you get a few more minutes when you ask
6 for it, but never as much as you ask for. Okay. I
7 want to be fair, since that's what we did yesterday.

8 MR. ELLIG: Good morning. I'm glad to
9 have the opportunity to talk with you today. My name
10 is Jerry Ellig, I'm a Research Professor at the
11 Regulatory Studies Program, Regulatory Studies Center
12 at George Washington University. My name is on a
13 couple of comments that were submitted in this
14 proceeding, one of them was cosigned by members of
15 the Transportation Research Board Study Committee,
16 that issued that report several years ago.

17 The other was just mine. Today I'm
18 speaking solely for myself, so don't blame them, my
19 esteemed colleagues for anything I say. They may
20 agree with some of it, they may disagree with some
21 of it, but these are my own views, these are my own
22 views.

1 In the announcement for this hearing, the
2 Board asked folks to address four topics. And I'm
3 going to address three of them, namely this issue of
4 calculating long-term revenue adequacy, the proposal
5 for a rate increase constraint based on long-term
6 revenue adequacy, and the proposal to remove the
7 bottleneck protections based on railroad revenue
8 adequacy.

9 So, let me talk about the revenue adequacy
10 issue first. I think it makes a lot of sense
11 intuitively that if the Board is going to look at
12 railroad revenue adequacy, it makes a lot more sense
13 to look at it over a multi-year period, than the
14 current annual calculation. No problem there. In
15 principal, that's the right way to do it. I don't
16 know for sure if looking at it over a business cycle
17 is the right time period, or if railroads have their
18 own business cycle that differs from the general
19 business cycle, that might be something to look into.

20 So, it probably needs a more careful look
21 there to try to figure out what's the most accurate
22 multi-year time period to get a good picture of

Page 8

1 railroad financial performance. But looking at it
2 over a period of years makes a lot more sense than
3 doing an annual calculation.

4 However, I would also want to add -- and
5 this is consistent with what was in the
6 Transportation Research Board report a couple years
7 ago, that when we suggested a multi-year period, what
8 we had in mind was not a mechanical calculation, but
9 rather a consideration of railroad's financial health
10 in the context of a more holistic overall look at how
11 the industry was working, competitive conditions in
12 the industry and so forth.

13 So, it wasn't quite the same thing. It
14 would be much better to do, to take a more holistic
15 view, rather than just do a multi-year calculation
16 instead of annual calculation. And finally, on the
17 issue of revenue adequacy, I do want to clear up one
18 misconception.

19 There were a few comments submitted in
20 this proceeding that said the Transportation Research
21 Board Committee declared that railroads are revenue
22 adequate. And when I read that I almost fell out of

1 my chair because I was thinking what the heck did we
2 say in that report that gave people that idea?

3 I want to emphasize that that committee
4 did not sit down and look at railroad finances and
5 say, "We now declare that railroads are revenue
6 adequate." The only thing I could think of is one
7 sentence in that study which says, "Railroads are now
8 financially viable and no longer dependent on
9 government subsidies."

10 And if you read the rest of the two pages
11 after that, it says, "Therefore, we don't think it's
12 a good idea to calculate revenue adequacy annually at
13 all, in part because it will become a temptation for
14 some type of price regulation."

15 So, yeah, there's no determination in that
16 report that railroads are revenue adequate. To get
17 an idea of the difference between what the report
18 said and the revenue adequacy determination, let me
19 give you an analogy that's not perfect. You know,
20 I'm financially viable and not dependent on
21 government subsidies. But I have a kid in college,
22 so I'm not sure if I'm revenue adequate.

Page 10

1 Okay, well secondly, let me address the
2 proposed constraint on price increases. There are, I
3 think, two kinds of problems with this. One
4 practical and one -- well, they're both practical,
5 but one is very much an implementation issue, and the
6 other is kind of a broader issue.

7 Let me address the implementation issue
8 first. The proposal for the rate increase caps
9 depends heavily on calculations that utilize
10 revenue-to-variable cost ratios. The variable cost
11 in the revenue-to-variable cost ratio, is a variable
12 cost figure determined using the uniform rail costing
13 system, which treats many costs that are not, in
14 fact, variable or incremental, as if they were,
15 variable or incremental.

16 Now, this has a problem regardless of
17 whether the goal here is to promote economic
18 efficiency, or to promote some notion of equity
19 because all of the economic efficiency rationale for
20 differential pricing, if you go back to the economic
21 theory, it is based on mark-ups over what are
22 actually marginal or incremental costs, not mark-ups

1 over an average cost figure that treats costs that
2 aren't marginal or incremental as if they were.

3 And so, you're not necessarily going to
4 get an economically efficient result trying to set
5 rate caps or rate increased caps using
6 revenue-to-variable cost figures that are based on
7 URCS estimates of variable cost. Now you may say
8 well that's okay, because our goal is not economic
9 efficiency, we're trying to do something fair here.

10 Well, to the extent that the fairness or
11 equity goal has anything to do with markups, it runs
12 into the same problem as the efficiency goal. If the
13 goal here is to have some sort of fair markup over
14 incremental or marginal cost, but the variable cost
15 figure you're using is not actually an incremental or
16 marginal cost figure, then that's going to frustrate
17 the equity goal as well.

18 You're not going to have a really accurate
19 idea of what the markups are over true marginal or
20 incremental costs. So, the underlying cost concept
21 is a real problem. Now if that excursion into the
22 chilled winds of economic abstraction was too much,

Page 12

1 just remember this.

2 The famous quote from Inigo Montoya in the
3 Princess Bride, "No, now you killed my father,
4 prepare to die." The other famous quote which is,
5 "You keep using that word. I do not think that word
6 means what you think it means." That's how I would
7 describe variable cost calculated under URCS.

8 The other problem that I see with the rate
9 cap proposal is a much broader problem than a simple
10 implementation issue and that's what in economics is
11 known as the credible commitment issue. Can a
12 regulatory body credibly commit to going only this
13 far with that regulation and no further? And whether
14 a regulatory body can do that or not, is very much an
15 empirical question, depends in part on past history.

16 Past history in rate regulation in this
17 industry is not great. And so, that's an issue that
18 deserves a lot more careful thought and investigation
19 before thinking about going down this road. I'm not
20 very optimistic that a regulatory body can commit to
21 doing just this little bit of price regulation, and
22 we promise we won't do any more.

1 And by the way, that is not at all, any
2 kind of a personal reflection on the three fine
3 Commissioners who are here. I'm not talking about,
4 you know, whether you all can make a commitment, you
5 know, personally, whether people believe you. I'm
6 talking about whether the Board as an institution,
7 can make that commitment in a convincing way that
8 will also bind future Boards composed of other
9 people who we don't even know who they are. So,
10 that's the commitment problem.

11 Okay, finally there's the removal of the
12 bottleneck protection and with the removal of the
13 bottleneck protections, at least as I read it, that
14 looks to me like a much more extensive and radical
15 proposal than the rate increase caps, because the
16 rate increase caps kick in only when the railroad
17 becomes revenue adequate, but all they do is prevent
18 the railroad from increasing rates faster than
19 inflation for some traffic.

20 It appears that the proposal to remove the
21 bottleneck protections kicks in when the railroad is
22 revenue adequate, then you no longer have the

Page 14

1 bottleneck protections and it's easier for a shipper
2 to basically break a movement into two pieces and
3 then get a regulated rate on one piece, and rely on
4 competition to set the rate on the other piece.

5 So, that seems to me to be a much more
6 extensive form of price regulation than the proposed
7 rate increase caps. And I am not -- I'm just not
8 very optimistic that, you know, widespread price
9 regulation in this industry is a good solution to the
10 problems that you all are trying to solve.

11 Now you may say okay, great, you've just
12 trashed everything that we proposed, what's your
13 alternative? Well, you know, there's a Spanish
14 saying, "Mi casa su casa." My alternative is, you
15 know, Mi metodologia es su metodologia. In several
16 other proceedings I think the Board has come up with
17 proposals that are likely to be much more productive
18 in terms of protecting captive shippers where the
19 problems are worse without creating the kinds of
20 problems that the bottleneck proposal and that the
21 rate ceiling proposal does, namely the proposal for
22 an expedited and simpler way to determine market

1 dominance as supplementing the several ways that I've
2 suggested in comments in that proceeding.

3 And the proposed law and final offer
4 arbitration which I think if the streamline market
5 dominance procedure were changed in some ways that I
6 and others suggested, the final offer procedure could
7 probably be used for larger shipments as well as
8 smaller shipments.

9 So, I think you all have actually put
10 better alternatives out there on the table than the
11 rate regulation focused proposals that we're talking
12 about today.

13 MR. WARREN: Good morning Chairman
14 Begeman, Vice Chair Fuchs and Member Oberman. It's
15 my pleasure to introduce Professor Kevin Murphy,
16 who's the George J. Stigler Distinguished Service
17 Professor of Economics at the Booth School of
18 Business and the Department of Economics at the
19 University of Chicago, and Professor Mark Zmijewski,
20 who's Professor Emeritus, also at the University of
21 Chicago, Booth School of Business.

22 Professor Zmijewski, typically goes by

Page 16

1 Professor Z and he's comfortable with you using that
2 moniker today. The Professor's presentation is
3 focused on putting everything that you heard
4 yesterday and everything that you're going to hear
5 today into the proper context. The basic question in
6 this hearing is whether the Board ought to be doing
7 something about the fact that its annual revenue
8 adequacy determinations are starting to show that in
9 some years, some firms are revenue adequate on an
10 annual basis.

11 And revenue adequate, of course, as the
12 Board has defined it, meaning that they are earning
13 accounting returns on investment that are higher than
14 the industry cost of capital calculated by the
15 Board. But to answer any question about whether the
16 Board ought to take those findings and roll them into
17 some kind of a multi-year average, and do something
18 about a revenue adequacy constraint, the Board first
19 has to understand what do those numbers actually
20 mean.

21 And the professors have approached this
22 question in a way that's ultimately pretty simple.

1 What they've done is they've taken the exact same
2 methodology that the Board uses for the annual
3 determinations, and they've applied it to a wide
4 range of other publicly traded companies.

5 And why would you do that? You would do
6 that because these publicly traded companies are the
7 firms with which railroads are competing for capital.
8 You know, a potential railroad investor isn't
9 deciding am I going to invest my money in Union
10 Pacific, or am I going to stuff it in my mattress.
11 They're deciding, am I going to invest in Union
12 Pacific, or am I going to invest in Dow, or am I
13 going to invest in Intel, or am I going to invest in
14 Alphabet.

15 They're looking at all the options in the
16 market. So, what the professors have done is using
17 publicly available data about these firms and
18 following the Board's methodologies, they've
19 calculated an ROIC cost of capital for companies in
20 the S&P 500. And the results of that study are a
21 pretty sign.

22 As Professor Z will explain, over 88

Page 18

1 percent of S&P 500 firms have accounting returns that
2 would make them revenue adequate under the Board's
3 definition. And in fact, the median firm of the S&P
4 500 has an accounting return that's 19 percentage
5 points over its cost of capital.

6 And that's not 19 percent, that is 19
7 percentage points. So, the median company in the
8 middle, if it had a cost of capital of 10 percent,
9 its ROI the average company, the median company,
10 would have a return on investment of 29 percent.

11 So, let's think for a moment about what
12 the Board would be hearing today if it's 2018 revenue
13 adequacy determination found a railroad that had an
14 ROI of 31 percent, which would be 19 percentage
15 points over the most recent industry cost of capital.
16 But that -- such a return would not be unusual. It
17 wouldn't even be high.

18 That's just the median of the S&P 500.
19 The facts that most of the firms which railroads are
20 competing for capital are wildly revenue adequate
21 under the way that the Board is measuring it today,
22 is strong evidence that the annual determination for

1 railroads, are not currently giving the Board
2 meaningful information.

3 88 percent of the S&P 500 is achieving
4 accounting returns at the revenue adequacy level, and
5 many of them are vastly exceeding that level. It's
6 obviously not true that revenue adequacy, as the way
7 the Board is measuring it now, is showing unusually
8 high profits that justify extraordinary regulatory
9 intervention.

10 I'm going to turn it over to the
11 professors shortly. I did want to start by briefly
12 reviewing the statutory framework governing revenue
13 adequacy. So, first I'm putting up the familiar
14 text of 10704(a)(2) and (3).

15 You know, Congress gave the Board two
16 duties related to revenue adequacy. And the first is
17 a duty to assist all railroads in becoming revenue
18 adequate. The Board is instructed to make an
19 adequate and continuing effort to assist carriers in
20 attaining revenue levels at the revenue adequacy
21 level. And that the annual determinations flow out
22 of this duty -- flow out of this same text the STB is

Page 20

1 instructed annually to determine which carriers are
2 earning adequate revenues.

3 So, no indication here of regulatory
4 adequacy constraint, but there is a duty to
5 accurately measure revenue adequacy so that the
6 Board can carry out its duty to assist all railroads
7 in becoming revenue adequate.

8 Congress also gave the Board clear
9 guidance about what revenue adequacy is supposed to
10 mean. The adequate revenues are defined to include a
11 reasonable and economic profit or return, or both on
12 capital employed in the business. So, that is not an
13 accounting return, that is an economic profit on
14 capital.

15 And as the professors will explain, those
16 are not the same thing. And Congress made clear the
17 adequate revenues have to enable railroads to
18 successfully compete for capital. So, revenues have
19 to be at levels that permit the raising of needed
20 equity capital, and railroads need to be able to
21 attract and retain capital in amounts that are
22 adequate to provide a sound transportation system.

1 So, in light of this text, we think that
2 the evidence that the professors are going to present
3 about the way that railroad accounting returns
4 compare to accounting returns for the companies with
5 which they compete for capital, is highly relevant to
6 any assessment of whether railroads have actually
7 reached revenue adequacy, as Congress has defined it.

8 And another conclusion that jumps out from
9 the statutory text is that Congress has told the
10 Board to assist railroads in earning returns that
11 will let them successfully compete for capital and
12 not to regulate rates in a way that would preclude
13 them from reaching that goal.

14 So, as the data the professors will
15 present shows, railroads aren't actually earning
16 returns that are abnormally high, or that are out of
17 line with what other investment options are earning.
18 On the contrary, their accounting returns, net of the
19 cost of capital are well below the median.

20 If the Board suggests that nonetheless, it
21 will act to stop railroads from earning above the
22 level that the Board currently deems to be revenue

Page 22

1 adequate, that will strongly discourage investors
2 from placing their capital with railroads because it
3 would signal that this Agency will not let railroads
4 earn what other companies in the market earn.

5 And we'd submit that that's exactly the
6 opposite of what Congress has instructed this Agency
7 to do. With that statutory background, I will turn
8 the presentation over to Professor Murphy.

9 PROFESSOR MURPHY: Matt, thank you very
10 much and thank you to the Board for allowing me to
11 speak here today. Matt covered a lot of what I
12 wanted to say in beginning remarks. Let me just go
13 back over a few things to make it clear. Revenue
14 adequacy, at least in principle, tries to address the
15 question of whether railroads are earning sufficient
16 returns to attract and retain capital needed to make
17 investments to improve and maintain their networks,
18 and provide competitive service to their customers.

19 The revenue adequacy that we use is, of
20 course a measure. A measure is usually in economics,
21 and in most places, an imperfect proxy for what we
22 are trying to actually understand. And we know some

1 of the reasons for that. We know, for example, that
2 the kinds of measures used here are based on
3 historical cost, appreciated historical cost.
4 They're also backward looking, not forward looking,
5 so there's differences between what we measure and
6 the underlying economic concepts we're interested in.

7 That's not the end though, that doesn't
8 say throw up my hands, I can't do anything because
9 what I have isn't what I would like to have.
10 Instead, we often say well geez, can I calibrate into
11 some way, my measure that I do have to make sure I
12 understand how to use it, what I can learn from it
13 and what it's telling me.

14 And indeed, in this context, what we'd
15 like to be able to do is understand how to interpret
16 both the level and any variation or changes that we
17 see in our measure and know what to make of those.
18 Probably the best way to do that, is to compare my
19 measure or evaluate my measure, in the marketplace in
20 which I want to apply it.

21 And in what we call context. And
22 probably, the first and foremost reason for doing

Page 24

1 that is to compare what we see for the railroads, to
2 what we see for the very firms that the railroads
3 need to compete with for capital. And then we chose
4 a broad set of firms from the S&P 500 as
5 representative of the marketplace out there.

6 We're going to use the same measures, but
7 for an alternative group of firms, being the firms
8 that the railroads have to compete with. And if you
9 think the measures we see for the railroads is
10 telling you yes, they can compete or no, they can't.
11 That has to be evaluated relative to what those same
12 measures show for others.

13 Second, we can look at that population and
14 learn a lot about how that measure performs in actual
15 practice. Does it tend to be higher? Do the
16 measured rates of return tend to be higher than the
17 return on capital in a competitive marketplace, or do
18 they tend to be roughly equal?

19 We can also learn do they vary. Do they
20 vary a lot? How much can we make out of a given
21 variation that we see? And therefore, that's why we
22 undertook the exercise we did, to really allow us to

1 understand the measures that we're using. And the
2 best way we see it, is to understand how they perform
3 in actual practice, and we have a nice laboratory for
4 that, namely the firms in the S&P 500 for which we
5 can make the exact same calculations.

6 And Matt has already told you somewhat
7 about the results, but Mark is going to go in much
8 greater detail about those results. So, let me turn
9 it over to Mark. He's going to go through the
10 results, and I'll come back later and maybe make a
11 few more comments.

12 MR. ZMIJEWSKI: Thank you. Thank you for
13 the opportunity to speak to you today. I'm not an
14 anti-trust economist, that's not what I do. I'm a
15 financial analyst evaluation person. I was at the
16 University of Chicago for 30-some years, and that's
17 what I taught, financial analysis valuation,
18 financial strategy, both in accounting and finance.

19 So, I come at this from a different
20 perspective. And what I'm going to do today is I
21 have four parts to my part of my presentation here.
22 First, is just to bring out the economic research

Page 26

1 that has been conducted on how well accounting rates
2 of return predict economic rates return, or measure
3 economic rates return.

4 And the literature is overwhelming. I'm
5 going to tell you they don't. They're a very, very
6 poor measure and you shouldn't use them as a direct
7 proxy. That doesn't help you very much. I heard
8 yesterday, "Put up or shut up." So, what we're going
9 to put up then is here's an alternative analysis, a
10 standard analysis that is conducted by financial
11 analyst and valuation people.

12 I have a book -- textbook on valuation.
13 It is Chapter 2 of our book, "How do you conduct a
14 financial analysis of a company or industry to see
15 how well it's doing." And it's relative financial
16 performance. It's always looking at the company
17 relative to another group of companies because the
18 information that you have based on accounting data
19 are very, very noisy.

20 They're not measuring that exact economic
21 concept. So, you want to put it into perspective.
22 Then the next two parts of my analysis are just first

1 to use the STB's definition of the rate of return on
2 invested capital, and conduct the financial analysis.
3 And then the last part of my presentation is to
4 propose an alternative to what you currently use as a
5 rate of return on invested capital and conduct a
6 financial analysis on that metric.

7 So, I'll start with the economic
8 literature and these were Kevin's slides. But here's
9 the economic literature. It started in the 1960's,
10 so it's not new. This is not a new topic. Business
11 schools started incorporating economic research in
12 the late 1950s and the 1960s, that's when economics
13 entered into business within the business schools.

14 And that research, all of a sudden,
15 started focusing on companies that are using
16 accounting data to make investment decisions, how
17 well do those accounting data actually measure the
18 economic concepts? And in 1960's-1970's the results,
19 every paper said not very well.

20 Then the anti-trust economists got a hold
21 of this result, and they said well, we're using
22 accounting rates of return for anti-trust litigation.

Page 28

1 Should we be doing that? So, there's a whole series
2 of literature in the 1980's going into the 1990's on
3 that topic. And the conclusion was don't use
4 accounting rates of return as measures of economic
5 rates of return because they're so noisy and they
6 just don't measure it well.

7 And I have a quote here from Fisher
8 McGowan in 1983, this is on the anti-trust
9 literature. And what they say there, and you can
10 read it here, there is no way in which one can look
11 at accounting rates of return and infer anything
12 about relative economic profitability.

13 Economists and others who believe that
14 analysis of accounting rates of return will tell them
15 much are deluding themselves. And that's well
16 accepted. So, if you look -- I probably worked on
17 more than 20 cases with the DOJ and the FTC, and on
18 mergers and acquisitions and anti-trust.

19 I'm not an anti-trust economist. I'm
20 brought in to look at accounting data and try to
21 measure economic rates of return and never have I
22 used, or have seen anybody else use, accounting rates

1 of return as measures of economic rates of return.
2 Nobody does that in the anti-trust litigation
3 framework.

4 So, what can you do? Well, I think you
5 can conduct a basic financial analysis just to put it
6 into perspective. So, I'm going to come back to this
7 slide, but I'm just going to go here to what do we do
8 in financial analysis? We calculate a measure of
9 financial performance. So, for the STB it's a rate
10 of return on invested capital minus the cost of
11 capital. That controls for risk.

12 So, that's a good way to think about
13 measure of financial performance, and now we're just
14 going to compare it to another set of firms, that's
15 all we're going to do. So, how do we do that?

16 Well, first we're going to use your formula -- the
17 STB's formula.

18 The numerator is the measure of earnings.
19 The denominator is a measure of invested capital and
20 I'll just talk about those briefly. We measured what
21 you measure. The numerator it really starts with
22 operating income after tax, and you make some

Page 30

1 adjustments for interest on some cash, very small
2 adjustment.

3 You take out any non-railway income to
4 just make sure it's all railway. And it's just a
5 standard operating income after tax measure that is
6 used in the numerator of your calculation for ROIC.
7 The denominator, and I don't have averages here, but
8 this is done on an average basis, which you should
9 do.

10 The denominator, typically if you think
11 about invested capital, you look at the right-hand
12 side of the balance sheet, you get debt and preferred
13 stock and common equity. However, the STB's
14 concerned with not the consolidated entity, the STB
15 is concerned with the railroad assets. So, instead
16 of looking at the right-hand side of the balance
17 sheet, you go to the left-hand side, the asset side
18 and you pick off property, plant and equipment, net
19 of the accumulated free shakes in the amortization.

20 You have a calculation for working
21 capital, which is a fairly tedious calculation, but
22 it's a fine calculation. And then you have any

1 affiliate assets that are railway assets affiliate.
2 Affiliates are not consolidated, so their assets
3 don't appear on the railway, on the company's assets.
4 So, you're going to actually get those assets and put
5 them on the books, all fine.

6 The one thing that's done in this
7 calculation that I'll explain in more detail later
8 that I don't understand, and there's history to all
9 of this, and I don't have all the history here, so I
10 know it's been around for a long time. But then
11 there's a deduction for deferred income tax. It says
12 deferred income tax credits.

13 That's deferred to income tax liabilities.
14 Deferred income tax liabilities represent just
15 quickly, you have a set of financial statements that
16 have assets minus accumulated depreciation, that's
17 net assets.

18 Taxes have a tax basis and there's assets
19 and there's accumulated depreciation and there's the
20 tax basis of those assets. The tax basis of those
21 assets do not equal the accounting. Accountants
22 figure out well what's the potential tax effect of

Page 32

1 that, and they take that difference and they put it
2 on the balance sheet as a deferred tax liability.
3 That's in a nutshell that would entail a three hour
4 lecture, deferred income taxes.

5 So, what are you doing when you deduct
6 deferred income taxes? What you're doing is you're
7 taking the accounting based numbers and you're making
8 them more like tax base numbers, so the numerator is
9 based on generally accepted accounting principles and
10 the denominator now, you're moving towards tax based
11 rather than accounting based.

12 And that would be fine if you think that
13 for some reason tax based depreciation, which is
14 accelerated depreciation, represents economic
15 depreciation, but nobody thinks that. Hotelling,
16 famous economist back in 1925, explained what
17 economic depreciation was, and it's essentially the
18 most simple way to explain it -- it's something very
19 similar to changes in replacement cost.

20 And that's economic depreciation. What
21 the tax courts do, or what the tax rules require is
22 nothing like that. So, I would disagree with that

1 particular adjustment but I'm using it. I'm going to
2 use exactly your definition in what I'm going to show
3 you.

4 So, now we have the analysis, railroads
5 versus S&P 500 and other companies, and we have your
6 definition that we're using and now we're going to
7 say well what firms did we look at and over what
8 time period?

9 The time period - oh, sorry. Cost of
10 equity, forgot about that. Cost of equity -- you
11 have a standard, STB has a standard cost of equity or
12 cost of capital calculation, cost of equity, two
13 methods, standard methods, cost of debt and deferred
14 weighted by the capital structure that's a standard
15 calculation in every corporate finance book, so
16 there's nothing really different about that.

17 So, the comparison is the rate of return
18 on invested capital minus this cost of capital. The
19 cost of capital is fairly standard for the most part.
20 So, now what are we going to look at? The time
21 period that we look at is 2006 through 2018. Why
22 2018? The last data that we have.

Page 34

1 Why 2006? A couple years before the
2 financial crisis, so I figured we should go before
3 the financial crisis, you know, no magic to those
4 years. The four railroads that are publicly traded
5 are in the S&P 500, so I choose the S&P 500 after
6 talking with Kevin, to use, although I exclude two
7 groups of firms.

8 One is financial institutions because
9 they're so highly levered, and the other would be
10 real estate companies because again, they are quite
11 highly levered, so they operate differently. It
12 turns out that if I showed you the analysis with all
13 the S&P 500, or this set, it's not -- the message is
14 the same, there's not a big difference.

15 So, that -- those exclusions don't really
16 matter. The railroads are also part of the
17 industrial sector, so instead of looking at the
18 entire S&P 500 without those two groups, we look at
19 just the industrial sector, so that's about out of
20 the 400 companies that are not financial institutions
21 or real estate companies, that gets us down to about
22 60 companies in the S&P 500 roughly, ballpark.

1 And then lastly, the railroads provided us
2 customers in the S&P 500, and I asked for customers
3 as well as revenues and we calculated combined
4 revenues of a million dollars. It seems like a
5 substantial amount of shipments, and we just have
6 another sample that is the railroad's customers.

7 So, I have the STB definition of this --
8 I'm going to just call it financial performance, ROIC
9 minus cost of capital, and we're going to look at
10 this on three groups. So, I'll present now three
11 slides. Each slide is just a slide on each one of
12 these groups.

13 The first slide, the dotted line
14 represents the median year by year in each year of
15 this particular group. And this group would be all
16 S&P 500 companies, but not financial institutions and
17 real estate companies. So, it's 400 plus companies.

18 The red line represents the weighted
19 average railroad. And this is the STB definition of
20 ROIC minus the STB definition of cost of capital, for
21 all of these companies. And you can hear what Matt
22 said, there's a 19 percent, and I call it a delta, 19

Page 36

1 percent median -- that's the average over this entire
2 period. The median performance of the S&P 500 group,
3 is 19 percent above their cost of capital.

4 The railroads is about half a percent over
5 their cost of capital. These are facts. You know,
6 this is just a fact. Next group, industrial. The
7 industrials, and this is about 60 companies of which
8 the railroads are a part. The industrials actually
9 performed a little better. Their median is about 22
10 percent over this period.

11 The railroads are the same. So, the
12 industrial group's actually a little bit better. If
13 we look at the customers, the customers they're
14 different. The customers only have, if you look
15 here, they have a 9 percent, the median customer has
16 a 9 percent ROIC above their cost of capital.

17 So, it's lower -- about 10 percent lower
18 and the railroad's is the same. So, we have three
19 different groups, and you see in every time the
20 railroads are performing far below the median of any
21 of these groups. And the way you conduct financial
22 analysis, you have a time series of data, and you

1 combine a time series with the cross section with
2 other companies, and you really try to figure out
3 because these are noisy signals, what's happening to
4 that particular company based on the trends of the
5 company, the trends of the comparable group, and
6 where this company fits in the distribution.

7 And you can see, based on all three of
8 these groups, the railroads fit at the bottom of the
9 distribution. And Kevin, and I have three more
10 slides to show you, or four more slides, but Kevin,
11 do you want to just relate this back to what you were
12 talking about?

13 MR. MURPHY: Yeah, what I said earlier,
14 you know, it was important to view these measures in
15 context. And remember, we're talking about how these
16 measures performed in practice. But that's what we
17 have to work with, so that's what's important to
18 understand.

19 And I think what's clear here when you
20 look at the data, is that rather than think about
21 passing above zero is somehow this threshold that
22 suddenly they make a lot of which side of that zero

Page 38

1 line you're on, once you look at the distribution for
2 companies as a whole, you realize there's nothing
3 magical about that zero number.

4 Indeed, the median company is far above
5 there and indeed, in this chart here, 80 percent and
6 some of the other charts, more than that percent of
7 companies are above that zero line. So, try to
8 attach a lot of significance or saying wow, something
9 happened when we went from one side to the other,
10 make a big deal out of that, I think is something you
11 would change your view on, I think, once you've
12 looked at the broader set of data.

13 I think the other one is just how much
14 variation there is in these measures across
15 companies. And how much variation there is over
16 time. As you can see, these are not constants either
17 across companies or across time and therefore
18 fluctuations or variations you see for the railroad,
19 need to be viewed in that context as well.

20 So, both in terms of the level, railroads
21 tend to be quite low relative to the average, even at
22 the levels they're at today. And secondly, that

1 there's a lot of variation out there and therefore,
2 having a bright line at any given level, wouldn't --
3 doesn't seem to be fit with the actual empirical
4 realities of these measures.

5 MR. ZMIJEWSKI: Thanks Kevin. I just went
6 back to the S&P 500 slide for a moment. And you'll
7 see in the box off to the right, you'll see at the
8 bottom of that box, on average, 88 percent of the S&P
9 500 companies had an ROIC minus the cost of capital
10 that's greater than zero.

11 Does that mean that 88 percent during this
12 time period, every year across the 400 companies,
13 they're earning more than their cost of capital? And
14 the answer is no. That's not what it means. What
15 it means is based on this definition with all the
16 limitations of accounting data, using ROIC, relative
17 to this cost of capital definition, this is the
18 information that we have.

19 To interpret that as the S&P 500 over all
20 these years is earning more than its cost of capital
21 every year is just over interpreting the data. The
22 data can't tell you that much information. And I'll

Page 40

1 give you an example. I think everybody here is old
2 enough, so you remember 2009 pretty well.

3 It wasn't -- companies weren't doing so
4 well. In that year, 73% of these companies earned
5 more than their cost of capital according to this
6 metric. Well, we know that's not true. We know
7 that they took it pretty hard and that was a very
8 difficult time for them. And the delta difference,
9 instead of being 19 percent, was still 13 percent.

10 So, according to this particular metric,
11 the rate of return on invested capital, the S&P 500
12 companies in this sample, earned 13 percent more than
13 their cost of capital in 2009 in the middle of the
14 global financial crisis.

15 So, again, it has to do with just the
16 calculations and the limitations of the data, you
17 know, and the message here is don't interpret -- over
18 interpret the data. You need to put everything in
19 perspective. I'm running out of time. I will go
20 quickly. I'm just going to not show that slide and
21 just say what I said. I'm going to make three
22 adjustments through the STB's definition.

1 Adjustment number one is the deferred tax
2 and the denominator. I'm not going to deduct it. I
3 don't think you should deduct it, I won't deduct it.

4 Adjustment number two is -- I'm going to
5 include non-goodwill intangible assets. Why include
6 non-goodwill intangible assets? Those are things
7 like brand value, customer list. They generate
8 revenue if you're having income in the numerator, the
9 denominator should reflect all the assets generating
10 that income, so I include non-goodwill intangible
11 assets.

12 This has little effect on the -- very
13 little effect on the railroads, because the railroads
14 just don't have those assets on their books. But it
15 does affect other companies. And then in the
16 numerator, the value of an asset is based on the
17 magnitude, timing and risk of cash flows. The
18 deferred tax component of income tax expense isn't
19 the cash flow.

20 And it's an expense that the company on a
21 going-concern basis will never pay. So, I am going
22 to exclude deferred income taxes in the numerator, as

Page 42

1 well as the denominator. They're out. So, those are
2 the three adjustments I made. And I'm going to show
3 you these three slides again. And the three slides
4 are now going to be the slide that you saw before and
5 next to it will be this different definition and
6 you'll see what happens.

7 And before I show you that, I just want to
8 show you the impact on the railroads. The black line
9 here is the cost of capital. STB's cost of capital
10 for the railroad. The blue line is the STB's measure
11 of ROIC. And we can see that early on the blue line
12 is below the black line and then it goes above, and
13 it's been a little above over this time period.

14 If we look at my calculation of ROIC, it's
15 the -- I'm going to call it orange line, or whatever
16 that color is. And there you see that all but in
17 only one year, the company -- the railroad industry
18 earned more than its cost of capital based on this
19 calculation.

20 Now, you might say well then, you're just
21 being biased and favor the railroads. No. I'm doing
22 this to everybody. Would I interpret this as saying

1 the railroads in one year earn more than their cost
2 of capital? No. That would over interpret the data.
3 You can't get that information out of accounting
4 data. It doesn't tell you that information.

5 So, let's look at these charts. On the
6 left-hand side is what you saw before, so we had a 19
7 percent increase or a rate of return on invested
8 capital above their cost of capital for the S&P 500.
9 And then we had essentially, a point about a half a
10 percent for the railroads. The railroads went down
11 about 2 percent in that previous chart.

12 The S&P 500 goes down about 10 percent.
13 So, you see on the right-hand side, you see that gap
14 closes and that gap goes from 19 percent down to 9
15 percent. Just by changing, looking at what I think
16 is a couple of reasonable, what I think --
17 adjustments.

18 Again, that doesn't tell you anything
19 about true economics, but it does put into
20 perspective the railroads are still, even on this
21 alternative definition, not performing like
22 non-railroads. And you'll see that again in the next

Page 44

1 chart. Again, the industrials decreased about 10
2 percent in this different definition and the
3 railroads decreased, again, the same 2 percent.

4 And for the customers, you'll see that
5 they decreased about 4 and one-half percent and a 2
6 percent decrease. So, the gap's always closing on
7 this alternative definition, so it really doesn't
8 favor the railroads, but it does demonstrate how
9 alternative definitions of accounting rates of return
10 can influence your results, and it's always important
11 to put them in perspective.

12 Now, we have to ask very nicely, for more
13 time. I think we probably need 4 minutes, so I'm
14 going to ask for 8. But I want to go to Kevin and
15 our Chairman, it's of course, up to you to let us get
16 whatever we can from you, Kevin.

17 MR. MURPHY: I always know it pays to work
18 with an accountant as much as my economics class has
19 talked bad about accountants, you really can see
20 their value. They really help you see the world
21 through actually how it looks. And like I said,
22 putting things in perspective is very important.

1 And really, again, I'll go back to what we
2 said before and just say. When you look at these
3 charts, and I think the corrected charts are probably
4 better. I think they're better measures, but
5 they're still highly imperfect measures. But they're
6 comparable measures between the railroads' measures
7 and the other comparison groups.

8 And you come away with a couple of things.
9 One is that the railroad performance, even today,
10 tends to be at the lower end of the spectrum, whether
11 compared to the S&P 500 as a whole, a subset of S&P
12 500 industries, or customers, and therefore, making a
13 lot of the fact that somehow we've crossed over that
14 zero line or maybe in one year in this measure, more
15 years in the other.

16 It doesn't really tell you very much. The
17 second is -- and if you go back to the earlier
18 charts, go back. Like this, you can really see if
19 you look at the chart on the left or on the right
20 that the railroads' performance measured in context
21 hasn't changed very much. The gap between those two
22 lines is very much the same as it was in the past.

Page 46

1 And I think it would be a mistake, based on that, to
2 say well, these measures are telling me that somehow
3 the world is dramatically different than it was
4 earlier on.

5 These measures, as Mark said, just don't
6 have the ability to make those kinds of refined
7 calculations. So, based on what we see here, I think
8 it's very informative, the limitations and how one
9 should actually think about these measures. The
10 railroads tend to be toward the low end if you're
11 going to do something, unlikely to be a bright line
12 and if there were a line or a level that you'd want
13 to think about, it wouldn't be one centered at that
14 zero point. Something more based on the distribution
15 we see of these measures used in practice.

16 MR. WARREN: I'll just take 30 seconds to
17 close. Chairman Begeman, we do, as Mark mentioned,
18 we want to follow-up on your request yesterday that
19 parties, kind of put up or shut up when it comes to
20 putting proposals before the Board.

21 CN and Norfolk Southern and Union Pacific,
22 didn't ask the professors to do this analysis just

1 because we think it's interesting. It is
2 interesting. But we think it's important for the
3 Board to find ways to incorporate this kind of
4 comparative information into its thinking about
5 revenue adequacy. For example, one thing the Board
6 could consider, is defining revenue adequacy to mean
7 earning or turn up the cost of capital plus whatever
8 the median S&P 500 company earns over its cost of
9 capital, which would be a way to help the revenue
10 adequacy standards that a measured railroad returns
11 against the returns from the firms with which
12 railroads are competing for capital.

13 We're still thinking through the issues,
14 but we wanted to let you know that we are working on
15 developing options that the Board could consider.
16 Thank you.

17 CHAIRMAN BEGEMAN: And let me just clarify
18 my very eloquent comment yesterday with respect to
19 rate reform proposals, not to tell us what not to do,
20 but to help us figure out what to do. And now we
21 will turn to Scott Group, thank you.

22 MR. GROUP: Thank you Chairman Begeman,

Page 48

1 Vice Chairman Fuchs, Board Member Oberman, as well as
2 your staffs for the opportunity to present at today's
3 hearings on this very important issue for the
4 railroads.

5 My name is Scott Group. I'm the Senior
6 Transportation Analyst at Wolfe Research, one of the
7 leading boutique research firms on Wall Street. Our
8 clients are primarily mutual funds and hedge fund
9 analysts and portfolio managers who invest in the
10 public equity and debt of the railroads and other
11 transportation companies. And my comments today take
12 these critical rail stakeholders into account.

13 First, slide 2 presents stock performance
14 of the Class I rails relative to trucking stocks, as
15 well as the S&P 500 over the past 20 years. On
16 average, rail stocks have returned 14 percent
17 annually since 2000, well above other freight
18 sectors, including the trucks which have gained 8
19 percent annually. This also compares with the S&P
20 500, which has produced a 4 percent annualized return
21 over this time.

22 We believe the outside stock returns for

1 the rails reflect improvements in operating margins,
2 returns and free cash flow over the past 15 years.
3 This next slide illustrates consolidated, operating
4 margins for the rail industry over this same period
5 since 2000.

6 As shown, rail margins have essentially
7 doubled over this period from a 19 percent average
8 operating margin in 2000, to a 39 percent operating
9 margin in 2019, based on our countered expectations.
10 We believe the strong margin improvement reflects a
11 combination of inflation plus pricing, and improved
12 productivity trends for the industry over time.

13 Next, we show valuations for the large cap
14 railroad stocks and the S&P 500, on a forward price
15 to earnings, or PE, basis. For a long period of time
16 from 1990 to 2007, the rails consistently traded
17 below the S&P 500's market multiple. More recently,
18 over the past decade, as margins and cash flow have
19 improved, the group is treated more in line with the
20 overall market.

21 Looking ahead, we believe that rail
22 valuations would contract from current levels, back

Page 50

1 below a market multiple, if investors perceived
2 potential risk of rising government regulation of the
3 industry.

4 Slide 5 tracks rail and truck pricing over
5 the last 40 years and depicts the rail pricing
6 renaissance that began in 2004. But it's important
7 to note that since deregulation in 1980, railroads
8 dropped sharply over the first 23 years. They've
9 subsequently increased since 2004 at an average
10 annual rate of more than 2 percent on an
11 inflation-adjusted basis.

12 However, they remain down more than 40
13 percent since deregulation. And, as you can see
14 here, the spread between truck and rail pricing has
15 widened over the past 40 years.

16 Slide 6 takes a closer look at more medium
17 term pricing trends for rails versus truckload and
18 less than truckload carriers. Over the past 5 years,
19 the rails have averaged 2 percent annual pricing
20 increases, and 4 percent for the TL's and 5 percent
21 for the LTL's. So, while the rails have generated
22 inflation plus pricing, it's worth noting that they

1 materially lagged the pricing increases of their
2 closest competitors, despite those competitors being
3 much more fragmented and naturally competitive.

4 Thus, we don't see evidence of excess or
5 outside pricing being exhibited in the rail industry.
6 This next slide compares the current volume mix for
7 the rails by commodity and market compared with 20
8 years ago. Most notably, intermodal has increased
9 from 34 percent of volume in 1998, to just under 50
10 percent of volume today.

11 And on the flip side, coal has shrunk from
12 27 percent of industry volume 20 years ago, to just
13 13 percent of volume today. In other words, the
14 railroads have naturally become much more truck
15 competitive over time, with less captive coal
16 traffic.

17 Next, we compare capital spending trends
18 for the rails over the past 20 years, compared with
19 each of the other modes of freight transportation
20 that we follow. Even with some reductions in
21 capital spending the past few years, the rails which
22 are the top line, are still spending much more on

Page 52

1 CapX than all other freight industries, including
2 truckload, less than truckload, and small package
3 carriers.

4 Over this 20 year period, the rails have
5 spent on average 18 percent of their revenue on CapX
6 versus all other freight transportation sectors below
7 10 percent, and actually closer to 5 percent. Rail
8 spending is also three times higher than the roughly
9 6 percent average of S&P 500 companies during this
10 period.

11 And it's worth noting that rails are
12 completely responsible for maintaining their own
13 track and terminal infrastructure, which is obviously
14 not the case for the trucking industry.

15 Next, slide 9 looks at each rail's return
16 on capital relative to the rail industry's cost of
17 capital as published each year by the Board. Rail
18 returns have, on average, improved from about 5
19 percent in 2003, to 10 percent plus most of this
20 decade. That said, if you look at the last 10 years,
21 average rail returns have exceeded the industry's
22 cost of capital in just 4 years, and have lagged the

1 industry's cost of capital in 6 years.

2 Notably, average rail returns the past 2
3 years have lagged the industry's cost of capital,
4 despite the very strong freight economy in those 2
5 years. Perhaps, more importantly, these return
6 calculations are based on the rail's historical book
7 values, which we believe are materially understated
8 with many assets, including bridges, tunnels and
9 track, that are now fully depreciated on the rail's
10 balance sheets.

11 We try and illustrate this point here. In
12 this slide, we highlight the relationship between
13 capital spending and reported depreciation expense
14 for the rails over the past 20 years. We then share
15 the same relationship between CapX and DNA for the
16 S&P 500.

17 Over the last 5 years, rail CapX has
18 essentially been double reported depreciation
19 expense, while most S&P 500 companies report CapX
20 much closer to their book depreciation expense. In
21 other words, book earnings for the rails are
22 overstated relative to their real earnings, and thus

Page 54

1 returns on capital as well, are overstated.

2 So, we believe it would be much more
3 appropriate to assess the health of the rail industry
4 based on the replacement cost methodology. We
5 believe this would also be much more of an apples to
6 apples comparison with most S&P 500 companies where
7 capital spending is much more in line with book
8 depreciation expense.

9 This slide shows a simplified analysis to
10 try and directionally estimate returns on capital on
11 a replacement basis. In our analysis, we have
12 grossed up reported PP&E figures on the balance
13 sheet, in line with each rails CAPEX-to-depreciation
14 ratio. We've then grossed up shareholders' equity at
15 a similar level, and then calculated the implied
16 returns on capital.

17 As shown on the bottom right of this
18 slide, adjusted returns on capital on a replacement
19 basis would effectively be cut in half relative to
20 reported returns on a book basis. This analysis is
21 somewhat simplified, but directionally shows the
22 returns on the replacement basis would remain well

1 below the industry's cost of capital.

2 Thus, it appears to us that despite
3 improved pricing and returns over the last 15 years,
4 the rail industry is not yet revenue adequate on the
5 long-term basis, and arguably not close. Next, slide
6 12 shows average rail train speeds over the last
7 several years on the top of the slide and composite
8 rail service rankings, based on our proprietary
9 quarterly surveys of large traffic managers and
10 railroad shippers.

11 As shown on the top, rail train speeds are
12 currently at multi-year highs as the rail's benefit
13 from a combination of weak volume trends and improved
14 service and productivity levels as they implement
15 precision-scheduled railroading.

16 Additionally, rail service rankings have
17 rebounded over the past year and are now back in
18 positive territory, indicating the view from
19 shippers, that rail service levels are improving.
20 So, despite large reductions in head count at some of
21 the railroads, reported service metrics, as well as
22 shipper perceptions of service levels, are improving.

Page 56

1 I believe the recent improvement in rail
2 service is important in the context of the rails'
3 competitive dynamic with the trucking industry.
4 Slide 13 shows that the rails remain significantly
5 more fuel efficient than the trucking industry, while
6 slide 14 shows that shippers consistently report to
7 us that railroad rates are 10 to 15 percent cheaper
8 than comparable truck rates on a lane by lane basis.

9 Rails can help relieve highway congestion,
10 as one double stack intermodal train can take up to
11 300 trucks off the nation's congested highways.
12 Meanwhile, laying one mile of rail track is about
13 one-fifth the cost of laying one mile of new highway.
14 We believe it's important to maintain a regulatory
15 framework that remains supportive of continued strong
16 capital spending levels by the railroads.

17 The rails are vital to the North American
18 transportation network and we believe will become
19 increasingly important to infrastructure in order to
20 alleviate highway congestion and promote a more
21 efficient and environmentally conscious
22 transportation grid. While the rails have seen

1 strong earnings and stock performance in recent
2 years, this is the most capital intensive industry,
3 of which you are aware.

4 As a result, the rails have low financial
5 returns on a replacement basis, and we believe rail
6 returns would decline if the Board were to implement
7 material regulatory reform that reduced the rails'
8 ability to differentially price. In that scenario of
9 reduced pricing power for railroads, we would also
10 expect that shareholders would demand substantial
11 reductions in capital spending.

12 In fact, we surveyed over 170 of our
13 institutional clients over the past 2 weeks to ask
14 their opinion about potential rate reform. As you
15 can see here, the results are quite clear. 99
16 percent of investors that we surveyed would be less
17 likely to invest in railroad stocks if the STB
18 enforced constraints on rail pricing.

19 We believe it's important for the STB to
20 consider this overwhelming investor response as the
21 Board contemplates potential future regulatory
22 changes for the industry. Thank you.

Page 58

1 VICE CHAIRMAN FUCHS: Mr. Group, I'll just
2 start off with you if that's okay. Okay? In your
3 summary slide, you said we don't see evidence of
4 excessive pricing power, rail pricing material lag
5 and truckload pricing. When you refer to rail
6 pricing, you're referring to the rates for all
7 commodities?

8 MR. GROUP: Yes. We're -- that comment
9 refers to aggregate rail pricing, so as I think we
10 had the slide earlier that showed that over the last
11 5 years, rail rates have increased 2 percent while
12 trucking rates have been increasing 4 to 5 percent
13 annually.

14 VICE CHAIRMAN FUCHS: And you also had
15 this slide that showed that the commodity mix has
16 changed quite a bit. Your rail pricing measure
17 controls for commodity mix?

18 MR. GROUP: Yeah, our analysis -- what we
19 try and do is we try and eliminate the impact of fuel
20 and mix, so we're trying to get true same-source
21 pricing.

22 VICE CHAIRMAN FUCHS: Same store. So,

1 however, you have a basket of goods within your rail
2 pricing index that is constant throughout.

3 MR. GROUP: So, what we do is we take each
4 rail when they report earnings every quarter, they
5 report their total yield trends revenue per carload.
6 And then we eliminate the impact of commodity mix and
7 we eliminate the impact of fuel surcharges, higher
8 and lower.

9 VICE CHAIRMAN FUCHS: Okay. So, from that
10 index, so Mr. Ellig has a point that when you're
11 assessing the longer term assessment of rail rate
12 trends, such an analysis should determine whether or
13 not rates have increased faster than the rates of
14 inflation and taking a look at for captive shippers.
15 So, if you're looking across the rail industry, is
16 there potential that your rate measure includes a
17 great deal of competitive shipments, and to the
18 extent that the railroads are getting more
19 competitive shipments, it might obfuscate some
20 pricing power on captive shippers?

21 MR. GROUP: I think that certainly that
22 would be possible, but I would say that if you're

Page 60

1 competing with trucks, and if trucks are raising
2 rates 4 percent annually, it's unlikely that the 2
3 percent increase for the rails on the competitive
4 traffic is much less than the 2 percent if your
5 competitor is raising rates 4 percent annually.

6 VICE CHAIRMAN FUCHS: I see. But I guess
7 what I'm trying to get at is it could be possible, if
8 we assume that the vast majority of rail traffic is
9 competitive. And that's a, you know, big growth
10 areas of the business. You could expect a situation
11 where the small fraction of rail traffic that is not
12 competitive could be seeing more and more pricing
13 power that vastly exceeds, kind of the trends that
14 are documented here and that wouldn't necessarily --
15 the rate chart might not necessarily capture that.
16 Is that a fair assessment?

17 MR. GROUP: I suppose that's possible.
18 That being said, I don't know that I have data around
19 this, but anecdotally if we think that coal is the
20 most captive business that the railroads have,
21 certainly coal yields have been increasing at a
22 slower rate than other yields and some of the

1 railroads and most notably, Union Pacific,
2 continually talk about the challenging pricing
3 environment for coal.

4 VICE CHAIRMAN FUCHS: Sure.

5 MR. GROUP: So, also, I'm not so sure that
6 that would be the case.

7 VICE CHAIRMAN FUCHS: Okay, of course we
8 had a good discussion yesterday with the case of
9 coal, you know, I think that the rails would put
10 forward that for some coal traffic, not all, you
11 know, they believe that they have, you know, product
12 competition with natural gas and not every captive
13 shipper has the same competitive forces.

14 So, can I talk a little bit about
15 replacement costs? This is -- Scott, I think you had
16 a very helpful calculation and for the professors. I
17 noticed you all said financial performance. And if
18 we were to think about economic return, what's the
19 appropriate way to think about economic return?

20 MR. MURPHY: I would say economic returns
21 you should think about two things. One, based on
22 replacement cost as you're talking about return on

Page 62

1 new investments. New investments or the costs of new
2 investments for which replacement costs of existing
3 assets would be a proxy.

4 And secondly, before -- with looking --
5 that is the expected return on investments going
6 forward. And the kind of measures we've talked about
7 here are both historical cost and backward looking,
8 so they differ for those two reasons, among others.

9 VICE CHAIRMAN FUCHS: So, in your view,
10 the best assessment for economic returns under the
11 statute, as they're required for revenue adequacy, is
12 to shift towards a replacement cost basis?

13 MR. MURPHY: I would think that's probably
14 a better way to go. You know, best is always tough
15 because, you know, you'd say in principal, if I could
16 really measure the cost of new investments and what
17 the return is that would be great. Replacement cost
18 brings its own issues.

19 I think it's probably an improvement net.
20 I said that in the earlier statement I submitted to
21 the Board in a prior.

22 VICE CHAIRMAN FUCHS: Yeah, and when the

1 Board has considered it in the past, a few issues
2 that they found that you know, obviously the
3 valuation issue and what the adjustment to the cost
4 of capital, which I think right now the Board -- and
5 please correct me here, inform me the way the Board
6 calculates the cost of capital is nominal. And it
7 would have to be adjusted to real if we went to
8 replacement costs.

9 MR. MURPHY: Not, there's a couple ways to
10 do it. You always want to do apples to apples. I
11 don't think you necessarily have to go to a real
12 return as the threshold, you just have to include the
13 appreciation of assets in the returns. And going
14 through a real -- exactly, you have to take account
15 of the change in asset prices, either in the
16 threshold that you set, or in the measures of the
17 actual returns.

18 Probably the better way to do it is
19 actually to leave the cost of capital the same and
20 adjust the way you measure the firm's net return.

21 VICE CHAIRMAN FUCHS: I see.

22 MR. MURPHY: That's the way I would teach

Page 64

1 you in class.

2 VICE CHAIRMAN FUCHS: And for the
3 replacement cost, you know, another issue is just
4 that the fact that I think some folks bring up that
5 maybe railroads don't -- aren't going to replace
6 every asset. How should we be thinking about that in
7 your view?

8 MR. MURPHY: You know, I think you -- one
9 thing you could try to do is to look at the kinds of
10 investments that they're actually making and see what
11 their price adjustments are for those types of
12 investments. We've talked about various ways. I
13 don't think there's a perfect measure which is why I
14 think moving to replacement cost, while better, still
15 is going to leave some of those issues on the table.

16 But I think you need to think about what
17 the asset mix is. I think that issue is probably
18 less today than it was in the past. You know, if you
19 tried to do this in 1980, where there was an
20 enormous amount of kind of redundant, not very useful
21 assets, it wouldn't be replicated.

22 VICE CHAIRMAN FUCHS: Right, right.

1 MR. MURPHY: I do think today's world that
2 that differential is getting smaller and smaller
3 because the railroads have gotten a lot closer to
4 kind of where they would like to be going forward in
5 terms of shedding assets.

6 VICE CHAIRMAN FUCHS: I understand Mr.
7 Group's estimates were, you know, for the purposes of
8 discussion and the like, but what do you make of that
9 methodology?

10 MR. MURPHY: Which methodology?

11 VICE CHAIRMAN FUCHS: When he was
12 estimating replacement costs as a, you know, using
13 proxies for discussion purposes I understand.

14 MR. MURPHY: Yeah, I mean we did similar
15 calculations and our calculations didn't come out so
16 different than his. So, I don't think that's a bad
17 place to start. I'm not sure that would be the
18 methodology you'd end up using if you went down this
19 road in practice.

20 VICE CHAIRMAN FUCHS: What entity has the
21 best measure that you've seen in practice of an
22 economic rate of return, and it could be an agency,

Page 66

1 could be on a case you worked on. You know, ideally
2 it would be, you know, something that's comparable to
3 what we do, and you know, understanding all the
4 difficulties we just talked about with replacement
5 cost, that entity nailed it.

6 MR. ZMIJEWSKI: So, if I could answer that
7 question. I was engaged by the DOJ in the Visa
8 litigation and in that litigation, we calculated the
9 economic rate of return on discovery. How could we
10 do that? We knew the initial investment, so we went
11 back to their initial investments. We knew all the
12 investments they made, and we calculated the value at
13 the end.

14 So, we had the investments in the
15 beginning, we could calculate a measure of value at
16 the end. And we knew all the cash flows in between.
17 We calculated the internal rate of return, and that
18 is the economic rate of return -- that discovered
19 earning on its assets during that period.

20 That is an example of how you calculate an
21 economic rate of return.

22 VICE CHAIRMAN FUCHS: Now, talk me through

1 the applicability of the Board.

2 MR. ZMIJEWSKI: I think you threw it out
3 within two and that's more difficult because you
4 can't go back to the railroad's initial investments.
5 You don't have those investments any more.

6 VICE CHAIRMAN FUCHS: Right.

7 MR. ZMIJEWSKI: So, the best you can do is
8 start at some point in time and calculate the
9 value -- the replacement cost of all their assets and
10 go through a similar calculation. But in a regulated
11 situation, the problem is it's difficult to calculate
12 the end point because the end point today, the value
13 today is dependent on the market's expectations of
14 what you all are going to do.

15 VICE CHAIRMAN FUCHS: Right.

16 MR. ZMIJEWSKI: So, there's a circularity
17 there to try to use market prices today because
18 that's dependent on market expectations of you. So,
19 it's a much more difficult calculation to conduct in
20 your setting.

21 VICE CHAIRMAN FUCHS: And in your
22 calculations of -- when you use the cost of capital,

Page 68

1 you used CAPM, or --

2 MR. ZMIJEWSKI: We did what the STB does.

3 VICE CHAIRMAN FUCHS: For the multi-stage
4 discounted cash flow, did you use projections of each
5 industry?

6 MR. ZMIJEWSKI: Yes. So, Duff and Phelps,
7 which is the same source that the STB -- your source,
8 eventually that the STB uses, we used their
9 calculation. So, we didn't calculate it
10 specifically, we used Duff and Phelps calculation.
11 So, Duff and Phelps has a beta calculation for
12 industry and a two digit SIC code, and they also have
13 the multi-stage DCF calculation for on a two digit
14 SIC code, and those are the ones we used.

15 VICE CHAIRMAN FUCHS: And --

16 MR. ZMIJEWSKI: And excuse me, I'm sorry.
17 And I should just tell you. So, we wrote up as just
18 part of our normal work, a detailed here step by step
19 everything that we calculated and I'm happy to give
20 that to you.

21 VICE CHAIRMAN FUCHS: Appreciate it. And
22 as I understand it, thinking about CAPM and

1 multi-stages kind of cash flow. You know, the Board
2 uses a weighted average of 50/50. And on top of that
3 we use a three-stage, multi-stage discounted cash
4 flow model. And you know, please, educate me, but as
5 I understand it, the number of stages in a discounted
6 kind of cash flow model, kind of differs based on the
7 characteristics of the industry in terms of what's
8 the most appropriate model.

9 Could you maybe talk to me about what you
10 see as the appropriate weight between CAPM and all
11 these stages, cash flow, what the Board should be
12 using for its cost to capital, and if the Board is
13 supposed to be in your view, using multi-stage as
14 cash flow, what's the appropriate methodology for
15 doing so.

16 MR. ZMIJEWSKI: Those are --

17 VICE CHAIRMAN FUCHS: Two questions. The
18 first is --

19 MR. ZMIJEWSKI: I got, I got it.

20 VICE CHAIRMAN FUCHS: A 50/50 way. And
21 second is what do you think of the three stages?

22 MR. ZMIJEWSKI: So, I'm going to go

Page 70

1 backwards, because, so the multi-stage is a common
2 method that's being used. The benefit of using that
3 is you're using forecast to the future, so it's
4 forward looking.

5 VICE CHAIRMAN FUCHS: Yeah.

6 MR. ZMIJEWSKI: More so, than the CAPM
7 which you use, you know, a very, very long time
8 period to calculate the market risk premium. The
9 only part of that calculation that's forward looking
10 is the yield on government debt. So, that's the
11 difference. Which one is better?

12 They've never been tested empirically in a
13 horse race to say one is better than the other.

14 VICE CHAIRMAN FUCHS: But you think the
15 50/50 weight is about right, or is common in terms of
16 estimated cost of capital.

17 MR. ZMIJEWSKI: Since we don't know which
18 one is better, it's a flip of the coin which one is
19 better. 50/50 is the best you can do.

20 VICE CHAIRMAN FUCHS: Sure. And now for
21 the stages?

22 MR. ZMIJEWSKI: Alright and stages. So, I

1 disagree with you. Every -- I could take any company
2 in the world and I could do a three-stage, a two-
3 stage, a 20-stage, you can do as many stages as you
4 like as long as in each stage you have the
5 appropriate growth rates.

6 So, a three-stage model is fine as long as
7 the growth rate is appropriate for each one of those
8 stages. So, the number of stages doesn't matter.
9 The growth rates used in each of the stages drives
10 whether or not it's appropriate or not, or it's
11 useful or not.

12 VICE CHAIRMAN FUCHS: Very helpful. Okay,
13 and I don't want to monopolize, okay. URCS -- Mr.
14 Ellig, you've had -- you know, I've obviously read
15 the TRB report, and your remarks, and you noted that
16 URCS is a variable cost measure, includes, you know,
17 fixed costs and that is your -- one of your primary
18 criticisms would you say it's your primary
19 criticisms, would you say it's your primary criticism
20 of URCS as a measure of variable cost.

21 I know that there are issues that we had
22 in terms of efficiency adjustments and insurance and

Page 72

1 the like that we've talked about in other forums, but
2 is that your primary criticism?

3 MR. ELLIG: Yeah, I mean the economic
4 theory problem with it is that it's treating a lot of
5 things as variable or incremental that aren't
6 variable or incremental.

7 VICE CHAIRMAN FUCHS: And so, the
8 prototypical example is like URCS has a 50 percent
9 wait for rail property investment. And I guess, a
10 two-part question. First is does that mean that the
11 variable cost is over stated?

12 MR. ELLIG: It could be over stated, could
13 be under stated, depending on the circumstances,
14 because the other classic example is hazardous
15 materials holds that may have actually higher
16 incremental or variable costs that are unaccounted
17 for, because of risk and so forth.

18 VICE CHAIRMAN FUCHS: Because insurance.

19 MR. ELLIG: Yeah. So, it could go either
20 way.

21 VICE CHAIRMAN FUCHS: So, is it -- you
22 know, and obviously the use of URCS is important for

1 a number of things. You know, most prominently the
2 market dominance threshold. So, in your view,
3 because of that dynamic, the way that the Board
4 currently calculates URCS by adding that, again, it's
5 possible that there are some shippers that you
6 believe unfairly can't bring a market dominance
7 case -- make a market dominance showing, because of
8 the allocation of fixed cost.

9 MR. ELLIG: Yeah, and also the converse
10 there are probably some that are eligible because
11 they're above 180, but it's not really, yeah.

12 VICE CHAIRMAN FUCHS: Okay. And then in
13 terms of your criticisms of SAC that came up
14 yesterday. And on the first panel, and somebody said
15 that TRB got it wrong on SAC. And let's set aside
16 the issues which, I think part of your issue with SAC
17 is that it uses URCS in some ways in terms of maximum
18 markup methodology as well as ATC for the allocation
19 of costs.

20 But what I think the point you were making
21 in the report was, and this was what I asked the
22 people yesterday, is you know, you talked about how

Page 74

1 within SAC, the hypothetical, you know, the railroad
2 is not profit constrained and every rate is not
3 regulated.

4 As such the cross subsidy kind of
5 envisioned by Falhaber and Baumol, doesn't really
6 hold. And you know, I think that the explanation
7 that I got, just to fill you in, was that's not -- it
8 doesn't hold in part because even under those
9 circumstances, a shipper shouldn't be paying over
10 their stand-alone costs and that shipper still should
11 be entitled to relief, and I might be paraphrasing
12 wrong.

13 I just -- I guess I'm wondering, can you
14 elaborate on why you -- why the TRB report thought
15 that the use of SAC conceptually was highly
16 questionable and why even when someone is over their
17 stand-alone cost, they wouldn't be entitled to
18 relief?

19 MR. ELLIG: Oh, sure, and by the way, I've
20 published things in the past that were very favorable
21 about the stand-alone cost methodology, and actually
22 kind of changed my mind as we dug into it in that

1 study.

2 VICE CHAIRMAN FUCHS: Yeah.

3 MR. ELLIG: Because again, as a matter of
4 economic theory, you can have efficient prices that
5 do involve some cross subsidies, and so the decision
6 to use stand-alone cost as a ceiling, is really a
7 decision that's more based on a notion of equity that
8 it's not right to make any shipper pay more than the
9 stand-alone cost. It's just not fair.

10 And if you want to use that as a
11 definition of what's, you know, what's fair for the
12 purposes of setting rates, that's fine, but that
13 doesn't necessarily mean that rates are being set in
14 the economically efficient manner.

15 VICE CHAIRMAN FUCHS: So, talk me through
16 a situation where a shipper is getting priced below
17 incremental costs. I think, you know, it's
18 typically, in Falhaber/Baumol, and that's an
19 inefficient outcome.

20 MR. ELLIG: Oh, gosh. I think that
21 involves reproducing a bunch of theoretic equations
22 from some of Baumol's work and others, but I mean

Page 76

1 they've at least demonstrated mathematically as a
2 matter of theory it is possible for -- under certain
3 cost of demand conditions, to have a set of efficient
4 prices that involves some cross subsidies.

5 VICE CHAIRMAN FUCHS: Okay, I have more,
6 but please.

7 BOARD MEMBER OBERMAN: Good morning.
8 Matt, I'd like to start with you if I could. When
9 you put up your slides showing us excerpts of our
10 statutes, you omitted subsection 6 of the RTP and do
11 you think it's irrelevant?

12 MR. WARREN: No, I'm very glad you asked
13 that question because speaking of omitting things,
14 let's talk about what the RTP says and holds. So, I
15 think I'd like to start because there was a lot of
16 talk yesterday about 10101(6) and you know, we
17 submitted our slides, you know, a couple days ago, so
18 I haven't had a chance to stick one in here.

19 But I think that there has been in some of
20 the commentary, some misunderstanding about what the
21 RTP actually says. So, I think if we look at 101 --
22 10101(6) in isolation, what does it say? It says

1 that the Board is to maintain reasonable rates where
2 there is an absence of effective competition, and
3 where rail rates provide revenues that exceed the
4 amount necessary to maintain the rail system and the
5 track as capital.

6 So, but if you look at the RTP, we've got
7 15 factors. That's the only one that talks about
8 rate reasonableness. So, this is not some
9 individual, this is not some secret mouse hole that
10 Congress has put in the statute saying that the Board
11 needs to be using a revenue adequacy constraint.

12 It's saying, one of the policies of the
13 United States, is that first the ICC and now the
14 Board, has an important role to maintain reasonable
15 rates. But wait. As you're maintaining those
16 reasonable rates, you need to pay attention to two
17 things that Congress made crystal clear in Staggers.

18 First, our direction that you need to
19 maintain reasonable rates, doesn't apply in the
20 presence of effective competition. So, don't
21 regulate under 180 and even if it's above 180, you
22 need to first find that there is no effective

Page 78

1 competition before it can regulate it.

2 And number two, don't forget what we said
3 in 10704(a)(2), that you also have a duty to ensure
4 that all railroads become revenue adequate. And I
5 would direct you in part to, you know, a couple lines
6 above in the RTP, 10101(3), which directs the
7 Board -- reminds the Board that it is to promote a
8 safe and efficient rail transportation system by
9 allowing rail carriers to earn adequate revenues.

10 So, I think if you look at the RTP, I
11 think in particular, 10101(6) is only talking about
12 in general the Board has the duty to -- you have the
13 responsibility to provide a forum for shippers to
14 come and, you know, bring allegations upon reasonable
15 rates, but it needs to remember market dominance and
16 it needs to remember that it is to assist railroads
17 in becoming revenue adequate.

18 BOARD MEMBER OBERMAN: Nobody would
19 quarrel that market dominance is a threshold. But
20 you know, 6 -- we can't just leave out 6 either. I
21 don't find this elephant in a mouse hole analogy to
22 be very instructive because at least 15 mouse holes,

1 and I don't know if there are any elephants around.

2 But you didn't mention -- subsection 12,
3 you admitted, talks about when you said 6 is the only
4 one about reasonable prices. I don't agree. 12
5 talks about prohibiting predatory pricing. So,
6 there's a lot of messages in that RTP and I just --
7 I'm struggling with how we implement how we do our
8 rate reasonableness trying to keep an account of all
9 15.

10 I don't think any of them are mouseholes,
11 I think that Congress laid them out and I think the
12 courts have said they're all equal. You can't just
13 single one out, but you can't omit it either, and I
14 just -- I couldn't figure out where you thought that
15 fit in to the sections you did cite to us.

16 But let me ask a related question because
17 I think the language in 10704(a)(2) is certainly
18 important -- equally important. You can't ignore
19 that either. It talks about plus a reasonable and
20 economic profit or return. So, we've been talking
21 about economic profit here and I have a couple
22 questions about it. How do you interpret the fact

Page 80

1 that the Congress didn't say plus an economic profit,
2 which would have been easy for Congress to say, if
3 all it meant was, we should listen to our prominent
4 economists here.

5 It also said a reasonable and economic
6 profit. What do you think that means, if anything, a
7 reasonable surplusage there, how are we supposed to
8 interpret it?

9 MR. WARREN: I think that -- I mean I
10 think that's, you know, I think reasonable there. In
11 part, I think it's important to remember that this is
12 you know, the definition of where the revenue
13 adequacy should be drawn. So, obviously, an economic
14 profit of, you know, 1,000 percent would still count
15 as an economic profit -- a very economic profit.

16 But, you know, it would be appropriate for
17 the Board to say, yeah, at some point, that's not
18 reasonable. That's, you know, for purposes of
19 defining what revenue adequacy is, whether a carrier
20 is appropriately revenue adequate. So, I think that
21 reasonable there is you know, is the kind of signal
22 that would give the Board license to look at, for

1 example, what are other firms in the marketplace
2 earning?

3 What are their economic profits and how
4 could we say that, you know, where does this fit in
5 line with that.

6 VICE CHAIRMAN FUCHS: I just want to jump
7 in on that Matt, just to make sure because I'm trying
8 to figure out the inner play between how you all view
9 we should measure revenue adequacy and how we do the
10 SAC test, and we had some discussion yesterday on it
11 in the first panel.

12 BOARD MEMBER OBERMAN: No, no, go ahead.

13 VICE CHAIRMAN FUCHS: But what we, kind
14 of, I thought arrived at was if SAC is setting for
15 the hypothetical railroad, a rate of return that
16 can't exceed cost of capital, so it's at zero
17 percent, and anybody who can make a showing is a
18 captive shipper, can come in and make sure that on a
19 replacement cost basis, the railroad can't make ROI
20 over cost of capital, for their rate.

21 Then necessarily, when a railroad has an
22 ROI over cost of capital, that's -- that economic

Page 82

1 profit is through competitive traffic and through
2 innovation and other good things. That's what I
3 thought we arrived at. So, if you're telling me that
4 the economic profit of 1,000 percent is no good, why
5 wouldn't an economic profit of 1,000 percent on
6 competitive traffic and innovation and all these
7 productivity things still not be good?

8 MR. WARREN: Yes. So, I mean I think one
9 of the messages here is you know, the Board should
10 not be regulating rates based on system-wide returns.

11 VICE CHAIRMAN FUCHS: Right.

12 MR. WARREN: The Board should be
13 regulating rates and it should be pursuing RTP 6 and
14 RTP 13, based on looking at individual circumstances.
15 And even if you have it -- so.

16 VICE CHAIRMAN FUCHS: Oh, no, I'm with
17 you. I just -- because I thought what we arrived at
18 yesterday was that, you know, the economic profit is
19 a good thing, if we're properly constraining monopoly
20 profits. So, when you just mentioned that a railroad
21 shouldn't have that much economic profit, I just kind
22 of --

1 MR. WARREN: I'm not saying that a
2 railroad shouldn't have that much economic profit.
3 I'm saying that for purposes of the Board of what
4 this is doing, is saying defining the line of revenue
5 adequacy, that you know, at some point the Board
6 could say, you know, this is where we believe it is a
7 reasonable economic profit.

8 So, at this point, we were going to
9 declare mission accomplished. This railroad is
10 revenue adequate.

11 VICE CHAIRMAN FUCHS: I hear you, I just
12 thought -- and Marty I'll give it right back, but I
13 just thought that what we arrived at was if we
14 properly constrained monopoly profits, whatever
15 economic profit there is is reasonable.

16 MR. WARREN: Yes.

17 VICE CHAIRMAN FUCHS: Okay, so are you
18 telling me to constrain reasonable economic --

19 MR. WARREN: No, I agree with that. I
20 just --

21 VICE CHAIRMAN FUCHS: Economic profit,
22 when all economic profit is reasonable, do you know

Page 84

1 what I mean.

2 MR. WARREN: Yes. No, but I'm not saying,
3 you know, I think that, you know, we're in some ways
4 talking about two different things because this is
5 you know, the Board has a duty to assist railroads in
6 becoming revenue adequate. This is the definition of
7 revenue adequate.

8 VICE CHAIRMAN FUCHS: Right.

9 MR. WARREN: I think understanding where
10 there are pockets of market power and what individual
11 rates are reasonable, I think that's a different
12 inquiry.

13 VICE CHAIRMAN FUCHS: Yes.

14 MR. WARREN: So, I think the Board saying
15 here's a level where we think you are revenue
16 adequate. I don't think has anything to do with you
17 know, what the process is individually.

18 BOARD MEMBER OBERMAN: No, that's okay.
19 That's helpful. I'm happy to.

20 MR. ZMIJEWSKI: So, just on my reading
21 here and this is out of my area, so I apologize.
22 But --

1 BOARD MEMBER OBERMAN: It's okay, I'm out
2 of my area, go ahead.

3 MR. ZMIJEWSKI: The statute says a
4 reasonable and economic profit or return, or both.

5 BOARD MEMBER OBERMAN: Or both?

6 MR. ZMIJEWSKI: Or both. And so, it's or
7 both, so when I read that and I was going through the
8 cites, it says that you could do both of those. You
9 could have a reasonable return, plus an above the
10 reasonable return, an economic profit. That's the --
11 how I interpreted the "or both."

12 Now, I'm not a lawyer. This is you know,
13 a legal statute, but that's how I interpreted the "or
14 both" which I have a feeling they were talking about.

15 BOARD MEMBER OBERMAN: Well, let me say
16 this. First of all, I have -- I want to pay great
17 deference to both you and Professor Murphy, if for no
18 other reason, because you're from Chicago, which
19 qualifies you for something.

20 But and this really -- I was going to
21 direct it to Matt, but I really think you are moving
22 into how I -- where my questioning is. To me the

Page 86

1 word "or" that the Congress put in there, just as an
2 open door. It doesn't tell us which, it says we can
3 do and/or, so it's a little broader language. It
4 isn't as prescriptive as it might have been.

5 But it's also these things that are
6 undefined, and that was where I was heading Matt, and
7 I'm going to say Professor Z, I'm going to take you
8 up on that. Professor Murphy, I'd like them to
9 weigh in on this, is the formula that has been
10 presented here about the rate of return and so forth,
11 one map that you would argue should be read into this
12 section of the statute about defining economic
13 profit?

14 Because if we're going to have a revenue
15 adequacy determination, whether we do it for one year
16 or long-term, we have to have a measuring stick. We
17 can't just look at it and say it looks good, we have
18 to have some way of measuring this.

19 We have a way now of measuring it. It
20 seems to me you're here saying we really should
21 re-evaluate how we do it. So, is there some precise
22 definition of economic profit that you think should

1 be read into the statute?

2 Or, does the use of the word "reasonable"
3 here, tell us that we can be instructed by the
4 presentation, but ultimately, we still have to pick a
5 number? I'm so lost at legally what's restricting
6 us here.

7 MR. WARREN: Well, I mean, I think in fact
8 the word reasonable is a legal restriction in the
9 statute. But yeah, I mean, I think the message here
10 is you know, for many years, you know, the Board has
11 heard from you know, the industry in area 722 and
12 prior panels, you know, you have natural -- you need
13 to be using the replacement cost, you know, you're --
14 the accounting returns aren't reliable, and you know,
15 and thinking about, you know, the rate reform task
16 force, and how to appropriately respond to that.

17 One of the things we thought about is
18 there, you know, should we go in and talk about
19 replacement cost again, or should we really try to do
20 something? Let's try to show the Board why
21 accounting rates of return aren't a reasonable
22 measure.

Page 88

1 BOARD MEMBER OBERMAN: That's fine, but
2 what I'm trying to figure out is, what is the
3 measure, as an economic return -- for two reasons:
4 Number one -- you know, you're all suggesting to us
5 that we should use replacement cost. A -- do you
6 think that the statute using that phrase and economic
7 profit mandates it, and two -- using Professor Z's
8 point, if we're going to use replacement cost, it's
9 not as easy to figure out as it was in that discovery
10 accounting case, because as you pointed out, who
11 knows where we start measuring replacement cost, so
12 what's the guidance that we would have to construe
13 our statute? That's really what I'm look for here.
14 Or, at least what your contention is. I'm sure
15 others will have other contentions, but I'm not sure
16 how to absorb all of this intelligence that you've
17 put forward here.

18 MR. MURPHY: I guess I would say there are
19 two paths that you could try to take. One would be
20 to alter the measure, that would be to say move
21 toward replacement costs and say that's getting
22 closer. It doesn't measure directly, perfectly,

1 economic returns, but it's hopefully getting us
2 closer to what we're looking for.

3 The other path is to say there are
4 problems there, maybe for reasons, other reasons, I
5 don't want to go there. I want to use a measure that
6 I'm using now. If you're going to use that measure,
7 you want to say, "How do I interpret it?" And that's
8 hopefully, what we tried to do for you today, is to
9 give you an idea of the characteristics that measure
10 has.

11 Where you should think about what it's
12 telling you. What's high, what's low, how big a
13 change that I would expect to see occurring
14 naturally. So, I think actually, we were trying to
15 be very constructive in saying, how does your measure
16 utilize -- how can you actually use it -- not say,
17 oh, it's a bad measure, don't use it. It's saying if
18 you're going to use it, recognize it's an imperfect
19 measure, but you can have a judge -- you have some
20 data that helps you assess its imperfections, whether
21 it tends to be too high or too low and how big
22 variations seem significant.

Page 90

1 BOARD MEMBER OBERMAN: I would invite all
2 three of you to present to us a legal argument of how
3 to use the -- if I could phrase it that was, the
4 economic data. You know, the Congress gave us some
5 breadth here, and I would say that Congress is not
6 necessarily any more expert economist than I am. And
7 so, that's clear to me, what they were given the
8 complexity of these calculations, exactly what our
9 mandate is.

10 I think it's fuzzy at best. It may not
11 be. Maybe these terms have more precise meaning from
12 a statutory point of view. And what I'm looking for
13 is to interrelate the legal standards with the
14 economic -- with sound economic concepts here. And
15 so, as yet, I don't have much specific guidance as
16 this is helpful.

17 There may not be a precise answer until
18 some court gives us more depth. We obviously have --
19 are delegated the authority to interpret these
20 statutes to some degree, and we have to do that.
21 And I'm looking for guidance on that part, and that's
22 why I asked you Matt, what -- I gather it's not just

1 simply saying everything that Professor Z and
2 Professor Murphy told us here this morning, just gets
3 incorporated into this section of the statute on
4 economic return. It's not that simple.

5 MR. WARREN: No, and I'll hand it to Mark
6 in a second. I mean I think that the statutory
7 language, I think economic profit or return on
8 capital employed in the business does suggest that
9 the Board ought to be looking at something more like
10 replacement cost and accounting returns. And I think
11 what this analysis essentially is an alternative way
12 of getting at that goal because the Board has --

13 BOARD MEMBER OBERMAN: I understand, but
14 and not to put you on the spot because it's a
15 complicated subject, but looking at something like,
16 to use your most recent phrase there, doesn't tell me
17 how to decide the issue. I need something -- I'd
18 like to at least hear what your contention is and I'd
19 like to have it based on a legal argument as well as
20 an economic argument.

21 MR. WARREN: Well let me get, if you'll
22 permit me, let me give the legal argument and then

Page 92

1 let Mark give the economic argument. From a legal
2 argument, you know, I would think the staff here
3 requires an economic profit on capital and more than
4 that, you know, Congress repeatedly says that it's
5 important to, you know, for -- railroads need to be
6 able to attract and retain capital.

7 They need to, you know, raise needed
8 equity capital. I mean you really have this kind
9 of -- you know belt and suspenders approach in the
10 statute where you can get a sense of how the
11 Staggers Congress was very disappointed that they did
12 not believe that the ICC had appropriately
13 implemented revenue adequacy.

14 And has reminded them again and again, and
15 then again at the legislative history of how
16 important Congress believed it was for railroads to
17 be able to compete on equal footing with other
18 businesses. So, we think that is the legal hook.
19 And I think, as I mentioned at the close, where we're
20 actively thinking about and developing ways that the
21 Board could potentially incorporate findings like
22 this in its revenue adequacy determinations.

1 But I think that's the core of our
2 arguments.

3 BOARD MEMBER OBERMAN: I want to defer to
4 Ann here for a minute, but I'd like to have that a
5 little more concretely as from a -- as a lawyer, so I
6 can sink my teeth into it.

7 MR. WARREN: I understand.

8 BOARD MEMBER OBERMAN: Because I can't
9 evaluate it based just on these general
10 presentations. If you're asking me to approve a
11 standard through revenue adequacy, I've got some
12 general concepts here, but you know, I've written a
13 lot of laws in my time, and to sit down now and write
14 a standard based on what I'm hearing today, I'd have
15 a hard time doing it, even if I wanted to agree 100
16 percent with what you're saying. I'm not sure I do.
17 But I'd like to at least know what -- how you intend
18 that revenue adequacy standard should be written.

19 MR. WARREN: Yeah, so I appreciate that,
20 and I believe Chairman Begeman indicated yesterday,
21 that the record would be held open. So, we would be
22 happy to provide some more information there.

Page 94

1 MR. MURPHY: I will say one thing. I
2 can't comment on the legal side. I'm not a lawyer.
3 I can tell you on the economics side.

4 BOARD MEMBER OBERMAN: That shouldn't keep
5 you from commenting.

6 MR. MURPHY: What we mean by economic
7 profit or economic notions and things are always
8 about opportunities, opportunity cost. And that's
9 why comparing them to other firms and assessing
10 profitability or economic profit relative to what
11 other firms get, is the natural economic approach
12 because that is the opportunity cost of capital that
13 people face.

14 And so, if you're going to talk about
15 economic profit, I teach this in my class every year.
16 Economic profit is always what you get compared to
17 the alternative. It's not some abstract notion that
18 God told me this should have been the number. No.
19 It's what do you get compared to the market
20 alternatives. And that's why a comparison to other
21 firms makes so much sense if you're interested in
22 economic profit.

1 Because economics is always about a
2 specific compared to the alternatives.

3 BOARD MEMBER OBERMAN: Let me ask on that
4 vein, I had a lot of questions yesterday about the --
5 what's happening in the railroad world, in terms of
6 buy back stock, and whether there's enough money for
7 capital expenditures and so forth.

8 So, I understand the abstract concept of
9 being able to compete for capital. But if you just
10 look at the last 5 years, where are the railroads
11 competing for capital? Because I read their balance
12 sheets, their income statements. They have all the
13 funds they need to invest in capital based on
14 operations. They're not going out and selling new
15 stock.

16 They are borrowing money to pay for stock
17 buybacks, so.

18 MR. MURPHY: But you're always competing
19 to retain capital. That is, you're competing against
20 the investors who would rather put that money to use
21 elsewhere. Whether I have the money or not, I'm
22 always competing against the alternatives, whether

Page 96

1 it's to get people to bring funds in, or to retain
2 the funds I have.

3 If you have investment opportunities that
4 are not equal to what people can get on the outside,
5 firms are going to have the economic incentive and
6 their investors are going to demand that that money
7 flow elsewhere, where it has a higher rate of return.

8 BOARD MEMBER OBERMAN: You're saying the
9 investors are going to demand that the railroad buy
10 back the stock, is that what you're saying?

11 MR. MURPHY: I'm saying whether it's
12 the -- where the investors would demand that or
13 dividends, or other ways. Investors are always
14 looking to put funds to use where they get the
15 greatest return, and that's true whether you're
16 competing to retain the capital you have, or
17 competing to bring in new capital, that doesn't
18 change.

19 BOARD MEMBER OBERMAN: Well, except that
20 this is a regulated industry, and we have something
21 to say about railroads maintaining their capital
22 structure to provide good railroads, the

1 infrastructure, to provide good railroad service.
2 So, as a regulated industry, are railroads as free as
3 all these other S&P 500 companies are to have
4 shareholders demand that the capital come out of the
5 company?

6 It could be if you're in the hula-hoop
7 business that the investors say you're not making
8 enough money, pay me my money back, and shut down the
9 company. Do you think investors are free to do that
10 in the railroad business, which is a regulated
11 industry?

12 MR. MURPHY: I'm not aware, I'm not a
13 lawyer, but my understanding is the success of the
14 railroad industry that we've seen over the last,
15 almost 40 years now, since the Staggers Act, was
16 driven by a movement away from the view that the
17 railroads were a "regulated industry," to the point
18 where they were an industry where competition, to the
19 extent it was possible, was going to be the
20 determinate of both capital investment, as well as
21 rates and the operation of the industry.

22 All the measures I've seen suggest that

Page 98

1 the railroad industry, the vast majority of its
2 business, is in those parts of the business where
3 competition has been allowed to work. And I think it
4 would be a great mistake, as an economist, to say
5 we're going to move back toward a view of the
6 industry broadly being regulated in terms of its
7 competition for funds and its operation.

8 BOARD MEMBER OBERMAN: Well, when I say
9 regulated, I don't mean setting prices as in the old
10 days. I mean aside from setting prices, maintaining
11 service requirements. Maintaining infrastructure,
12 safety regulations that the FRA has, we hear
13 repeatedly about how great the railroads are
14 safety-wise because they're investing.

15 Those regulations the Staggers Act didn't
16 take away. And in fact, recently the Congress gave
17 us more regulatory authority on service
18 investigations. So, it's not -- it's still a
19 regulated industry in that sense. It's not one in
20 which anybody says we should be setting rates for
21 every commodity as in the old days. Nobody is
22 talking about that kind of regulation.

1 But it just seems to me that railroads are
2 not entirely free compared to many of these S&P
3 companies that were up there to say we're going to
4 spend or not spend money on CAPEX. They have to keep
5 the system flowing, and in fact, if you look at all
6 the statutes, Matt, most of it is about keeping this
7 system in good shape.

8 CHAIRMAN BEGEMAN: So, to chime in. To
9 add to what Marty is saying and his comments. So, I
10 want to ask you, Scott. The last chart you had of
11 your survey of your 171 investors, I think it was, if
12 I wrote it down, I mean I have it here, but it was
13 that 41 percent would be somewhat less likely? Well,
14 it's not so much what the percentage breakdown was,
15 but I think your question to them was do they view --
16 well, my question is, so, did they currently believe
17 there is no constraint on railroad pricing?
18 Is that what their current sense is?

19 Because you said if there were a
20 constraint, and then in parenthesis I think you said,
21 "like a cap." But --

22 MR. GROUP: So, I didn't clarify that in

Page 100

1 the question. So, I'm not really sure how to answer
2 that.

3 CHAIRMAN BEGEMAN: You don't know what
4 they thought or think?

5 MR. GROUP: I think that the question -- I
6 think the implied question was the current regulatory
7 backdrop and then if that were to change.

8 BOARD MEMBER OBERMAN: Well, could I just
9 chime in here on this point. You know, I know
10 something, I don't know much about anything. I might
11 know a little bit about political polling, and for
12 that data to be useful, that's not what the question
13 was that was asked. And we've already found out in
14 this hearing that there seems to be a wide variation
15 among the railroad lawyers who've been here, as to
16 what this task force proposal means in terms of how
17 these restraints would be in place if we adopted
18 them.

19 So, in order to have a meaningful reaction
20 as to whether 171 people in that survey are going to
21 pull their money out of the railroad industry based
22 on your poll, it's essential that we know what the

1 question was to ask them. And are you telling us you
2 don't know what the question was asked?

3 MR. GROUP: No, the question, and I'll
4 just repeat it: If the STB enforced constraints on
5 pricing, such as pricing caps, for rails that are
6 deemed long-term revenue adequate, would you be more
7 or less likely to invest in railroad stocks? And I
8 think the essence of that question was taken from
9 effectively one of the proposals in the task force
10 report.

11 BOARD MEMBER OBERMAN: That sounds like
12 the person listening to that question would
13 understand that we were going to cap every commodity
14 on a railroad -- a revenue adequate railroad. And
15 that's a very broad insult to the current system
16 compared to what this task force, so to me, with all
17 due respect, I don't have that information.

18 MR. GROUP: In our research that we've
19 written about, we've been clear that this would not
20 be broadly applied. And so, I do believe --

21 CHAIRMAN BEGEMAN: Scott, was it curious
22 to you that 41 percent would only be somewhat less

Page 102

1 likely? I found that kind of interesting that it
2 wouldn't be 100 percent.

3 MR. GROUP: 100 percent, much less likely
4 you mean.

5 CHAIRMAN BEGEMAN: Yeah. I mean just --
6 there are 41 percent would be somewhat less likely.
7 That's kind of indifferent.

8 MR. GROUP: Well, I think the no impact
9 would be the indifferent, and that was only 1 percent
10 of people. And we also give the option of more
11 likely to event and zero percent chose that response.

12 CHAIRMAN BEGEMAN: Um-hmm.

13 MR. GROUP: And perhaps it speaks to the
14 prior point that I think investors understand that
15 this would not be 100 percent broad pricing caps, so
16 that's why it potentially is not much less likely.

17 CHAIRMAN BEGEMAN: And plus, look. I'm
18 very familiar with your writings over the years. I
19 try not to miss them. I typically -- well, on
20 occasion, I disagree with you, but actually I'm
21 curious to know. Do you pay attention to the Board's
22 annual revenue adequacy determination?

1 MR. GROUP: Yes, we look at it every --

2 CHAIRMAN BEGEMAN: Why? What does it mean
3 to you since given, sort of the dialogue and what's
4 being said. It should have no meaning, so why do you
5 look at it?

6 MR. GROUP: I think that it potentially --
7 I think that the long-term revenue adequacy is the
8 single biggest concern that investors in railroad
9 stocks have.

10 CHAIRMAN BEGEMAN: Concern as in it's a
11 goal, we want you to be revenue adequate, or oh my
12 God, I don't want to invest in a revenue adequate.

13 MR. GROUP: The potential risk that the
14 STB were to change the current regulatory backdrop
15 based on railroads being a view of railroads being
16 deemed long-term revenue adequate is the single
17 biggest concern that I think investors have.

18 And so, naturally, we look at the annual
19 determination because it arguably, influence -- could
20 influence, how the Board is going to proceed on
21 long-term revenue adequacy.

22 CHAIRMAN BEGEMAN: And because that is

Page 104

1 you -- the investors, I guess, biggest concern. Is
2 that why you're here?

3 MR. GROUP: Yes.

4 CHAIRMAN BEGEMAN: I mean, you know, we've
5 put out a number of other proposals from the task
6 force. You've brought some interesting commentary,
7 and I'm like oh, good, it's one more benign proposal
8 after another, which I have no problem with your
9 interpretation. I'm surprised that the carriers that
10 you deal with don't have the very same
11 interpretation.

12 Instead, they think that we're doing
13 something unconstitutional and the sky will fall,
14 perhaps it has fallen as we're in here, I'm not sure.
15 Hopefully, not. But so, one of the things I do --
16 and I guess I'm going to move over to Matt for a
17 second. I don't want to put words in your mouth but
18 at the beginning of the presentation, and you know,
19 I'm going to call you, you know, Mr. Z, I think you
20 sort of previewed that the industries that are
21 earning like 19.23 percent above the median, that's
22 all fine too, nothing to worry about there.

1 That's good. I think that's what you
2 said. That wouldn't be a reason to regulate. But
3 yet then you got into the words, the
4 unreasonableness or reasonableness language that's in
5 the statute, and then you said just generally that of
6 course if it was 1,000 percent, then the Board --
7 there should be an impact on that.

8 So, where do you draw the line between 19
9 percent great, pay no attention to that, but 1,000?

10 MR. WARREN: So, I think from -- for
11 purposes of determining whether individual rates are
12 reasonable or unreasonable, then it doesn't matter
13 whether it's 19 or 1,000 or a million. I don't think
14 that's relevant. I think you've got to look at the
15 individual rates.

16 Now, for purposes of the statutory purpose
17 of the Board, you are instructed to draw a line and
18 determine where, whether railroads are adequate or
19 not, then it does matter. And I think 19 percent,
20 and to be clear it's 19 percent using the exact STB
21 methodology, using Professor Z's adjusted methodology
22 which, you know, includes intangible, non-goodwill

Page 106

1 intangible assets, and you know, does defer taxes in
2 a more, you know, rigorous way. It's about 9
3 percent.

4 But that's we think, is a more, you know,
5 reasonable line for the Board to be looking at in
6 terms of are railroads actually earning over their
7 cost of capital, on an accounting basis at a rate
8 that's you know, more than the typical company does.
9 Does that not answer your question?

10 CHAIRMAN BEGEMAN: No.

11 MR. WARREN: No?

12 MR. ZMIJEWSKI: Can I try?

13 MR. WARREN: Yes.

14 MR. ZMIJEWSKI: So, are we at 10 percent,
15 20 percent, 100 percent, 1,000 percent. The question
16 really --

17 CHAIRMAN BEGEMAN: 1,000 mattered, did
18 anything else?

19 MR. ZMIJEWSKI: Well, to Matt it mattered.
20 I think the statute is not clear, it mattered to me
21 because I would ask well, what's the context? What
22 about everybody else? Right? You have to look at --

1 these are very imprecise measures, so and I
2 apologize, because I don't think it came across where
3 I think we have something helpful to you, and that is
4 here's the distribution.

5 You pick your comparative group. Here's a
6 way to calculate your ROI minus cost of capital, and
7 maybe there's three different ways you're going to do
8 it. And then you say, well, where do the railroads
9 fit in this distribution?

10 Are they at the 95th percentile? And that
11 number could be 10, 100, 1,000, a million, I don't
12 know what it could be. It depends on how you do
13 these calculations. It's more where did the
14 railroads fit in the distribution? And if they were
15 at the very top consistently year after year, as a
16 regulator, you might be concerned about that if
17 they're at the very bottom year after year, based on
18 that calculation you wouldn't be concerned.

19 And I think, as regulators, and you all
20 have a tough job because there isn't a formula that
21 you can just use. That's just life. So, you have to
22 then decide well where in that distribution do you

Page 108

1 think it's a problem? And that's really what we're
2 trying to tell you. You have to think about
3 distribution and where you're fitting in the
4 distribution where you said, you know, that's a
5 yellow flag. Over here at this point, it's a red
6 flag. And I don't know, that's a policy decision for
7 you all to make.

8 It's not something I can tell you. But
9 that's where I would suggest that you think about it,
10 where they fit in the distribution, whatever metric
11 you use.

12 CHAIRMAN BEGEMAN: So, you know, it's -- I
13 don't know if it's really been said, at least from
14 this table, but obviously we all recognize that the
15 railroads need a lot of money to invest. This is a
16 very expensive business that they are in. But what I
17 would like to hear, maybe from Scott, because you
18 know, while on the one hand the railroads are --
19 they're way below, or quite a bit below the 19
20 percent number.

21 And then you had your other three charts.
22 And the railroads are always less than your -- than

1 the others. But yet, Scott, when I go to your
2 charts, and sort of like how the stocks have
3 increased over time, and really, it's one of your
4 charts looked pretty crazy, as like oh, my gosh, look
5 at those.

6 But really, if you go to -- it's showing
7 that the rail stocks really are where other industry
8 stocks are. It's not that they're an outlier, even
9 though that we read like oh, my God, CSX, and UP
10 and just whomever you want to choose for the day.

11 But if the railroads are so below their
12 cost of capital and not really earning what maybe an
13 investor wants them to earn, why are their stocks
14 currently on par with other -- I mean I'm not
15 saying Amazon necessarily, but I'm just looking at
16 the chart that you have where they were all kind of
17 at the same point.

18 MR. GROUP: I think you're referring to
19 the PE multiples for railroads in line with the S&P
20 500.

21 CHAIRMAN BEGEMAN: Am I?

22 MR. GROUP: I think that's what you are.

Page 110

1 CHAIRMAN BEGEMAN: Yes, that's what I was
2 going to say.

3 MR. GROUP: I think that the railroads are
4 better businesses without a doubt, than they were 10,
5 20 years ago. And I think they can continue to
6 become better businesses than they are today, but I
7 would argue that they are not great businesses yet.
8 As the reported returns, the reported earnings and
9 returns, I believe are overstated and thus, I think
10 these are -- like I said, better business than they
11 were 10 or 20 years ago, and I think that reflects
12 the stock performance, but I would still argue that
13 these are still not great businesses.

14 CHAIRMAN BEGEMAN: Do you invest in them?
15 You don't have to answer that.

16 MR. GROUP: I'm not allowed to.

17 CHAIRMAN BEGEMAN: You don't have to.
18 Neither are we. Actually, Mr. Ellig, I've been
19 entertained watching you listen. Would you like to
20 comment on what you've been hearing this morning
21 besides, of course, what you have said yourself?

22 MR. ELLIG: Oh, gosh, yeah. I think if

1 there is maybe one point about thinking about revenue
2 adequacy that bears repeating from what the folks
3 have said, it was what Kevin Murphy said, it's always
4 in comparison to an alternative. In comparison to
5 the next best alternative.

6 And so, I think without rendering any
7 judgment on you know, the presentation we've seen
8 this morning, I think the concept of comparing
9 returns in the railroad industry with returns in
10 alternative industries, makes a lot of sense if
11 you're trying to figure out, you know, are railroads
12 doing well, are they not doing well.

13 Are they, you know, are we about the point
14 where, you know, Congress wanted them to be and so
15 forth. So, that's probably the most important
16 economic insight that falls out of this. It's
17 always relevant relative to an alternative.

18 VICE CHAIRMAN FUCHS: So, I want to just
19 jump back to a point Marty was making in terms of
20 CAPEX and service and the like. You know, Dr. Ellig,
21 you as part of the TRB Committee, talked about how
22 the Board could actually improve its oversight of

Page 112

1 rail service by collecting shipment-specific data,
2 time stamps, some of which is already available at
3 the AID reader, through Rail Link.

4 Can you maybe elaborate on that a little
5 bit?

6 MR. ELLIG: Oh, gosh. I would just say
7 you're asking me about the chapter that I probably
8 had the least to do with in figuring -- and how to
9 implement this stuff. But it's certainly made common
10 sense. Because if you look at, you know, if you look
11 at the way that the performance of a lot of other
12 deregulated industries has been evaluated, whether
13 it's in railroads, trucking, airlines, natural gas,
14 telecom, you know, you certainly want to look at
15 price and price competition and what have the trends
16 been for price.

17 But we also want to look at, you know,
18 non-price aspects to see has it improved, has it gone
19 up, gone down, whatever. And as I can recall, you
20 know, the existing state of scholarly literature on
21 this looking at railroads, they were able to -- and
22 this was some studies done at Brookings back in the

1 late '80s. You know, they were able to look at some
2 things like delivery time and standard deviation of
3 delivery time, you know, get some idea about reliable
4 service, but it was pretty inexact.

5 VICE CHAIRMAN FUCHS: And the reason why I
6 asked, is because there was a discussion about the
7 relationship between CAPEX and service. And, you
8 know, from your standpoint, you know, from an
9 economics standpoint, doesn't it make more sense to
10 consider service as the same way as we consider price
11 and not focus as much just on CAPEX because you could
12 have a high CAPEX percentage as a percentage of
13 revenue by investing in track that's not very
14 productive, by getting a bad deal on your
15 locomotives, or whatever. And so, you know, from
16 your perspective, does it make more sense for the
17 Board to be focused on its core regulatory
18 responsibilities like service and prices and the
19 like, as opposed to kind of, interjecting itself in
20 kind of CAPEX, CAPEX expenditures and percentages and
21 these types of things?

22 MR. ELLIG: Okay, I'm going to say

Page 114

1 something a little bit dangerous because I'm going to
2 make reference to another issue in another industry
3 that people feel very strongly about, and it's kind
4 of become a lightning rod. And I'll try to do it as
5 delicately as possible, and I ask that folks just
6 forget about the lightning rod aspect and focus on
7 the analytical point.

8 Okay, that's a long introductory. Yeah, I
9 was Chief Economist at the FCC for a year dealing
10 with, you know, a highly contentious issue which was
11 the reclassification of broadband from you know,
12 Title 2 back to Title 1.

13 And one of the big issues, one of the big
14 empirical economic issues there was does that
15 classification of broadband matter at all for
16 investment? And why did we care about investment? I
17 think the FCC order was very clear on this that
18 investment itself is not a benefit.

19 Investment is a cost. But it's a leading
20 indicator of thing -- it can be a leading indicator
21 of things like service quality, growth productivity
22 and other things. So, yeah, we want to be careful

1 not to say investment is the social benefit that
2 we're aiming for, but it tells us something about
3 what some stream of services we are likely to get in
4 the future from the things that the investment is
5 being made in.

6 And so, in that sense, I think it does
7 make sense to look at, you know, how are the things
8 we are doing affecting investment. But I think it
9 also makes sense to say to, you know, look at things
10 like quality, service and price as well.

11 VICE CHAIRMAN FUCHS: But as an indicator
12 not as an end?

13 MR. ELLIG: Right, right. Yeah, I mean
14 the things that the customers ultimately care about
15 that are closer to social benefits, or you know,
16 what's happening to price, what's happening to
17 service.

18 BOARD MEMBER OBERMAN: Just a few more
19 areas I just wanted to cover three or four questions.
20 Scott, one of your graphs shows a sharp reduction in
21 capital expenditures beginning in around 2015, and
22 then it sort of ticked back up again in 2017 by the

Page 116

1 railroads.

2 Is that a result of pressures from Wall
3 Street to cut capital expenditures? We've been
4 hearing a lot on these quarterly calls about Wall
5 Street analysts pressing railroads to cut their
6 capital expenditures down below 16 percent and so
7 forth.

8 MR. GROUP: If you look at this chart,
9 it's CAPEX as a percentage of revenue and I would
10 just remind you that in 2015 and '16, you saw a
11 meaningful reduction in revenue. So, if you just
12 think about that denominator, revenue falling, it
13 naturally it makes -- it's influencing the CAPEX as a
14 percentage of revenue calculation.

15 And I would just remind and if you look at
16 the last 5 years, you've had meaningful rail volume
17 declines in 3 of those 5 years. So, I think more so
18 than anything, that's the reason why CAPEX has come
19 down. I would just say, the last thing I would just
20 say if you look over any, you know, multi-year period
21 of time, there is -- the rails are spending more in a
22 5 year period than the prior 5 year period, than the

1 prior 5 year period, and there is just a very, very
2 clear relationship between us as margins and earnings
3 have increased and stock prices have gone up, so has
4 capital expenditures.

5 BOARD MEMBER OBERMAN: But, would you
6 agree that there has been some pressure on Wall
7 Street to reduce the percentage of revenue that's
8 spent on CAPEX?

9 MR. GROUP: To some extent.

10 BOARD MEMBER OBERMAN: And do you think
11 that's good for the industry?

12 MR. GROUP: I think where you're seeing
13 the most meaningful reduction in capital spending is
14 on locomotives, and not at all on any sort of
15 maintenance, CAPEX or technology-related spending.
16 And I think the reality is that the railroads entered
17 2015 expecting a period of significant volume growth
18 and quite the opposite happened, and I think the
19 industry ended up with probably too many
20 locomotives. So, I would think this is more of a
21 holiday than any sort of permanent reduction.

22 BOARD MEMBER OBERMAN: Well, my concern, I

Page 118

1 think I made -- I'm not sure I actually differ a
2 little bit with Patrick. But since CAPEX is such a
3 long-term expenditure and a long-term planning, that
4 if there is too much pressure from Wall Street to
5 reduce CAPEX expenditures, and clearly, based on the
6 calls I've heard, we may actually -- it's like the
7 boiling frog.

8 You know, 10 years from now we've may find
9 infrastructure inadequate and were we not doing
10 something about it when we saw this coming. And it
11 just, that trend continues from Wall Street towards,
12 you know, operating revenues, ratios as well as CAPEX
13 expenditures.

14 It might result in diminution of service
15 at a point where now it's too late to catch up. So,
16 that's a trend that I think we should be keeping an
17 eye on. I'm not sure if we should do anything about
18 it.

19 You referenced, and there were many
20 references yesterday as well, from the railroads that
21 railroads, unlike their competitors pay 100 percent
22 of the infrastructure. Would you agree with me that

1 that's really an overstatement? We just had a tour
2 of the Create Project, which is costing 3 or 4
3 billion dollars, of which the railroads are paying 25
4 percent in Chicago, and I'm sure you know what I'm
5 talking about.

6 There are all kinds of federal grants,
7 Patrick authored some of them, that provide funds for
8 bridges and other infrastructure, so I don't know
9 what the percentage is. I'm sure it's not a huge
10 percentage, but it is accurate to say, isn't it, that
11 railroads pay 100 percent of the infrastructure
12 compared to everybody else?

13 MR. GROUP: I think that's probably fair.
14 I was -- I think it's directional, if you think about
15 it in relations to the trucking industry, where
16 clearly the highways are not built by the trucking
17 companies themselves.

18 BOARD MEMBER OBERMAN: Well, they're built
19 in part by the gas diesel tax that the trucking
20 companies pay. So, you know, I think the rhetoric
21 isn't helpful. That's all I'm suggesting. Now, I
22 sat there in the Create meeting and wondered why the

Page 120

1 taxpayers of Illinois are spending 3 billion dollars
2 to provide faster service through Chicago for freight
3 railroads which are making billions and billions of
4 dollars a year.

5 So, to me there is a broader question
6 there. Mr. Ellig, you have talked a lot about the
7 inadequacies of URCs. Is any part of your concern
8 about URCs that the data on which these cost
9 calculations are made, is apparently quite old? Does
10 that affect the accuracy of it as well as the fact
11 that it doesn't always relate to very accurate cost?

12 MR. ELLIG: Yeah, I think that would
13 affect the accuracy of it as well. I have not dug
14 into URCs deeply enough to be able to say, oh, hey,
15 you know, there are these categories of things where
16 the data is clearly antiquated and just isn't doing
17 what we wanted to do, and these other things are
18 okay.

19 I'd say the more significant problem is
20 that you know, the variable cost measure probably
21 isn't telling us what we think it's telling us.

22 BOARD MEMBER OBERMAN: So, when -- just to

1 finish this point, it came out yesterday. When we
2 say 76 percent of the traffic is competitive, or at
3 least that's what the railroads tell us, that's based
4 on the 180 calculation. Is there any way for us to
5 have any idea whether it's 76 percent, or 90 percent,
6 or 40 percent?

7 Is it just a dart against the board?

8 MR. MURPHY: Dr. Caves didn't use the 180
9 in his, as I recall. He did not use that to come up
10 with the 76 percent number. It turns out it's pretty
11 similar to what you get if you use the 180 and some
12 other methodologies, but his was not based on 180.
13 His was based on structural measures of the existence
14 of competition.

15 MR. ELLIG: He intentionally -- besides
16 URC in every aspect.

17 BOARD MEMBER OBERMAN: The railroads tell
18 us that it's 76 percent. Other than Doctor Caves,
19 there's a vast majority -- I think AAR's presentation
20 is the vast majority are competitive, and I think
21 that's based on the 180 as I understand it. I mean
22 can we draw any conclusions from the 180 measurement

Page 122

1 if URCs is as inaccurate, and I don't disagree with
2 you, but?

3 MR. ELLIG: Yeah, I certainly wouldn't use
4 that as the main indicator. I think it's a lot more
5 accurate to look at things like the actual
6 availability of competitive options and you know,
7 there's a lot of econometric studies of rail industry
8 where they're trying to figure out what things
9 determine rail rates. And they do look at things
10 like, you know, competition from another railroad,
11 proximity to barge competition, you know, how
12 practical is it to have truck competition.

13 In fact, a lot of the rate benchmarking
14 work that went into the transportation and research
15 board report, also does that kind of thing and pretty
16 well specifies you know, here are the places you can
17 go look to find the data on those kind of things.

18 And finally, I'd suggest that a better or
19 a more reliable cross check on calculations based on
20 180 figure, and I suggested this in the market
21 dominance proceeding, that a more reliable thing to
22 do would be to do some rate benchmarking to look at

1 how rates for a particular shipment compare to the
2 distribution of competitive rates for similar
3 commodities and so forth, to get some idea of -- you
4 know, how does it compare to prices in markets that
5 we think are competitive.

6 Now, you know, the Board, in its judgment,
7 may still decide that there's going to be a certain
8 differential there in order to implement differential
9 pricing. But at least getting an idea of where
10 the -- where a rate to a captive shipper is compared
11 to the rates, the distribution rates, they're
12 probably competitive. I think that's a lot more
13 reliable than looking at the 180 number.

14 BOARD MEMBER OBERMAN: Just -- and I
15 realize this is beyond our jurisdiction, it's up to
16 Congress. But if you were -- ran the zoo here, would
17 you then recommend a different threshold for being
18 able to file a rate case, other than the 180
19 measurement?

20 MR. ELLIG: No, I wouldn't recommend a
21 different threshold. I would just recommend looking
22 at -- as I think the Board proposed in the market

Page 124

1 dominance proceeding, you know, look at several
2 different indicators. 180 is one of them. Also,
3 some other ones.

4 BOARD MEMBER OBERMAN: But if you're under
5 180, you can't function. That's what I was asking.
6 Should that be a different measuring stick? If
7 Congress were here, and I asked you yesterday, will
8 you have a recommendation for them, would you
9 recommend a different measuring stick before you can
10 file a rate case other than the 180, given the
11 concerns with URCs?

12 MR. ELLIG: No, I think given my concerns
13 with URCs, I don't think we have the relevant
14 knowledge to figure out what some other appropriate
15 percentage threshold might be.

16 BOARD MEMBER OBERMAN: Well, so that's
17 what I'm asking. Should there be different kind of
18 measuring sticks than a percentage, such as the
19 market dominance test?

20 MR. ELLIG: Yeah, yeah, no, I realize
21 there are statutory reasons that you have to look at
22 the 180, but yeah, I would much rather look at, you

1 know, the kinds of things that anti-trust agencies
2 would look at, which is what are the actual
3 competitive options and you know, how the rates
4 compare and how do the markets.

5 BOARD MEMBER OBERMAN: Just one final
6 question. Somebody asked about whether any other
7 agency which regulates industries uses the economic
8 return definition and Professor Z, you mentioned that
9 you had this calculation in a DOJ anti-trust case, so
10 that's one.

11 Is there any other example that we could
12 look to as to how some other agency has defined this
13 term that you know of, other than the one case you
14 were involved in, anybody?

15 MR. ZMIJEWSKI: I've been involved in
16 several cases where the calculation is -- and it's
17 not a calculation that you could easily do if you
18 could do at all, is an internal rate of return
19 calculation like Discover, Amex litigation was the
20 same thing.

21 BOARD MEMBER OBERMAN: But other than this
22 kind of a litigated setting at DOJ, is there any

Page 126

1 agency that does anything like what we do, has a
2 definition that we could be schooled on?

3 MR. ZMIJEWSKI: I would have to go look.
4 I don't know about the other agencies.

5 BOARD MEMBER OBERMAN: Alright, if there
6 is I'd like to see it, so we can find what others
7 have done. Thank you.

8 VICE CHAIRMAN FUCHS: I just have one
9 final question for Mr. Group. You know that there
10 is -- you mentioned earlier in the discussion about
11 some of the decline in coal, which is obviously has
12 been a bedrock for the rail industry for a number of
13 years. And I think there's some references
14 throughout other witnesses' testimony about, you
15 know, truck competition and the potential for
16 advances and autonomous trucks and other things that
17 could heighten competition in some regards.

18 I guess I'm wondering as you see it, what
19 does the financial health of the rail industry look
20 like in 10 years? And, you now, how should we
21 generally be thinking about the gold carriers
22 achieving revenue adequacy with those pressures?

1 MR. GROUP: Yeah, so as I said earlier, I
2 think clearly the rails are financially healthy and
3 in better position than they were 10 years ago. But
4 there are clearly some real competitive threats over
5 the next decade, be it from -- I don't think anyone
6 would argue that coal is and will remain in secular
7 decline.

8 At some point you have the risk of your
9 biggest competitor seeing materially improved cost
10 structure if you move to autonomous and electric
11 trucks. So, the competitive threats are real, so I
12 think that the -- I still believe though that we want
13 to create a regulatory backdrop that incentivizes the
14 rails to continue to invest -- to compete against
15 what could become a tougher competitor.

16 CHAIRMAN BEGEMAN: Thank you all very
17 much. We greatly appreciate it. And a reminder the
18 record will be open until February 13th. We will now
19 go to the next panel. Panel VI and we're going to
20 start with NGFA.

21 We'll begin with Sharon Clark from NGFA.

22 MS. CLARK: Good morning Chairman Begeman,

Page 128

1 Vice Chairman Fuchs and Commissioner Oberman. I
2 could say good morning by five minutes, so we're
3 doing good. My name is Sharon Clark, and I am Senior
4 Vice President of Transportation and Regulatory
5 Affairs at Purdue AgriBusiness in Salisbury,
6 Maryland.

7 I am presenting this testimony on behalf
8 of the National Grain and Feed Association in my
9 capacity as a member of its Executive Committee and
10 Board of Directors. This supplements the written
11 materials that NGFA submitted to the Board on
12 November 26th.

13 I am accompanied by Tom Wilcox, Principal
14 of the firm, GKG Law, PC, who is NGFA's
15 transportation counsel and will be supplementing my
16 testimony by discussing some of the legal issues
17 relevant to the rate reform task force's
18 recommendations.

19 NGFA is the nation's largest and most
20 all-encompassing agribusiness trade association. It
21 consists of more than 1,100 member companies that
22 operate between 7,000 and 8,000 facilities that

1 annually store, handle, market, process and export
2 approximately 70 percent of U.S. grains and oil
3 seeds.

4 NGFA commends the Board for conducting
5 this hearing and Chairman Begeman for establishing
6 the task force to critically evaluate and develop
7 recommendations to improve the Board's existing rate
8 review standards and processes.

9 We also thank the task force for
10 fulfilling that charge by producing an impactful
11 report containing a suite of innovative and well
12 researched recommendations. NGFA believes that the
13 task force accurately identifies systemic problems
14 and flaws with the Board's existing rate challenge
15 methodologies and processes, and that its
16 recommendations that are at the focus on this hearing
17 are a very reasonable attempt to address the nexus
18 between revenue adequacy and rate regulation.

19 NGFA believes the need to address these
20 issues has become more urgent given the ever-growing
21 exercise of market power by Class I railroads,
22 following the consolidation of the North American

Page 130

1 rail marketplace into regional duopolies and the
2 adoption by most of them of some form of the
3 so-called precision scheduled railroad operating
4 model.

5 In this current market environment,
6 railroads are imposing ever-increasing freight rates
7 and commercially unfair demurrage and accessorial
8 charges and rules, while also dictating the frequency
9 and conditions under which they will provide service.

10 NGFA wishes to reiterate and amplify its
11 written testimony on 3 of the 4 task force
12 recommendations, as well as discuss the legal
13 authority of the Board to develop proposed rules on
14 each.

15 First, NGFA strongly supports the task
16 force's recommendation that the Board establish the
17 definition of long-term revenue adequacy. While
18 NGFA, in its written testimony, noted it had no
19 recommendations for altering the task force's
20 recommended definition, we do concur with the
21 testimony submitted by several other shipper
22 organizations and companies, that the proposed

1 definition is extremely conservative, and tends to
2 over-emphasize the effects of recessions on the
3 finances of railroads.

4 Indeed, Class I railroad carriers reported
5 earnings in 2019, despite significant reductions in
6 the volume of freight being handled, provide ample
7 evidence that they profit handsomely even in a down
8 market. The positive financial trends in the rail
9 industry is further evidenced by its staggering
10 return on investment data, cited in the task force
11 report.

12 The tendency for carriers to remain
13 long-term revenue adequate after achieving that
14 status provides strong assurance that the Board can
15 place reasonable constraints on rates long-term
16 revenue adequate railroads charge captive shippers
17 without undermining the railroad's profitability or
18 reinvestment in our infrastructures.

19 NGFA also reiterates its request that the
20 Board take this opportunity to refine the concept of
21 railroad revenue adequacy by developing a more
22 comprehensive, accurate and defensible approach for

Page 132

1 evaluating the financial soundness of Class I
2 railroads in an era of duopolies and substantially
3 reduced rail-to-rail competition.

4 This could be accomplished in part by
5 completing the pending proceedings on the methodology
6 for determining railroad revenue adequacy in EP 722,
7 and the proceeding to re-evaluate the cost of
8 equity capital calculation in EP 664.

9 In any event, NGFA believes strongly that
10 developing a definition of long-term revenue adequacy
11 is an essential element of rate reasonableness
12 standards, such as the rate increase constraint, or
13 RIC, proposed by the task force, the benchmark
14 methodology proposed by the American Chemistry
15 Council, or other such methodologies that apply to
16 revenue adequate railroads.

17 The Board has considerable discretion to
18 develop a definition it believes is economically
19 sounds and legally defensible. We recommend that the
20 Board not make perfect the enemy of the good in
21 finalizing its definition of long-term revenue
22 adequacy.

1 Second, NGFA strongly supports the task
2 force recommendation to implement an RIC on long-term
3 revenue adequate railroads' ability to differentially
4 price freight rates on shippers that subsequently
5 file a formal complaint and demonstrate market
6 dominance.

7 NGFA believes the clear intent of
8 Congress, when enacting the Staggers Rail Act, was
9 that once revenue adequacy was achieved, a carrier's
10 freedom to charge higher rates to its captive
11 shippers in large part to achieve revenue adequate
12 status, would be curtailed in some manner.

13 NGFA also supports the task force's
14 recommendation that for shippers whose rates exceed
15 the RIC, carriers would be prohibited from raising
16 their non-contract, non-exempt rates beyond an
17 established threshold by more than the rate of
18 inflation, thereby limiting the ability of long-term
19 revenue adequate carriers to differentially priced
20 traffic.

21 NGFA strongly disagrees with the
22 Association of American Railroads contention that the

Page 134

1 RIC constitutes an unlawful constraint on system-wide
2 railroad earnings. The task force clearly stated
3 that the RIC would apply only on an individual
4 movement basis, upon the filing of a complaint and
5 the requisite showing of market dominance.

6 As NGFA has stated in other proceedings,
7 the mere adoption of a new methodology that might
8 afford captive shippers some rate relief will not
9 result in an avalanche of rate cases and systematic
10 economic disruption that the railroads allege will
11 occur.

12 Third, NGFA supports the task force's
13 proposal that so-called bottleneck road protections
14 should be suspending or overruled for railroads
15 determined to be long-term revenue adequate. By
16 that, we presume the task force means that a
17 bottleneck railroad that serves the same origin or
18 destination, as an alternative railroad, would be
19 required to provide a rate for transportation over
20 its bottleneck segment, without the shipper having to
21 make a case for competitive access under the Board's
22 rules and applicable precedent, as well as without

1 having to first enter into a contract for the
2 non-bottleneck portion of the overall movement. The
3 latter part is helpful to agricultural shippers
4 because many do not ship by contract. NGFA does not
5 interpret the task force recommendations to mean that
6 the shippers could pick and choose interchanges, as
7 contended by the AAR, and that the Board will remain
8 the ultimate authority for such determination.

9 In short, NGFA understands the task
10 force's recommendation to merely facilitate
11 competition between railroads above the bottleneck of
12 feasible interchanges. NGFA agrees that there is no
13 policy-basis for imposing the barrier of the
14 competitive access rules to protect a long-term
15 revenue adequate railroad's desire for long haul
16 revenues.

17 Tom's testimony will add additional detail
18 on NGFA's view of the applicable legal rules. Our
19 written testimony recommends two additional elements
20 that we believe would be appropriate for suspending
21 or overruling the bottleneck rules that are pertinent
22 to shipments of agricultural products.

Page 136

1 I would like to add a third that
2 previously has been cited by NGFA, namely, to the
3 extent a long-term revenue adequate railroad responds
4 to a request for a rate over a bottleneck segment, by
5 establishing a charge to switch the trains of the
6 alternate railroad.

7 Or, if the Board modifies its reciprocal
8 switching rules, and orders reciprocal switching over
9 the bottleneck segment, there should be clear
10 standards that prevent such charges from becoming an
11 economic barrier to using an alternative carrier.

12 NGFA previously has suggested a rebuttable
13 presumption, cost-based approach that the railroad
14 must justify if the switch charge is challenged. Let
15 me conclude by again expressing NGFA's appreciation
16 to the Board for conducting this hearing and for the
17 serious attention and considerable time and effort
18 you and your staffs have expended on these critical
19 issues.

20 We urge the Board to proceed by issuing
21 proposed rules on these task force recommendations.
22 It is vitally important that the Board restore some

1 semblance of balanced regulatory oversight in
2 today's rail marketplace, precisely to ensure that
3 the freight rail industry continues to be a viable
4 part of our national transportation system, including
5 for American agriculture. At this time, I'll hand
6 the podium over to Tom.

7 MR. WILCOX: Good afternoon Chairman
8 Begeman, Vice Chairman Fuchs and Member Oberman. I'm
9 going to definitely keep to our time, so I would
10 first want to congratulate the Board and the task
11 force on your efforts. The voluminous responses of
12 the AAR and its Class I railroad members, and their
13 experts in opposition to these recommendations, are
14 proof that you're on to something substantive and
15 meaningful for rail shippers.

16 NGFA has done a preliminary review of the
17 written submissions, and we appreciate that the
18 record will be held open until February 12th so we
19 can have a more thorough response, but for now, we
20 offer a few initial observations on the AAR's written
21 submission.

22 First, the statements -- there's a lot of

Page 138

1 statements that the railroad academic witnesses and
2 references to academic studies showing revenue
3 adequacy has been achieved through market forces,
4 competitive environments. There's no reason to
5 suspect the improving financial health of the
6 industry has resulted from inappropriate exercise of
7 market power, statements like that. Those are all --
8 and NGFA has testified in their comments before,
9 they're bellied by their real world experience of
10 NGFA's members and other rail shippers.

11 If there was really, truly competition in
12 the industry, you would not see rates increasing to
13 the extent they have increased. You would not see
14 contracts without any service standards. You would
15 not see fuel surcharges that over-recover cost, a lot
16 of things that you would see in a meaningfully
17 competitive environment.

18 Second, AAR's made an argument that their
19 revenue adequacy constraint should be rejected after
20 34 years because it violates the statute. I think
21 you heard a little bit about they've had some
22 discussion about, this yesterday, we believe that is

1 just wrong. At a minimum, the constraint is fully
2 supported by 49 U.S. Code 1016 which we discussed
3 about yesterday, the coal rate guidelines and, of
4 course, the Third Circuit's decision in 1987, where
5 they specifically held "the four constraints in the
6 final guidelines are consistent with the 4R Act in
7 Staggers Act." In that case, the Third Circuit also
8 talked about imposing revenue adequacy as a ceiling
9 in a couple of instances.

10 As Sharon said that the AAR characterizes
11 the rate increase constraint as a cap is belied by
12 the, you know, the terms of the report itself and the
13 fact that you would have, you know, just a small
14 amount of shippers filing complaints. It's not an
15 overall system-wide cap.

16 So, on the bottleneck, I'll just hit the
17 bottleneck issues. Again, we do not believe the
18 carriers have a statutory right to the long haul.
19 There was some discussion about this yesterday. The
20 obligations to uphold a railroad's routing references
21 are qualified in Section 10705, that also requires
22 only that the STB must give reasonable preference to

Page 140

1 the carrier originating the traffic. I want to
2 discuss a case that I don't believe was discussed in
3 the AAR submission that connects its case from 2012.

4 In there, the Board stated there is "a
5 broad variety of public interest factors that go into
6 10705 determinations." And it even said the relevant
7 factors are "Subject to change with each analysis."
8 In that case, the Board found that, you know, BNSF
9 had actually a preference for short haul.

10 They didn't want to transport chlorine to
11 Kansas City, and the Board found that BNSF's
12 preference for a particular route interchange point
13 was unreasonable under 10705 and contrary to the
14 public interest under the facts of that case and
15 ordered that BNSF could not stop the chlorine in
16 Spokane and had to take it to Kansas City.

17 I guess I will stop, because I don't want
18 to go over our time, and just answer questions about
19 the issues. Thank you.

20 MR. PATELLI: Good afternoon Chairman
21 Begeman, Vice Chairman Fuchs and Commissioner
22 Oberman. My name is John Patelli, head of Regulatory

1 and Federal Affairs. It is my pleasure to introduce
2 my colleagues, Ray Atkins, outside counsel for us at
3 Sidley Austin, and my colleague Sean Pelkey, Vice
4 President Finance and Treasurer for CSX, who will
5 discuss CSX's process for making investments and the
6 impact that a system-wide earnings based constraint
7 would have on those investment decisions.

8 MR. PELKEY: Thank you John. Members of
9 the Board, it's a pleasure to be here with you today.
10 My role as Vice President of Finance and Treasurer,
11 includes responsibility for reviewing CSX's capital
12 allocation, capital budget, business plans and
13 forecasts.

14 I speak with nearly 15 years of direct
15 finance experience at CSX and provide you my
16 perspective on how earning's based rate regulation
17 could dramatically impact our ability to make capital
18 investments in the future.

19 I want to begin by discussing the cost of
20 capital and what it represents. Cost of capital has
21 a significant influence on our investment decisions
22 as a company. The simple investing principal is that

Page 142

1 those who take on more risk require a higher return.

2 All costs of capital calculations reflect
3 this reality, including the one used annually by the
4 Surface Transportation Board. As you can see on
5 slide 1, equity holders demand higher returns than
6 bond holders, and the return demanded by both
7 increases with leverage.

8 A stable company like ours attempts to
9 balance debt and equity to maximize the value of the
10 firm. If CSX cannot provide returns above the cost
11 of capital, many of our current investors will
12 redirect their capital to other companies not
13 constrained by regulatory caps.

14 The investors who remain will not be
15 willing to accept sustainably lower returns.
16 Constrained by potential regulation, our shareholders
17 will likely force us to seek acquisitions completely
18 unrelated to the railroad business that will distract
19 our core focus on serving our rail customers
20 efficiently and reliably.

21 We will also be pressed to reduce capital
22 investments in the railroad. As you've heard in

1 previous testimony, the vast majority of S&P 500
2 companies earn more than their cost of capital. If
3 their investors demand this kind of performance, it's
4 clear ours do as well.

5 This is the reality of the financial
6 marketplace. Starting on slide 2, I'll try to
7 provide you more insight into how we make investment
8 decisions. The net present value or NPV, of an
9 investment is positive, if the value of the future
10 cash flows discounted our cost of capital exceeds the
11 investment.

12 Return on invested capital is essentially
13 the rate of return generated by all investments in
14 our enterprise over time. If our return on capital
15 exceeds our cost of capital, we can justify
16 continued investment in the business. While return
17 on capital is traditionally a backward looking
18 metric, we look at all potential investments on a
19 forward looking basis, using the assets replacement
20 cost in our analysis.

21 To evaluate strategic investments, we
22 discount the future cash flows by what we call the

Page 144

1 hurdle rate. That hurdle rate references the cost of
2 capital includes a small premium for risk. Project
3 risk can include unanticipated cost overruns,
4 expected benefits that don't materialize, and even
5 regulatory uncertainties.

6 When the rate of return or IRR, of any
7 project exceeds the hurdle rate, the project has a
8 positive NPV. And importantly, for CSX to pursue a
9 strategic investment of any kind, we must ensure the
10 return exceeds the hurdle rate.

11 Slide 3 illustrates a potential
12 hypothetical freight car investment we evaluate
13 regularly. In this example, you'll see how CSX's
14 significantly improved service and efficiency levels
15 help support and encourage future investments.

16 Now, let's look at the scenario before CSX
17 implemented its new operating model. In this
18 example, we explore the purchase of a freight car
19 with a replacement cost of \$100,000. We expect that
20 car to generate annual revenues of \$40,000 and an
21 operating ratio of 70 percent. On the surface, this
22 seems like a good investment. We increase both

1 revenue and earnings. The problem, however, is that
2 the cash flow, when discounted back at the hurdle
3 rate, in light of the initial investment, actually
4 results in a negative NPV.

5 One might suggest that we should just
6 lower our hurdle rate and be satisfied with the new
7 business. But in this example, our investors simply
8 would not tolerate it. Low return investments would
9 disadvantage us in the marketplace. Remember the
10 expectation and norm is for a company to earn more
11 than the cost of capital.

12 Now let me illustrate how this investment
13 premise has changed for us after the significant
14 service and efficiency improvements we've made over
15 the last few years. In this example, the freight
16 car costs the same \$100,000. However, by tightening
17 schedules and operating more reliably, we're now able
18 to turn our cars approximately 15 percent faster
19 across the network.

20 As a result, this same investment can
21 actually produce more annual revenue. Instead of
22 handling 20 loads a year, this car now handles 23.

Page 146

1 In addition, the higher revenue turns into higher
2 income because margins increase with lower overtime,
3 maintenance and other asset related costs. Now we've
4 got \$46,000 of revenue at a 60 percent operating
5 ratio, and more than 1.5 times the operating income.

6 Since the NPV is positive, we can now
7 justify investing in this car with the expectation
8 that the return will exceed our cost of capital. The
9 improvements we've made under the new operating plan
10 also benefit our customers by making it more
11 economically feasible for them to invest and grow
12 their own fleets.

13 Let me pause here to draw on a fundamental
14 question raised at the hearing. If we extrapolate
15 the investment on the left, as illustrative of all
16 rail investments, would we call this revenue
17 adequate? Its returns are below the cost of capital,
18 so likely not.

19 How about the example on the right? This
20 investment earns above the cost of capital, and if
21 this were representative of every investment CSX has
22 made, we might now say that CSX is revenue adequate.

1 But would it be just to say that the rate charged to
2 the customer on the right is unreasonable, when on
3 the left it was perfectly reasonable?

4 If you followed the math, you've probably
5 figured out the rates are the same, \$2,000 in each
6 scenario. Further, who has a right to the profits
7 that have been generated through this transformation
8 and hypothetical investment? Should our shippers
9 get a lower rate because of the efficiencies we've
10 generated? The fact is that the owners of our
11 company have a right to the increased cash flows that
12 are a result of this investment.

13 I'm happy to expound further in Q and A,
14 but our owners get to access that cash in several
15 ways -- dividends, share buybacks, or simply
16 liquidating their investment whenever they think they
17 can earn a greater return elsewhere. Such a return,
18 in and of itself, cannot be equated with revenue
19 adequacy.

20 As this example illustrates, CSX has
21 improved operating and financial performance empowers
22 us to invest in projects aimed at enhancing our

Page 148

1 ability to compete and win more traffic. We've made
2 recent changes to our capital budgeting process to
3 allocate more funds to strategic projects,
4 encouraging innovation, growth and automation.

5 When we make these investment decisions,
6 we always use replacement cost. As you've heard, the
7 depreciated asset base that helps form the
8 denominator of our return on invested capital,
9 severely under represents our true investment needs.

10 CSX replacement cost far exceeds net book
11 value, which as of year-end 2018, was approximately
12 28 billion dollars, excluding land. Nearly
13 two-thirds of the net book value is made up of three
14 asset classes -- track, locomotives, and cars. These
15 assets have easy to estimate current replacement
16 costs, and the average replacement cost of those
17 assets is roughly three-times their net book value.

18 Using this three times multiplier for the
19 remainder of the assets gets you to a replacement
20 cost in excess of 80 billion dollars. Given that the
21 other assets include engineering structures, like
22 bridges and tunnels that have extremely long lives

1 and extraordinarily low network values, the three
2 times multiplier is likely conservative for this
3 category.

4 This slide demonstrates how a return on
5 replacement costs would clearly come far below our
6 cost of capital. We have to evaluate our investment
7 decisions based on what it costs to replace assets
8 now, not what those investments are worth on the
9 books.

10 Over the last 10 years, CSX has invested
11 an astounding 22 billion dollars on new assets,
12 representing two-thirds of our operating cash flows.
13 These investments include over 5,000 miles of track,
14 33 million ties replaced, and nearly 550 new
15 locomotives.

16 Importantly, this year marks the most
17 miles of rail and number of cross ties replaced since
18 2015. We continue to reap the benefit of prior
19 locomotive purchases, as our average fleet is newer
20 and more reliable. We remain committed to investing
21 in the safety and reliability of our core
22 infrastructure.

Page 150

1 Turning to our capital allocation
2 framework on slide 6, investment in core
3 infrastructure is our first priority and represents
4 in excess of a billion dollars annually for CSX.
5 Beyond that, we continuously have discussions with
6 our Board of Directors regarding capital allocation.

7 Our priorities are to balance returns with
8 risk. As Mr. Beyer described yesterday, we
9 continuously explore strategic high-return
10 investments that drive efficiency and organic growth
11 to our existing business. We also explore inorganic
12 growth opportunities, such as small strategic bolt-on
13 acquisitions that may help drive business to the core
14 rail network.

15 These growth investments must exceed our
16 cost of capital as I've described, accounting for the
17 risk inherent in the proposed projects. Once we've
18 exhausted these potential options, we could choose to
19 hold onto the cash. As you know, if you have any of
20 your investments in deposits today, returns are low,
21 below 2 percent for us and far below the cost of
22 capital.

1 We could also use the cash to repay debt,
2 but given the low interest rate environment and the
3 importance of a balanced capital structure, buying
4 down debt is also not a very attractive strategy.
5 That leaves us with dividends and share repurchases
6 which sit somewhere in the middle.

7 When we utilize cash to provide a
8 dividend, we give that cash back to the investor,
9 allowing them to invest elsewhere and earn the return
10 they demand. Lastly, we can buy back our shares,
11 where we give investors a choice. Those that want to
12 cash out and utilize their proceeds for alternative
13 investments can do so when we repurchase shares.

14 Those that prefer to stay invested can do
15 so as well. For companies, buybacks preserve
16 flexibility by avoiding commitments to higher and
17 possibly unsustainable dividends, which tend to be
18 viewed as fixed costs.

19 Buybacks also reflect confidence in the
20 future of the company and in our ability to generate
21 returns above the cost of capital. To be clear, we
22 buy back our shares precisely because we think there

Page 152

1 will be an increasing amount of high return
2 investments available in the future that will help
3 drive efficient, reliable service and provide us a
4 return adequate to justify those investments.

5 When this happens, the remaining owners in
6 the company each have a greater share in this
7 success. However, if our company was constrained
8 from earning returns above the cost of capital, there
9 are three hypothetical outcomes. And I could state
10 confidently that two of them will not be tolerated by
11 our share owners.

12 The first outcome is to continue investing
13 in high return projects which typically possess a
14 higher risk profile. Despite rate caps that benefit
15 a subset of shippers and are designed to keep CSX at
16 or near its cost of capital, we don't believe that
17 our investors will allow us to let this happen, and
18 therefore would discourage us from future, strategic
19 investments.

20 The second alternative is that we keep
21 investing in a combination of high return projects
22 and balance this by investing in an equal amount of

1 lower return projects. This would increase our
2 investment base and keep our returns in line with our
3 cost of capital. But why would we ever do this?

4 Each strategic project, including our
5 investments in advance technology and the significant
6 commitment we just made to expand capacity of the
7 Howard Street Tunnel in Baltimore, carries
8 significant risk. If we're in a world where CSX is
9 constrained from earning returns above the cost of
10 capital, there's no reward, and we retain all the
11 downside risk.

12 Simply put, investors would not tolerate
13 the balance required in this scenario to invest in
14 low return projects. The final and only feasible
15 outcome would be to reduce our capital spending. We
16 would have no incentive to invest in high return
17 projects. We would continue to maintain or replace
18 assets, at the end of their lifecycle, but would stop
19 investing in strategic projects.

20 Turning to slide 8, I'll close with the
21 sentiment that CSX is delivering exactly the kind of
22 results through the first three quarters of 2019 that

Page 154

1 should be encouraged: The lowest personal injury
2 rate of the Class I's, fewest reportable train
3 accidents in company history, velocity and dwell,
4 best in company history to the benefit of our
5 customers, and a recent launch of our new trip plan
6 compliance electronic platform for merchandise and
7 intermodal customers, which provides an unprecedented
8 level of transparency into our performance at an
9 individual shipment level. A long-term revenue
10 adequacy constraint would discourage this kind of
11 progress and create an uneven playing field as
12 compared to trucks who already dominate the
13 transportation market and enjoy the benefit of a
14 publicly funded highway system.

15 Rate ceilings would only make it more
16 challenging for us to win loads from overly congested
17 roadways, something I think we can all agree is in
18 the nation's public interest for railroads to do.
19 Members of the Board, CSX respectfully recommends
20 that long-term revenue adequacy properly calculated,
21 should not be a -- should be only a measurement of
22 railroad financial health, not a vehicle for system

1 wide earning regulation that will diminish incentives
2 to inspire innovation, efficiency and every improving
3 customer service.

4 Having witnessed first-hand the
5 transformation of this railroad, I can confidently
6 say I'm proud to represent CSX. I come to work every
7 day energized and engaged because I work for a
8 company that's constantly seeking new ways to drive
9 efficiency, compete against other railroads, as well
10 as trucks, and invest in projects aimed at growing
11 our business to serve this nation's freight
12 transportation needs today and in the future.

13 Thank you for your time and I'll be glad
14 to take questions on the topics that I've discussed.

15 CHAIRMAN BEGEMAN: Gordon, you're next.

16 MR. MACDOUGALL: Good afternoon. I'm
17 Gordon MacDougall, appearing today on behalf of
18 Samuel J. Nasca. I'm the New York State Legislative
19 Director for the SMART Transportation Unit. And we
20 submitted a statement, and I'm here to tell you that
21 we don't think that revenue adequacy should be a
22 factor in the individual rate making.

Page 156

1 And under Section 49-10701(d)(3), you're
2 supposed to look at simplified forms. And the
3 simplified way is after you get first market
4 dominance, which is the statutory requirement, then
5 we think you should go to rate comparisons, which is
6 the standard way of setting rates at the old ICC and
7 at the new STB.

8 And Unreasonable Freight Rates was a
9 published book by Examiner Shen. He wrote two others
10 as well, one routing in this routing and another was
11 freight rate application. And these spoke before the
12 practitioners. He was a good examiner. They now
13 call him Administer of Law Judges. He didn't like to
14 be called Administrative Law Judges at the time.

15 And there's nothing wrong with taking
16 freight rates and comparisons and cost comparisons
17 you use as revenue variable costs, and that's not the
18 issue, actual rates. And when you go to negotiate a
19 rate, that's what you do. You go to the rate officer
20 and the shipper would say -- they'd discuss I want
21 this certain rate because it's comparable to other
22 rates by competitors.

1 Or, there's some special situation.
2 There's nothing wrong with that system. Revenue
3 adequacy was done by ICC and the STB through ex parte
4 increase cases. And the ICC published a
5 publication, 100 pages, in McGraft, with all the ex
6 parte increases ever since Louie Brandeis in 1914,
7 the 5 percent case all the way up to Ex Parte 267
8 back in 1971.

9 And to get it, add over there it's 100
10 pages and get every case of the commodities,
11 citations and so forth. And we think that's what's
12 the best way to solve this. I'm not here to discuss
13 revenue adequacy from an overall revenue standpoint
14 of the railroads.

15 That's something else. That's what you
16 did in this 100 page document over the years. It
17 varies. The interest rate can be different at
18 various times. And, but the way to decide the
19 reasonableness of rates is without going to revenue
20 adequacy. That was the rule we were all trained at.
21 We have traffic schools in New York, Chicago,
22 Nashville, that was the rule. And it was

Page 158

1 successful.

2 And revenue adequacy is something
3 different, and it's not part of the individual rate
4 making. Now, you had staff issue a report. We're
5 critical of that report. It's unsigned. We used to
6 have ALJ's do rate cases. They put their name on it.
7 And if you didn't like it, you filed exceptions to
8 it.

9 This report is sent all over the country
10 from people, staff, dozens of meetings and all that
11 kind of stuff, all oral, apparently, all oral. And
12 you issued a report which is just through and through
13 wrong.

14 And as I say, you've abolished all of your
15 Administrative Law Judges, unlike the Federal
16 Communications Commission, or the FERC or anybody
17 else. You don't have a Secretary now of your agency,
18 unlike other agencies.

19 So, we think that the primary issue is the
20 membership of the STB. You should get your own house
21 in order and go back to decide rates that are
22 reasonable, and there's a method to decide if rates

1 are reasonable. We do it by rate comparisons. We
2 don't do it by fancy cost formulas.

3 And to be sure, if we go back to the old
4 system, you may have to -- won't have as many cost
5 cases, but that cost case started out of 2300, the
6 late '30's, because there were feudal system in the
7 south and there was alleged to be freight raise
8 directed towards industrial development of the north
9 and not the south.

10 You have taken that formula and decided to
11 make individual rates out of it. And it hasn't
12 worked. And politically, we suggest to you that to
13 solve the small shipper problem, so that go back to
14 the way you used to do it, and the way the actual
15 shipper looks at it. He looks at what are the rates
16 other people are paying, the way the railroad sets
17 rates on what other railroads are doing, and what
18 other shippers are getting.

19 It's not an easy process, but it's -- we
20 think it's the fair way, and we don't believe that
21 revenue adequacy should be a factor in individual
22 rate making. I'll be happy to answer any questions.

Page 160

1 CHAIRMAN BEGEMAN: Thank you. I'm going
2 to start with just a couple of questions for CSX, if
3 you don't mind, and thank you Sean, I'm glad that you
4 go through it. We'll leave it at that. You know --
5 how long have you been at CSX, just out of -- because
6 I don't want to ask you a question that would be
7 unfair.

8 MR. PELKEY: Nearly 15 years now, since
9 2005.

10 CHAIRMAN BEGEMAN: Okay, great, then one
11 of the questions that I had was, although your
12 testimony talks about the record of CAPEX investment,
13 et cetera. But if based on our own data that we
14 have, and over from the data that our Office of
15 Economics put together, you're really right now at
16 about the same level you were in 2009.

17 And you've been investing steadily less
18 each year since 2015. And I'd like you to help us
19 understand why that is. Is it and I'll pick up from
20 what my colleagues said. Is it pressures from Wall
21 Street? Is it changes that less, I guess, maybe need
22 because of different changes and how you have been

1 changing your network and you know, shedding lines,
2 et cetera?

3 But if you could just help us understand
4 because the same level as 2009 isn't really shocking.

5 MR. PELKEY: Yeah, no, it's an important
6 question. And it's a very important question. I
7 think, you know, if we go back and we look at the
8 history over the last 10 years, we need to think
9 about it, not just in terms of dollars, but we also
10 need to think about it in terms of what types of
11 investments are CSX making, and let's start with
12 track, rails, track rail, cross ties, ballast, and
13 when you measure it on that level, we're doing as
14 much as we've done in quite some time.

15 And the other thing we're doing is we're
16 doing it more efficiently. So, you look at the
17 efficiency that we've generated on the operating
18 expense side. I'll tell you that we really only
19 scratched the surface on the capital side. So,
20 getting the same amount or more done to maintain the
21 safety and reliability of the infrastructure, and
22 actually spending the same or perhaps even less.

Page 162

1 So, that's the first thing. The second
2 relates to a point brought up on the last panel
3 around locomotives and freight cars as well where we
4 certainly bought a lot of locomotives in the
5 2015-2016 period. You recall that we came out of the
6 winter of 2014, all the railroads got caught short
7 and put in a lot of locomotive orders, because it was
8 a major issue at the time.

9 When we sort of changed the operating
10 model, it began operating significantly better. We
11 have 30 to 40 percent fewer trains on our network
12 today, with about the same amount of volume we had
13 three years ago. So, we've been able to pull a lot
14 of locomotives out.

15 In fact, we have, I'll call it 2,500
16 active locomotives. We have nearly 1,200 in storage,
17 and we've actually sold some as well over the time,
18 so that locomotive and freight car investment has
19 gone down. We're in that holiday that Scott Group
20 talked about.

21 And the last factor is PTC. So, PTC, over
22 the last 10 years has been a significant, I think for

1 us, 2.4 billion dollar investment. We're at the
2 final stages of that this year. We'll have it fully
3 implemented next year.

4 CHAIRMAN BEGEMAN: But if you take PTC
5 out, it's still -- with it or without it, it's still
6 the same trend line?

7 MR. PELKEY: It's -- I mean it jumps
8 around a little bit, right? So, I wouldn't
9 necessarily argue that our capital spending has
10 increased. Clearly, one of the reasons we're
11 generating significant cash flows, is the ability to
12 kind of take that holiday on the rolling stock
13 assets, and the reduction of PTC span.

14 MR. PATELLI: Can I just add one quick
15 thing? When it comes to just the core infrastructure
16 that he started with, we've actually seen an uptick
17 since 2016. I think we have provided the Board with
18 that in the past, but there actually has been up to
19 when it comes to core infrastructure, so a lot of
20 that absolute difference is to those three areas that
21 he focused on.

22 BOARD MEMBER OBERMAN: Uptick in dollars

Page 164

1 or uptick in the amount?

2 MR. PELKEY: In miles, miles of rail.
3 Number of cars. The other part of your question was
4 related to shareholder pressures. And I think that's
5 an important one as well. I was here when we had
6 some activist pressure in 2008-2009, and one of the
7 things that they pressed us for was to invest less in
8 capital.

9 We held our ground and we continue to
10 invest because the safety and reliability of
11 infrastructure is critical to us. I think if you
12 were to do a survey of investors and say, investors,
13 what would you like the railroads to do? I think
14 overwhelmingly they would say go and find more good
15 investments.

16 That's how we generate returns for our
17 shareholders. There's only so much productivity we
18 can generate. There's only so much cost we have that
19 we can take out. And I think that's what's exciting
20 about where we are right now is we're thinking about
21 those things.

22 CHAIRMAN BEGEMAN: So, for the trend line

1 and the holiday sort of quota, what a couple of you
2 have said, so could you give a projection if
3 you're -- as far as how the trend line will change
4 over the next 5 years. Will there be an uptick? Do
5 you expect it still will be a downward trend? Again,
6 I'm not trying to ask you anything that would be
7 inappropriate to --

8 MR. PELKEY: Yeah, and clearly, I've got
9 to be careful about providing forward guidance, but
10 when you think about maintenance of the
11 infrastructure, we're going to continue to do it at a
12 level that we're doing today. Will it be a little
13 more and a little less in certain years? Probably.

14 But that core maintenance, the billion or
15 so dollars that I talked about, should be fairly
16 steady. When you think about freight cars and
17 locomotives, I don't think you're going to see
18 anywhere near the kind of spending that you saw in
19 2015 and '16. We will probably rebuild some
20 locomotives. Let's hope we're able to win some
21 freight and let's hope we see growth and that we're
22 able to buy some freight cars to support that growth,

Page 166

1 spend money in infrastructure and growth and
2 capacity.

3 We continue to spend money on technology,
4 so you know, I think that would be a good result if
5 we found good opportunities to invest in that had
6 high returns.

7 CHAIRMAN BEGEMAN: And, I'll just ask one
8 last quick question. At the beginning of your
9 testimony, I don't want to paraphrase you, but I
10 believe what you said, depending on what the Board
11 may do with revenue adequacy, your investors may
12 require you to seek unrelated acquisitions? What did
13 you mean? Give me an example if you will.

14 MR. PELKEY: Yeah, so if you think about a
15 world, and perhaps this isn't what the Board is
16 suggesting, right. But if you think about a world
17 where the railroads are capped at their cost of
18 capital, an investor who invests in the railroads
19 knows what the maximum that they can earn is. What
20 return it is.

21 So, let's say the cost of capital is 12
22 percent and the railroad is 10, they got a little

1 room to go, but once they hit 12, that's it, right?
2 So, what they're going to say is we need more. We
3 need more than that. And the only way to get more
4 than that in an unregulated way, would be to go and
5 say, hey, let's go -- it's actually to explore
6 technology, you know, invest in the technology
7 company.

8 Maybe even go and invest in a barge line
9 or get into biomedical, or whatever it might be,
10 right. They're going to say you're generating good
11 cash flows from the railroad, go and do something
12 with those that's completely unrelated and I joined
13 CSX when we were unraveling that and learning from
14 the mistakes of the past and being able to focus just
15 on the railroad has been critical. We're not
16 considering those types of investments unrelated to
17 the railroad, but if we're capped, that's the kind of
18 thing that you might hear from shareholders. Can you
19 take that cash? Can you invest it in something else
20 for us? Or, just give it back to us, and we'll do it
21 for you.

22 CHAIRMAN BEGEMAN: Thank you.

Page 168

1 VICE CHAIRMAN FUCHS: I want to just quick
2 jump in to comparison groups. This is for NGFA.
3 There is some criticism I think in your testimony
4 about the use of URCS and I guess I'm wondering what
5 you see as the most appropriate basis for comparison
6 with the comparison group. Is it R/VC or is it
7 R/VTM, what is your view?

8 MS. CLARK: In the testimony today, I
9 didn't specifically refer to URCS. And we do urge
10 the Board to fix URCS and with that I'll turn over to
11 Tom here for some suggestions that we've made.

12 MR. WILCOX: Well what NGFA did in EP 665
13 Sub 2 is actually propose a modified comparison group
14 methodology. Oh, it's a modified comparison group
15 methodology that had -- actually had a revenue
16 adequacy adjustment to it. And the modifications to
17 the two benchmark was to and various things, such as
18 including movements that are below 180 percent, to
19 get a true look at the market.

20 I think that that was part of the main
21 one. It also, from a data standpoint, just to think
22 back, but from a data standpoint, it would include

1 all movements, so that essentially it would be a
2 plugged comparison group. You wouldn't have the --
3 you know, base bar arbitration and you would be a --
4 you'd throw all the movements that met the criteria.

5 So, but that assumed URCS as URCS and
6 revenue adequacy as revenue adequacy, both, we think,
7 can be improved. And you know, NGFA hasn't done a
8 lot of you know, empirical analysis, but you know, I
9 don't think we disagree with some of the things we
10 heard, particularly from, you know, Professor Ellig.

11 And I think NGFA has quoted, you know,
12 favorably referred to the TRB report, in terms of
13 what they found on a number of things, so.

14 VICE CHAIRMAN FUCHS: And one thing in the
15 task force report that was related to revenue
16 adequacy, but actually not within the revenue
17 adequacy constraint section, but on the 3B section,
18 about the revenue needs adjustment. And you know,
19 there's a discussion in that report about how when
20 that was formulated, you know, with RSAM over 180,
21 you would think that the benchmark rate would have to
22 be adjusted upward.

Page 170

1 And if railroads exceed what they need --
2 you know, the revenue needs adjustment currently, the
3 current composition of 3B is to adjust the benchmark
4 downward. And I'm just wondering, do you have any
5 views on that dynamic? What the task force said is
6 that it just should be set at one so that there's no
7 downward. Do you have any views on that dynamic?

8 MR. WILCOX: I think the view, thinking
9 back to our comments, NGFA I think, agreed with the
10 proposal, but as to details for all that, I will have
11 to tip my fingers.

12 VICE CHAIRMAN FUCHS: Let me turn to one
13 aspect of the task force report is on simplified SAC.
14 And we've talked about, you know, honestly that the
15 RPIs -- and there's some testimony about other types
16 of simplification within the AAR testimony.

17 And the task force has that as well. I
18 guess I'm wondering, from NGFA's perspective, can SAC
19 ever be automated, computerized, simplified to the
20 point of being useful? Will it continue?

21 MR. WILCOX: I think that NGFA's current
22 position is no. They've been consistently opposed to

1 SAC. It just doesn't work for grain movements.
2 That's NGFA's belief. It's not like anybody's tried
3 recently, but I think there's good reasons why they
4 haven't tried. So, I think that's the answer I would
5 give you.

6 VICE CHAIRMAN FUCHS: And why so, some
7 chemical companies have brought -- that have many OD
8 pairs, and so they have many OD pairs, and sometimes
9 some of those OD pairs don't have many carloads
10 going. They've brought cases -- I'm not saying you
11 know, successful, in all -- and, but I guess I'm --
12 and I know that they have strong criticisms of SAC,
13 on many fronts.

14 So, I'm not, you know, but to the extent
15 those folks have found pursuing SAC to be a potential
16 avenue and I presume would find that simplification
17 of SAC might you know, continue to improve that
18 avenue. Not saying, again, they support it
19 generally. Why would -- why does it work as a
20 potential avenue for chemical but not AG?

21 MS. CLARK: Unlike the chemical industry
22 which has, for the most part, very set origin and

Page 172

1 destination points. I mean you've got a
2 manufacturing facility. You've got a set number of
3 customers. That's not the Ag industry. In fact,
4 this year is a classic. We've seen the devastation
5 of the crops, particularly up in the upper Midwest.
6 You not only have this variability when mother nature
7 hits a reset button every year, but in addition to
8 that, as you mentioned, SAC is very expensive, it's
9 very time consuming, and again, in our business,
10 we're basically flipping the switch every 12 months
11 as a new crop comes online.

12 MR. WILCOX: Yeah, I would echo that.
13 What I've heard is well, if you have the, there's a
14 you know, low-density issue, with ag, but just the
15 you know, the variability with ag is what I -- the
16 fact that they're -- by the time a SAC case is even a
17 year old, two years old, their whole market has
18 changed. Their mix has changed. They've moved on.

19 And so, that's why NGFA and its members
20 keep suggesting you know, shorter, you know more
21 compact regulatory processes where they can, you
22 know, get in on a short period of time, get a ruling

1 and move on.

2 And you know, for more prescriptive, as
3 opposed to reparations. You know, they want to keep
4 things moving, so that's a real influence for these
5 guys.

6 VICE CHAIRMAN FUCHS: Thank you very much.
7 I have a question for CSX, but I just wanted to know
8 first, if you all have a response to anything she was
9 saying?

10 MR. PATELLI: I guess we could start with
11 a group comparison approach question that you had.
12 On the group comparison, you know, obviously there
13 was a lot of debate when 3B was announced, and there
14 was an appeal and there was a huge focus on what are
15 the -- you know, what are the imprecisions with a
16 group comparison approach.

17 And of course, the first thing that comes
18 to mind always, is if you do a group comparison
19 approach, and if you do keep it truly to a similar
20 commodity, you'd have an array, not unlike arrays
21 that we've seen earlier today and yesterday.

22 And you may have some outliers, right?

Page 174

1 And it's almost presumed, right, as soon as there is
2 an outlier, oh, there's something wrong. There's
3 anti-competitive behavior. And the analysis doesn't
4 go much further than that. And so, it's really just
5 the problem with the group comparison approach is you
6 know, they may look like outliers initially, but a
7 closer analysis might reveal the reasons why they're
8 outliers, right?

9 And so, that's so much of what simplified
10 SAC and SAC are all about is taking that closer look.
11 What's really going on? Where are the densities of
12 the line? Is it light density? Is it heavy
13 density? What's the type of traffic? What's the
14 share of the total fixed costs, right?

15 So, all the things that you guys have
16 already heard before. And then --

17 VICE CHAIRMAN FUCHS: But AAR's promise
18 compares to spur smaller cases. I know you all say
19 smaller shippers. And so, it's your position that
20 you know, even if you have that, you know, believe
21 that limitation of comparison groups, whatever is
22 lost there is gained by the efficiency benefits in

1 terms of the regulatory process and having, you know,
2 accessibility for shippers. That's kind of the idea
3 behind the current rail position.

4 MR. PATELLI: I think it is. I think, you
5 know, Chairman Begeman, we heard you loud and clear a
6 number of times on the need and as you said, it even
7 predated you, right, post or pre-Chairman and others
8 have really focused on the problem of -- and the
9 opportunity set for, you know, smaller shippers.

10 I think the most promise there is to look
11 hard at the 3B construct. Again, limit it. I think
12 the Board was wise when they wrote up the 3B
13 construct to limit it to a certain amount of damages
14 claims and to look at ways to make it more
15 approachable and also, at the same time, make it more
16 accurate.

17 And that way, I think if you refer to the
18 AAR letter that was sent because I think there were
19 some good -- I can say personally, there was some
20 good hard thinking behind that. And I think, you
21 know, there's some constructive view back there.

22 CHAIRMAN BEGEMAN: John, I'm going to

Page 176

1 interrupt just a moment, excuse me Patrick. But, you
2 know, one of the reasons that the Board moved on from
3 just the 3B and proposed the final offer proposal --
4 decision making proposal, was I've heard time and
5 again that it looked -- 3B also doesn't work for the
6 grain shippers, you know, or a good portion of them
7 because all it does is compare them to another
8 equally high unaffordable rate.

9 So, Tom, I'm wondering if you could
10 comment. I mean, I'm all -- if we could make 3B
11 better, it's not like we need to have a new method if
12 a current method actually works. But I'm -- if you
13 would please.

14 MR. WILCOX: Sure, you know.

15 CHAIRMAN BEGEMAN: Remind me.

16 MR. WILCOX: In ex parte 665, NGFA
17 proposed their alternative to 3B, their modification,
18 but they've also responded to the task force's
19 recommendations on 3B because I think NGFA as a
20 whole, believes that a version of 3 benchmark could
21 work.

22 As you said, the issue that is the

1 sticking point is that a lot of rates, you have
2 across the board rate making. So, when you
3 challenge a -- you have a comparison group, but all
4 the rates are high, then all the rates are deemed
5 reasonable. You know, so that is why the NGFA
6 proposed the inclusion of comparable movements under
7 180 percent because that would give a more -- not
8 perfect, obviously, but the idea being there'd be
9 more reflective of the market as a whole throughout,
10 you know, and by including all the movements then you
11 sort of see what the market is, certainly an
12 imperfect market for those movements, to try to take
13 a little bit of that, you know, across the board
14 stuff out of the equation.

15 So, that's kind of the thinking to try to
16 work with 3 benchmark, knowing it's, you know, it's
17 not perfect, but it could be usable.

18 VICE CHAIRMAN FUCHS: So, turning to some
19 of the long-term revenue adequacy concepts. The
20 revenue adequacy period, you know, I know NGFA you
21 made a suggestion to alter. I noticed in the last
22 panel I didn't get a chance to ask that the

Page 178

1 economists went back to include the financial crisis.

2 Is it CSX's view that any long-term
3 measure has to include some sort of aspect of a
4 recession?

5 MR. PELKEY: I think it does. You know, I
6 think first when we're talking about revenue
7 adequacy, our position is clearly it's got to be
8 measured on replacement cost. We would support some
9 of the testimony in the last panel as well.

10 But in terms of the timeframe as well, I
11 think it's critical. It includes a recession. If
12 you think about where we are right now, we've done
13 such a good job on efficiency, our margins are --
14 you know, operating ratio is 60 percent, 40 percent
15 margins. If we were to lose, you know, 20 percent of
16 our traffic, 2 billion dollars of revenue in a year,
17 there's only so much cost we can take out and so that
18 recessionary year would be a very challenging year
19 for us, but that's part of -- when we make these long
20 lived investments, we're going to have several of
21 those cycles in the course of making that investment.

22 VICE CHAIRMAN FUCHS: What -- I'm sure you

1 saw some arguments in the testimony about how the
2 correlation between railroad earnings and the
3 recession wasn't as strong as some folks might have
4 expected. What is your reaction to that?

5 MR. PELKEY: Yeah, so I was there in 2009
6 and it was not a pretty sight. We woke up and found
7 volume was falling off a cliff, and unfortunately, we
8 had to start, you know, shutting shops down, cutting
9 shifts, reducing employees. We weren't making enough
10 money in order to withstand that kind of a downturn
11 at the time.

12 Fortunately, or unfortunately, however you
13 want to think about it, we have a lot of excess
14 capacity, you know, perhaps overstaffed in certain
15 places, or inefficient would probably be a better way
16 of stating it and we're able to make some reductions
17 that were hard, and we were able to make our way out
18 of it. It's harder given how tight things are right
19 now for us, and how much productivity we've gained
20 over that 10-year period.

21 VICE CHAIRMAN FUCHS: And you had kind of
22 a chart about how CSX makes individual investment

Page 180

1 decisions. And you talked about that hurdle rate
2 being risk adjusted. What is the cost of capital
3 that CSX typically uses in making its investment
4 decisions?

5 MR. PELKEY: So, what I can't do is give
6 you a number. What I can do is tell you how we think
7 about it. We clearly look at this on a consistent
8 basis. We survey our bank group. We've got a
9 consortium of 13 banks that support CSX. We ask
10 them, what would you think our cost of capital is?
11 We go from one bank to the next and they give us
12 different answers.

13 They also all give us a range of different
14 inputs that can be used to determine that cost of
15 capital. We look at the Board's cost of capital.
16 All of those things are inputs that we use in order
17 to you know, determine what a reasonable number is.
18 And you know, I would say what we've learned more
19 than anything is that looking at it from multiple
20 perspectives is better than honing in on one
21 methodology and saying I've got it, it's CAPM and the
22 risk free rate is this and the data is that.

1 VICE CHAIRMAN FUCHS: So, you go to the
2 banks and you ask them, what's our cost of capital?
3 What do you think they do?

4 MR. PELKEY: Yeah, the banks predominantly
5 use CAPM. I think that's a commonly accepted
6 methodology. It doesn't mean as you heard on the
7 last panel that it's correct. We learned in business
8 school, we learned CAPM. We also learned multi-stage
9 DCF and there's other methodologies out there. The
10 banks tend to use CAPM because they can pull it up on
11 Bloomberg, and within a split second they can figure
12 out what the cost of capital is for any company that
13 they're researching.

14 It's the most convenient methodology.

15 VICE CHAIRMAN FUCHS: So, why do you think
16 the banks convenience for sure, but I would think
17 that, you know, the professors did it. I believe I
18 heard them say that they calculated multi-stage
19 discounted cash flow as well.

20 MR. PELKEY: Yeah.

21 VICE CHAIRMAN FUCHS: Oh, I'm sorry. I
22 believe I heard the professors say that they

Page 182

1 calculated multi-stage discounted cash point, they
2 did it for many, many companies. And when I think
3 about it, I mean, multi-stage discounted cash flow is
4 a pretty simple model as well, I think. And they
5 just, you know, you take your stock projections,
6 right, and so it doesn't strike me that that's so
7 hard to obtain either. And for something as
8 important as counter costs of capital, I guess is it
9 just convenience, or you know, why would the bank
10 ignore kind of the forward-looking perspective that
11 is -- you know, the Board has said is important?

12 MR. PELKEY: Yeah, I think convenience
13 certainly does have a lot to do with it. I think,
14 you know, additionally when you're thinking about the
15 multi-stage DCF, the inputs are not challenging, but
16 again, I'll go back to my Bloomberg example. I'm not
17 aware that you can go into Bloomberg and pull a
18 multi-stage DCF.

19 And you have to think about, you know,
20 their doing this constantly all the time, and they're
21 trying to use something that's convenient. They do
22 play with it, because they recognize there are

1 different methodologies out there. They also
2 recognize that no methodology is perfect.

3 The other thing that I would tell you is
4 that if you're an analyst, or you're an investor
5 looking to invest in our stock, even though in
6 business school they teach us the way to value a
7 company is to look at its future cash flows and
8 discount them at the cost of capital, most investors
9 don't do that.

10 Again, for convenience they use PE
11 multiples, or some other type of multiple. And so,
12 you know, again it's -- they're not perhaps as
13 concerned about it as we -- the company might be in
14 terms of making the kind of capital investment
15 decisions that we make.

16 And part of the reason we set the hurdle
17 rate higher than the cost of capital is because of
18 that uncertainty. Not only in whether the project
19 cash flows will materialize, but also what the
20 precise cost of capital is. And even in the Board's
21 calculation it changes over time.

22 And we're making very long-lived

Page 184

1 investments relying on some level of cost of capital
2 that is imprecise and likely to change.

3 BOARD MEMBER OBERMAN: Good morning. I
4 just have okay, it's still morning. Tom, let me ask
5 you a question. If we did not adopt any of the task
6 force proposals on the rate constraint measured on a
7 different comparative for railroads that were
8 measured in a new way on revenue adequacy, the
9 existing coal rate guidelines are still there.

10 And we now have, excuse me, two or three
11 railroads that we have deemed to be revenue adequate.
12 So, what is the situation from the shipper's point of
13 view about bringing CF Industries kind of case, and
14 why isn't that being done?

15 MR. WILCOX: Well, you're correct absent
16 the task force report, you have the revenue adequacy
17 constraint out there. You also have -- you've taken
18 comments on it in ex parte 722 on what it means and
19 what and how it should be utilized. You had the CSX
20 case where, unfortunately, well -- fortunately for
21 CSX, they weren't revenue adequate for the whole
22 period in that coal case.

1 So, the standard -- there is a standard
2 out there so to speak, but from the shipper's
3 standpoint there's a couple things. There's the
4 usual hesitancy to file a case, a rate case at the
5 Board in terms of you know, a lot of things that
6 shippers worry about in terms of cost, and you know,
7 retaliation and all those types of things, and
8 whether it's worth it.

9 The other thing is that there aren't --
10 there is not a body of cases that have interpreted
11 the revenue or refined the revenue adequacy
12 constraint for a long-term revenue adequate railroad.
13 You know, there's only a few cases where you know, if
14 you want to analyze how we'd go forward, you know,
15 believe me, I mean the shippers are well aware of the
16 fact that, you know, Union Pacific Railroad's been,
17 you know, revenue adequate under the Board's form
18 for a very long time.

19 NS has been revenue adequate for probably
20 a long enough time to try to use the constraint.
21 It's just you haven't had the case where someone
22 feels strong enough about it to be the one to go

Page 186

1 first, and try to get some more meat on the bones.
2 That's why your proceeding 722 I thought was, or NGFA
3 thought was helpful to get comments on that.

4 BOARD MEMBER OBERMAN: Well, what would
5 the difference be then if we adopted the new proposal
6 which would at least give you -- you wouldn't have to
7 litigate the length of time of revenue adequate,
8 because we'd decide that, if we adopted this
9 proposal. So, and that was litigated in the CF
10 Industries case, or in the -- I'm sorry, in the
11 consumer's case there was litigation about how many
12 years the Board should look at.

13 MR. WILCOX: Right, consumer's case. I
14 said CSX.

15 BOARD MEMBER OBERMAN: Yeah, that's what I
16 was -- knowing you would tighten that. And the --
17 and of course there'd be a new way of measuring how
18 the relief would be applied if we adopted the task
19 force proposal. Would that make it more or less
20 attractive from a shipper's point of view to bring a
21 revenue adequacy, rate case?

22 MR. WILCOX: Well I think yeah, obviously

1 if the standards and the parameters were clearer,
2 then an aggrieved shipper would be more likely to
3 file. But then, you know, there are other factors
4 that are still in play as to whether that would
5 actually happen, you know.

6 BOARD MEMBER OBERMAN: The reason I ask is
7 I'm just wondering from an actual practical point of
8 view of a shipper getting relief, leave beside the
9 other things that are pending, final offers, and so
10 forth.

11 If we adopted a proposal such as the task
12 force proposes on revenue adequacy, would that
13 provide meaningful relief to the shipping world
14 compared to what we have now?

15 MR. WILCOX: Compared to what you have
16 now, it appears to, yes. I would -- you know the
17 devil is in the details, but yes. What it would also
18 do, and NGFA's made this point before is, it would
19 create an environment to commercially settle you
20 know, rate disputes without going -- without
21 litigating.

22 BOARD MEMBER OBERMAN: Well, it would only

Page 188

1 do that if the railroads perceived that it would be
2 easier for you to bring a rate case under the revenue
3 adequacy constraint. Excuse me, and therefore
4 motivate them perhaps.

5 MR. WILCOX: Correct. It would have to be
6 meaningful.

7 BOARD MEMBER OBERMAN: But do you see this
8 proposal giving you a meaningful avenue of relief
9 that you don't have now?

10 MR. WILCOX: I feel that NGFA.

11 BOARD MEMBER OBERMAN: In the real
12 litigation world.

13 MS. CLARK: As Tom said, the devil is in
14 the details, but I would say that we are certainly
15 open to something that is more crisp. And that
16 provides a faster timeline and less costly
17 methodology in order to be able to bring a case
18 forward.

19 BOARD MEMBER: Alright thanks. I have a
20 question for Sean. The -- and by the way, your
21 graphic presentation was very helpful and clear, and
22 I appreciate it.

1 MR. PELKEY: Thank you.

2 BOARD MEMBER OBERMAN: In the slide you
3 put up there on the difference in an investment of a
4 \$100,000 railcar, and you pointed out that the rate
5 for the car, you used \$2,000 hadn't changed.

6 MR. PELKEY: That's right.

7 BOARD MEMBER OBERMAN: And you posed the
8 question who should get the benefit of that return.

9 MR. PELKEY: That's correct.

10 BOARD MEMBER OBERMAN: And so, the way you
11 posed it the answer was sort of obvious. But let me
12 ask if you add in the factor that the only reason,
13 you're able to charge \$2,000 to the shipper was
14 because that shipper happens to be captive. Then,
15 wouldn't the answer be, perhaps, that shipper
16 deserves a little bit of that 7.9 -- I can't remember
17 the number now in the slide.

18 MR. PELKEY: Yeah.

19 BOARD MEMBER OBERMAN: Excess of return
20 over cost of capital. In other words, if you're
21 market dominant or you're predatory, or whatever the
22 standards of the statute are, enable you to get a

Page 190

1 rate that you couldn't get if it was truly
2 competitive, because then the shipper gets some of
3 that relief and fairness.

4 MR. PELKEY: So, you know, at least as I
5 read the report, what we're trying to do here is
6 we're trying to say is the railroad revenue adequate?
7 And if the railroad is revenue adequate, then there's
8 some additional level of relief that needs to be
9 provided to the shipper.

10 In the example, what I was trying to do is
11 to say here's an investment that at \$2,000 a car is
12 uneconomic. A return on it is below the cost of
13 capital. So, if CSX made those investments, and
14 that made up 100 percent of its investment base, its
15 returns on capital would be below its cost to
16 capital. We would say CSX isn't revenue adequate,
17 therefore, no additional rate relief triggers or
18 mechanisms kick in.

19 So, that doesn't necessarily assume that
20 the rate is reasonable, but what we're doing here is
21 we're trying to tie the two concepts together and so,
22 if on the left-hand side of that graph, the

1 investment below the cost of capital by the Board's
2 definition, would make us not revenue adequate, then
3 those mechanisms wouldn't kick in.

4 BOARD MEMBER OBERMAN: Exactly.

5 MR. PELKEY: On the right-hand side they
6 would. But does that mean that the rate itself was
7 unreasonable and was reasonable and now it's
8 unreasonable was the point I was trying to make.

9 BOARD MEMBER OBERMAN: Well, it depends on
10 we don't have all the facts, whether it's reasonable
11 or not, seems to me whether a non-competitive market
12 enables you to charge the rate. That's to me, one of
13 the things we're supposed to be looking at. So, that
14 your ability to make the decision to invest is in
15 part determined, as I understand it, by how much you
16 could charge to get your investment back.

17 And how much you can charge is going to
18 vary depending on whether the people you're charging
19 are captive to some degree. I don't think anybody is
20 suggesting that the entire value of the additional
21 investment gets taken away, but the way you posed the
22 question, which I thought was a fair way to pose it,

Page 192

1 who should get the benefit if you're making that
2 \$100,000 investment.

3 And if you extracted benefits for the
4 shareholder from the shipper who has no choice, it
5 seems to be the answer to that question is different
6 as to how to divide up that benefit, maybe the
7 shipper doesn't get all of it, but what we're
8 struggling with is should there be some relief if
9 that's the situation you're in. Would you agree with
10 that?

11 MR. PELKEY: Yes, and let me make a point
12 and then I'll pass it over to John. So, I think the
13 concept of is the rate reasonable is different than
14 the concept of is the investment making an adequate
15 return. And I think it would be difficult for
16 someone to argue that the rate is unreasonable if I
17 can't even invest in the car and earn an adequate
18 rate of return.

19 That doesn't mean that it's not. But I
20 think, you know, more instances than not, if an
21 investment isn't meeting its cost to capital, the
22 rate you're charging on that move to the customer is

1 probably not egregious. That doesn't mean absolutely
2 it's not. John, do you want to?

3 MR. PATELLI: Commissioner Oberman, I
4 think the heart of your good question is really, how
5 does the Board go about determining if it is an
6 anti-competitive environment? And it really just
7 keeps coming back to that over and over and over
8 again, I think, throughout all of the panels and from
9 what you've been hearing from railroads, I think
10 fairly consistently is it needs to be looked at on an
11 individualized basis to determine if they really are
12 a captive shipper that fails both the quantitative
13 and qualitative market dominance test.

14 BOARD MEMBER OBERMAN: Well, I agree.

15 MR. PATELLI: It went on to the SAC to see
16 what the real situation is.

17 BOARD MEMBER OBERMAN: But what seems to
18 be coming across from the economists that were
19 brought here by the railroads and by the AAR is that
20 somehow the task force proposal is a cap across the
21 board without regard to the individual shipper. And
22 I raised this point yesterday and I'm focusing on it

Page 194

1 again this morning, today.

2 That you could have this construct set up
3 there but for a shipper to actually get relief, they
4 would have to first still prove that the railroad is
5 market dominant as to their shipment, their movement.
6 They can't even come in, can't get past -- they can't
7 get to us if they can't make that showing. So, yes,
8 there would first be some test as to whether the
9 shipper is captive. And then the next step would be
10 if they are and if you're revenue adequate, then how
11 is the -- what relief, if any is provided. That's
12 not automatic because the formula, which I can't
13 repeat here, is too complicated.

14 But it's still into it. It's just not an
15 automatic cap on the rates as I understand it.

16 MR. PATELLI: Well, it's a great point and
17 it's funny because we really struggled. I mean we
18 really did read very carefully the task force report
19 and it was actually refreshing to be perfectly
20 candid, to see that not everybody had a perfect grasp
21 of it. It's not super easy to read that and then say
22 well, how does that really play out practically,

1 right?

2 And so, let me go over with you, just
3 really quick.

4 BOARD MEMBER OBERMAN: On a personal
5 basis, I share what you say because I've had a
6 terrific economics team in my office more than once
7 walking me through this. It doesn't stay in there
8 for a long time, so that's why I've had to have it
9 come back.

10 MR. PATELLI: Yeah.

11 BOARD MEMBER OBERMAN: So, I don't
12 criticize anybody for not being fully comprehensive
13 as to how this works in the real world, but it is
14 shipper by shipper determined. The Board --

15 MR. PATELLI: Let's go back to that point.
16 So, I think it's important. So, this is how I have
17 come to understand it. I'd be interested to know if
18 any of you have a different interpretation, but
19 basically you have a net surplus that's calculated by
20 way of how much is the railroad earning over its cost
21 of capital once it's determined that it is long-term
22 revenue adequate?

Page 196

1 You would take an annual look at what the
2 net surplus is. Then you turn to allocating that net
3 surplus. And the way you allocate it is to create
4 categories and the task force report did have a
5 helpful table that laid out the categories, and you
6 would categorize it by commodity.

7 So, that is to say, an easy example is
8 coal. Over 500 miles, 50 plus car unit trains,
9 right, that was a category. And you take your net
10 surplus, let's say for illustration purposes, 100
11 million dollars. Then the first step you do in the
12 allocation is say to yourself how much of the traffic
13 this railroad has is over 180? What percentage over
14 180 does that coal bucket get?

15 And let's just say for illustrative
16 purposes it's 10 percent, right. So, 100 million
17 dollar surplus, 10 percent associated with the coal
18 bucket, so 10 million dollars needs to be attributed
19 to that coal bucket. The next thing you do is the
20 MMM methodology. I think this is where a lot of
21 people don't always follow. They hear MMM and they
22 think it's, you know, the dark science that's

1 difficult to follow.

2 BOARD MEMBER OBERMAN: It is.

3 MR. PATELLI: It is. It is, it's not
4 easy. But at the end of the day, MMM looks at that
5 bucket and it says, "What's the highest profile rated
6 traffic?" And let's say it's at 600 R/VC, just to
7 use an example, so you start there. And then you
8 say, okay, what's the second highest profile traffic?

9 Let's say it's 500 R/VC, so then you go
10 down. You would actually ratchet it down and in that
11 ratcheting down, even though you're not doing it for
12 rebate purposes, or reduction purposes, you're
13 looking at that to see well how much of the 10
14 million dollars I know are attributed to this, does
15 that 10 million get reduced, right?

16 And so then, if it's reduced, if it's
17 exhausted, you're done. Once you've gotten down to
18 that 500 level. But if it's not, then you go down to
19 the next one, let's say it's 400 R/VC, right. And
20 ultimately, you just keep ratcheting down to create
21 the RIC freeze level, right.

22 And then every year, every year come back

Page 198

1 to that and you'd see well, where are they? Maybe
2 they really did succeed over an intermodal lane. Or,
3 maybe they really did succeed to become more
4 efficient and provide better customer service. For
5 instance, some of the shippers that are below the RIC
6 freeze level, right. Now, that RIC freeze level
7 keeps coming down and it keeps picking up additional
8 traffic, right?

9 And so, that RIC freeze level is acting as
10 a cap to the stuff that's already below it and it
11 keeps everything above it frozen, right. So, that
12 way what the good thing you might do in your network
13 over here on your left-hand can't hurt you. Can't
14 come back to get you over here in the right-hand.

15 The whole design is really to keep the
16 company close or at or near the cost of capital,
17 right. I think that's the whole intent and the whole
18 design. The last thing I'll say is back to your good
19 point on individualism, you know, that each one -- to
20 really have an impact, would take an individual case
21 as soon as the carrier is long-term revenue adequate.

22 Just like the table showed, there would be

1 some publication, I would imagine. And if there
2 wasn't a publication, people could come perhaps, and
3 work it out themselves, but they would look at the
4 publication and they'd say oh, my goodness, coal, you
5 know, has a RIC level at 180. Or they'd say, you
6 know, some other commodity has a RIC level of this
7 other one. And that would be used time and time
8 again as to the railroads in negotiations. It would
9 not -- shippers would not wait around to only get
10 relief on a particular case.

11 And I would adopt everything that's been
12 said prior to this panel related to how carefully
13 both the shipper community and the railroad community
14 look at every single rate case. And I can assure you
15 personally, Ray said this yesterday, but the
16 railroads look at every instance where there's a rate
17 case type of threat, and they really do evaluate, you
18 know, how is this going to work if somebody brings a
19 rate case against us.

20 BOARD MEMBER OBERMAN: Do you think that
21 the, excuse me, if we did nothing and I know Ray
22 thinks that the coal rate guidelines are illegal, but

Page 200

1 let's assume they're not. Yeah. Parts of them are
2 illegal. Let's assume they aren't. And we did
3 nothing and now you have UP and S and so forth, that
4 are revenue adequate.

5 Do you think the railroad would be better
6 off under the current system in terms of the relief
7 that the Board would give in a revenue adequacy case
8 which isn't portioned out, but the whole thing goes
9 to the shipper that brings the case and then the next
10 shipper? Do you think -- in other words, do you --
11 as I understand it, the formula that has been
12 proposed by the task force, which I'm going to accept
13 your description of it because it sounds a lot like
14 the one I've heard, but since I barely grasp it, you
15 know, for sake of this discussion it sounds like
16 you've mastered it, and I congratulate you for that.

17 As I understand it, the intent was to
18 spread out the relief that would actually be less
19 intrusive on the railroad's actual performance than
20 if we just had the current system where the rate was
21 just -- first of all, the shipper might get
22 reparations in addition to a freeze if they succeeded

1 in a revenue adequate case in a way that consumers
2 didn't, but might have.

3 So, I'm trying to figure out why you
4 think -- whether you think the current system is
5 better. Well, so far, they are.

6 MR. ATKINS: Well, I'll just take it real
7 quick. I mean for one thing, no one knows what the
8 current system actually is. So, in the consumer's
9 rate case, for example, they were advocating the rate
10 freeze. They were not advocating that the rates be
11 brought down to some sort of prescribed level.

12 But if you're asking generally speaking,
13 what's better, a really bad idea or a bad idea, we're
14 going to pick the bad idea. I mean if it's a fixed
15 earnings cap that drives all the rates down to the
16 cost of capital, that's as bad as it gets. If it's a
17 rate freeze, which just creates all of these
18 distortions across the network above a certain
19 threshold, that's not a welcomed addition to the way
20 that the freight rail operates, and as you've heard
21 us say in prior testimony that we think actually,
22 there will be some unintended consequences.

Page 202

1 But even if they're not, but Member
2 Oberman, if you're saying do we take a big bad idea
3 or a little bad idea, the industry is not going to be
4 supportive just because there's this threat of some
5 catastrophic revenue adequacy constraint that you're
6 going to drop on them for doing something that we
7 just don't think is appropriate.

8 Rather, what seems to be more appropriate
9 is to use the existing set of tools and work hard to
10 improve them, whether it's ADR, 3B, simplified SAC,
11 these are all tools that you have that are designed
12 to get at what you're worried about, which is how do
13 I determine if a financial performance is because of
14 positive, pro-competitive activity on the part of the
15 railroads, or how do I determine whether it is
16 actually a function of the exercise of market power
17 in certain pockets.

18 And you need those individualized tools.
19 You don't think these current tools meet your
20 requirements. I think you should strive to improve
21 them. But I don't think tying a tool tied to
22 system-wide financial health, as you're currently

1 measuring it, is the right path.

2 BOARD MEMBER OBERMAN: Well, obviously
3 Ray, the staff doesn't think that the proposal would
4 result in catastrophic damage to the railroads, they
5 wouldn't have proposed it obviously. We are -- no
6 one --

7 MR. ATKINS: Deeply the staff does not
8 deliberately advise you with proposals of that sort,
9 and I'm sure that the staff of the ICC pre-Staggers
10 was not deliberately intending to impose regulations
11 that was going to destroy the freight rail industry,
12 either.

13 Everyone is good intentioned, it's just
14 that having a trigger based on this metric, the
15 problem for us as Joe told you, the metric is not
16 showing you what you think it's going to show you and
17 you just need to be careful and cautious about
18 whether there are going to be unintended consequences
19 either from that proposal which we appreciate their
20 designing in a way to try to avoid some of the
21 really significant problems with sort of, straight
22 up, utility style, rate of return regulation.

Page 204

1 CHAIRMAN BEGEMAN: Well, I just want to
2 interject for a moment. You know, as I said
3 yesterday in my intro, we have been making good use
4 of the task force report. And what I meant by that
5 is, you know, by the various proposals that we have
6 already issued. But I don't think anything that the
7 Board has done so far was just taking the task force
8 report and proposing it.

9 We modified it in a lot of different ways.
10 We've had a lot of different discussions about how to
11 make something work as well as we believe it could
12 work. And of course, that's why we also are having
13 notice and comment, so we can have input and hear
14 what the various stakeholders think about the
15 proposals, and we'll make modifications to the extent
16 we believe there need to be modifications.

17 And that really holds with this whole
18 exercise on the revenue adequacy matter. You know, I
19 don't view and it's more than likely the three of us
20 have different views on what the task force report
21 is pitching. I certainly didn't take it as a, you do
22 all four things.

1 It's like -- it could be one thing. It
2 could be two things, or we could come up with six
3 different things and different versions of it. So,
4 really this has been very helpful throughout the last
5 two days to get different input ideas. Now
6 obviously, an economist -- there was a wide view of
7 how good and bad and indifferent you know, there was
8 not unanimity. At least that certainly was my
9 takeaway.

10 MR. ATKINS: Chairman Begeman, let me just
11 reiterate perhaps on behalf of the whole industry,
12 how appreciative they are of the opportunity to
13 actually have these types of conversations with the
14 Board, whether it's through the ex parte rules that
15 you've opened up, but also having this hearing
16 because --

17 CHAIRMAN BEGEMAN: Well no one is coming
18 in Ray.

19 MR. ATKINS: Well, I'll do my best to
20 convince more of them to come in on this subject.
21 But just to -- because the back and forth helps us
22 try to advise you on what you're hearing from staff

Page 206

1 because my own personal experience is, having been on
2 both sides of this, is that when you're just on one
3 side of this sort of demarcation between the agency
4 and the industry, your perspective is not as robust
5 as it is -- as you're trying to do, Chairman
6 Begeman, by getting the viewpoints of everyone
7 involved.

8 And so, I'm hopeful that you're thinking
9 this is as productive as the industry is in having
10 these conversations.

11 BOARD MEMBER OBERMAN: Let me just
12 interject quickly. What the Chairman said, really,
13 goes exactly the way I view it too. You know,
14 articulated it well. And I would just add in and no
15 need to ask for questions, but I assume you all heard
16 my inquiries of Matt Warren in the last panel. And I
17 would invite Tom and Ray to supply us with something
18 I think would be helpful in how we're supposed to
19 construe that statute about reasonable and economic
20 return.

21 I don't know that the term is such a term
22 of art that they, without further, run themselves to

1 precise definition in terms of how we exercise our
2 discretion.

3 MR. ATKINS: Yeah, we heard the message
4 and we're thankful of the opportunity.

5 BOARD MEMBER OBERMAN: And certainly, the
6 shipper side too, equally.

7 MR. WILCOX: Yeah, and I'll respond
8 similar to Matt. We're -- we appreciate that there's
9 a chance to follow-up from February 13th and we'll
10 give that some thought. And give you something more
11 substantive.

12 BOARD MEMBER OBERMAN: That would be
13 great.

14 CHAIRMAN BEGEMAN: So, just one last
15 thing. And first of all, Sharon, please feel free to
16 excuse yourself. But my question is some of you
17 probably have heard me yesterday. We've been
18 pivoting on a few hot topics that the Board is real
19 interested in and one of the things I talked about
20 was demurrage based on -- it was prompted by some of
21 the testimony and also by filings. And I will say I
22 was referring to your filing Tom.

Page 208

1 But I want to also point out that a number
2 of carriers Rick talked about alternative dispute
3 resolution. For years now, really ever since the
4 Board or soon after the Board tried to improve its
5 arbitration program, UP sort of opted in that they
6 would arbitrate demurrage issues.

7 After the hearing, CSX and CN have let us
8 know they would arbitrate demurrage issues, so I am
9 kind of curious as to why no one seems to -- people
10 have a lot of complaints about demurrage, and so I
11 would encourage you to explore whether or not
12 arbitration program, or an arbitration approach might
13 be helpful to some of your members.

14 And I'll just leave it at that. And thank
15 you very much. We are going to take a break until 2
16 o'clock, and we're going to start promptly at 2. If
17 I'm not here, my colleagues will start it. I'm
18 teasing, I will be here. But we will start. So,
19 thank you.

20 (Break).

21 CHAIRMAN BEGEMAN: So, last but not least,
22 Panel 7, and with the standing room only left in the

1 room. I hope that we will make this well worth
2 everyone's wait. I really am looking forward to it.
3 Thank you. I also want to -- so, publicly, thank the
4 Fertilizer Institute folks for accommodating the
5 previous panel who had a time constraint. You let us
6 do a swap and Jeff since you got to kick it off, I
7 thought it would be fine for you to close it too.

8 But thank you for working with us. Much
9 appreciated. We will start with the American Fuel
10 and Petrochemical Manufacturers.

11 MR. BENEDICT: Thank you. Thank you and
12 good afternoon. Chairman Begeman, Vice Chair Fuchs,
13 Member Oberman and Surface Transportation Board
14 staff, thank you for providing us this opportunity to
15 testify before you today and addressing this
16 important rail issue as well as many others that you
17 did in the rate reform task force report.

18 My name is Rob Benedict, and I'm the
19 Senior Director of Transportation and Infrastructure
20 for the American Fuel and Petrochemical
21 Manufacturers, also known as AFPM. We are a trade
22 association that represents virtually all the U.S.

Page 210

1 refining and petrochemical manufacturing industry,
2 and our members produce the fuels that drive the
3 economy as well as the chemical building blocks that
4 are in millions of products that are used every day.

5 To produce these essential goods, we rely
6 on a safe, reliable, efficient rail system to move
7 our materials to and from our facilities and rail
8 transportation is vital to our members and other
9 manufacturers, and ultimately the customers
10 downstream that we serve and the consumers of the
11 United States that demand our products.

12 Last year we shipped about 3.7 million
13 carloads of our different types of feedstocks and
14 products. And I think, if I would leave you with
15 anything, I think what we want to do here today is
16 improve the entire system. We're not trying to sway
17 it towards shippers or anything like that. We want
18 to improve the system for everybody.

19 A little bit about me. My career, I've
20 been focused on developing sound transportation
21 policy that focuses on rail transportation both in
22 the government and in the private sector. So, I

1 understand the complex tasks you have ahead of you
2 and I really appreciate you guys thoughtfully taking
3 comments and data from stakeholders.

4 At AFPM, I oversee our midstream
5 operations and that predominantly has been focused on
6 rail, freight, transportation for the past year as
7 our members kind of came to us and raised this as a
8 priority issue. Directly, I work hand in hand with
9 senior personnel in charge of logistics and
10 operations at our facilities. These are refineries
11 and petrochemical manufacturing facilities, and many
12 of those have actually worked in the rail industry
13 before they came over to our industry.

14 So, the comments that they provided were
15 trying to raise up the entire system as opposed to
16 just benefitting one party. Prior to joining AFPM, I
17 worked for the government as well, as I mentioned.
18 And because of that I think I understand the position
19 you're in with this complex issue.

20 What I'm not is an economist, so I'm not
21 going to dive in a lot of economic theory. I can
22 give you our opinion of our members, but I will refer

Page 212

1 to our comments on some of the more specific
2 particulars there. I would like to highlight some of
3 the things our members wanted to note.

4 And that is first and foremost, the
5 healthy efficient rail system is a win for everybody.
6 And I think our members really want to see the
7 regulations that you know, have tried to keep up with
8 the changing industry, updated, and this is an
9 opportunity to do so.

10 One other thing I want to mention is that
11 our industry is predominantly a captive one. So, I
12 think all of the comments that we've provided here
13 are kind of in the vein of dealing with captive
14 shippers for the most part. In addition, you saw
15 some data before today talking about a comparison of
16 us with industrial and grouping a large sector of the
17 industry together and I think I just want to make the
18 point that while industries is a very broad term,
19 there's a lot of differentiation in between those
20 different industries.

21 For example, based on commodity type, if
22 removing hazardous materials, you might not be

1 feeling those same rates -- the rate increases that
2 you heard before. You might be seeing a little bit
3 more. In addition, I wanted to mention that when
4 we're talking about infrastructure and investments
5 and assets, we're part of that game too.

6 AFPM's members are in the process of
7 upgrading our fleet of tank cars. We've also, based
8 on some changes in demurrage, you've heard in other
9 hearings, made investments to storage because we
10 needed to make sure our operations still work.

11 But to the point at hand, I would like to
12 talk a little bit about the different three major
13 proposals here -- the definition of long-term revenue
14 adequacy, the bottleneck changes and the rate
15 increased constraint. I will say that we think as
16 AFPM that these, as well as the other proposals
17 you've made, particularly the market dominance and
18 the final offer should all be kind of considered
19 together because I think with putting these all
20 together, you can create an overall system that would
21 work very well.

22 As far as the definition of long-term

Page 214

1 adequacy, we agree with and are supportive of clearly
2 defining this term, and we applaud your efforts to do
3 so. We do believe that the definition, as far as the
4 timeframe, should be lengthened and we support
5 broadening that definition.

6 We -- while the Board's proposed approach
7 is compelling and its straight forward in its
8 simplicity, if the Board used the definition in some
9 recent cases, we feel that some railroads that would
10 be considered maybe revenue adequate would not have
11 been under the proposal.

12 And as such, AFPM believes that some of
13 these concerns could be addressed, particularly, if
14 there was some consideration around the cost of
15 capital and the precise nature of that process. We
16 suggest in our comments tying these to various rating
17 agencies and perhaps a stratified scale when it comes
18 to those.

19 With rate increase constraints, I think
20 our members would support the proposal that would tie
21 the raising of rates to the definition of a long-term
22 revenue adequate carrier, particularly when it comes

1 to captive shippers. We also think that this could
2 be paired with a retrospective look, as far as
3 challenging rates which would be -- could be aided by
4 the streamline market dominance discussion that we
5 had in a previous docket.

6 As far as the probably, the biggest area
7 of interest for our members, would be the bottleneck
8 changes. AFPM applauds the Board's suggestion and we
9 would ask that you know, the Board consider all
10 opinions on the financial health of the rail industry
11 when considering to move forward with this.

12 And AFPM and AFPM members again, we feel
13 the network is much healthier overall than it was
14 when these regulations were initially brought into
15 place. We believe that making a through route more
16 available when a carrier is found to be long-term
17 revenue adequate, is within the Board's statutory
18 power.

19 And because most rail carriers are clearly
20 revenue adequate, we believe the suspension of the
21 bottleneck decisions that have essentially stopped
22 the throughout remedy to this point makes sense.

Page 216

1 AFPM supports the Board's suggestion to potentially
2 reverse its decisions requiring the use of the
3 existing stringent competitive access standards to
4 obtain the reciprocal switching remedy.

5 With the regard to the stand-alone cost
6 changes, this was of interest, but probably of all
7 the proposals, the lowest priority for our members.
8 While we would support any and all efforts to kind of
9 make the stand-alone costs model more accessible, we
10 would rather the Board focus its efforts on the other
11 proposals at hand.

12 But we also would support some of the
13 comments made yesterday by ACC regarding rate
14 benchmarking. So, in conclusion to be clear, the
15 Board's proposal to provide a really good opportunity
16 to create a more healthy and efficient rail system,
17 we wouldn't support proposals that we thought had the
18 potential to cause complications in the network.

19 And ultimately, if implemented properly,
20 we believe these forums represent a win for the
21 entire rail industry and ultimately consumers. You
22 know, we heard a lot of talk about stocks and

1 returns there, but I think some consideration needs
2 to be had to the effect that our movements have on
3 consumers in the end. With that I'll thank you and
4 I'll be happy to answer any questions.

5 CHAIRMAN BEGEMAN: Thank you. The
6 Fertilizer Institute?

7 MR. LOUCHHEIM: Hi. Good afternoon
8 Chairman Begeman, Vice Chairman Fuchs and Member
9 Oberman. My name is Justin Louchheim. I am the
10 Director of Government Affairs for the Fertilizer
11 Institute, TFI. TFI represents companies that are
12 engaged in all aspects of the fertilizer supply
13 chain. I say this all the time, but it bears
14 repeating that commercial fertilizer's boost crop
15 yields by 50 percent, hence adds value to the farmer
16 and everyone else.

17 We cannot feed the current global
18 population of 7.7 billion people without commercial
19 fertilizers. Literally, millions would starve. To
20 get fertilizer to farmers, a safe, efficient and
21 competitive freight rail system is essential. TFI
22 thanks the Board for this opportunity to express the

Page 218

1 views of its members on various regulatory reform
2 proposals in both this docket, and other proceedings
3 including EP 755 and 756.

4 TFI's testimony at this hearing will focus
5 on bottleneck changes in the rate reform task force
6 report. Among the report's revenue adequacy
7 proposals, bottleneck reform is of greatest interest
8 to TFI members. Bottleneck relief would promote free
9 market rail transportation policies that encourage
10 competition in contrast to regulatory intervention.

11 Anhydrous ammonia, to step back one sec
12 here, anhydrous ammonia is the building block of all
13 nitrogen fertilizers. It's the most efficient source
14 of nitrogen for farmers. Unfortunately, between 2005
15 and 2017, rail rates for ammonia went up over 200
16 percent. This is three times more than the increase
17 in the system-wide average rail rate per car.

18 For TFI's members, this obviously puts
19 tremendous pressure on the logistical operations, as
20 they worked to supply their farmer customers.
21 Moreover, this forces an ever greater reliance on
22 motor carriers for anhydrous ammonia shipments.

1 The Board's various methodologies for
2 regulating rates have proven to be ineffective and
3 inaccessible due to cost, time and complexity. TFI
4 appreciates and supports the Board's current efforts
5 to reform its rate regulatory methodologies.
6 Enhancing rail to rail competition is key.

7 A substantial amount of competition
8 potentially exists beyond bottleneck segments that
9 currently is foreclosed to shippers. In addition,
10 TFI members have suffered from multiple rail service
11 failures over the past several years. These have
12 been widely discussed over the last couple of days
13 and prior to today, prior to this week.

14 When such failures occur, our members
15 suffer the consequences with no effective remedy
16 through alternative service or compensation for the
17 related financial damages. Although the Board has
18 processes for obtaining emergency service relief,
19 they simply cannot respond fast enough to be of
20 benefit to our members. Again, greater competition
21 in contrast to regulatory intervention, could
22 provide a more effective response to these service

Page 220

1 failures.

2 One of our members, one of TFI's members
3 is fortunate to have -- and this is a little unique,
4 to have some locations in the United States where
5 reciprocal switching has been grandfathered into
6 these locations.

7 This unique situation has allowed them to
8 switch traffic to Norfolk Southern during the worst
9 moments of the CSX service failures a few years ago.
10 I know CSX has worked hard since then to iron out its
11 operations. I'm not here to bad-mouth CSX.

12 However, the point here is that broader
13 access to alternative rail service that is currently
14 foreclosed by bottleneck segments, is positive for
15 shippers and an opportunity for potential rail
16 carrier competition. This is something we should be
17 encouraging. It's a free market good principle.

18 Moreover, between these unique locations
19 in the United States and throughout Canada, where our
20 members operate extensively as well, interswitching,
21 competitive switching, reciprocal switching,
22 whatever you want to call it, it works smoothly and

1 professionally. The sky has not fallen at any of
2 these locations or nations.

3 The message that TFI wants to convey today
4 is the urgent need to ease the rail bottleneck
5 restrictions that preclude more rail to rail
6 competition. There are different ways to achieve
7 this goal. The task force report suggests one
8 possibility. TFI has been an enthusiastic advocate
9 for another possibility through Docket 711, having
10 filed extensive comments and participated in ex parte
11 meetings, both in its own name and accompanying and
12 going along with TFI members as well.

13 EP 711 is much further along and TFI would
14 very much like to see the Board advance this
15 particular docket, which has been pending for 8
16 years, rather than restart the entire process.
17 However, TFI supports the concepts outlined in the
18 task force report, and would like to see bottleneck
19 relief advanced in some form.

20 To step back again, a minute, you know
21 having listened to AAR's witnesses yesterday, also
22 listening to some of the economists earlier today,

Page 222

1 I'd like to make a couple notes. About two-thirds
2 of all rail stations are served by just one Class I
3 railroad. This is a common line. I'm sure everyone
4 here has heard this before and knows it.

5 Target system is, you know, competitive,
6 is indeed requires some highly theoretical economic
7 gymnastics, which is what I've been watching for the
8 past two days. A monopolistic system or duopoly,
9 requires government oversight and at times
10 intervention, if we want less government
11 intervention, then we should promote rail to rail
12 competition.

13 Bottleneck reform can get us more
14 competition therefore it should lead us to less
15 government intervention. I want to address another
16 point regarding a concern about single carrier spurs
17 not being viable if there was bottleneck performer to
18 occur. I think, you know, consideration of this
19 concern is appropriate, but I think it would be
20 appropriate as part of rail to shipper negotiations.
21 Competition, free market discussions will guide
22 negotiations to a sensible outcome.

1 You know, if one of my members has a
2 facility and there's a little spur there and there,
3 you know, through bottleneck reform, they're going to
4 switch to a different line, the rail carrier with
5 that one spur is at liberty to tell them we can't
6 afford to keep that open if you're going to do this
7 or that.

8 I mean that should just be part of a
9 normal free market conversation that could happen.
10 Right now, you know, these conversations aren't able
11 to happen. You know, also, you know, I made
12 reference to the morning's economists. I mean, I
13 would just -- this is a little flip, and I don't want
14 to come across as flip, but I know it's flip. You
15 know, I guess apparently none of them have ever
16 worked for Warren Buffet, who made a big investment
17 in BNSF a while ago.

18 I don't think he did that blindly thinking
19 that it was a bad investment. So, you know, at this
20 point I'll turn the microphone over to TFI's counsel,
21 Jeff Moreno, who will provide more details on how the
22 Board could approach bottleneck reform.

Page 224

1 BOARD MEMBER OBERMAN: While you're
2 sitting down, flip is good.

3 MR. MORENO: Yeah, I have some slides as
4 well. Great, thank you. I want to thank the Board
5 for holding this hearing today in particular for a
6 special reason, because if I were not here, I would
7 be dressed up in a Santa Claus suit passing out bonus
8 checks to my condominium association staff members.

9 So, once again thank you. The rail
10 industry's testimony, both yesterday and today, has
11 hit back aggressively against the task force
12 bottleneck proposal. This is not particularly
13 surprising, given the industry's vehement opposition
14 to reciprocal switching in the ex parte 711 docket.

15 Indeed, most of the railroads have
16 submitted written testimony that accuses the task
17 force proposal of being more expansive than
18 reciprocal switching, raises nearly all the same
19 objections and even submits the very same testimony
20 that they filed on that docket. Those Chicken Little
21 arguments that the sky is falling have been addressed
22 and soundly rebutted in the opening and reply

1 comments of the Shipper Coalition for Railroad
2 Competition in this EP 711 sub 1 docket, which TFI
3 was a member of the coalition, and I will not go into
4 all of those here.

5 I submit however, that if this proceeding
6 is going to rehash the same legal in fact arguments
7 that have been extensively briefed in ex parte 711,
8 the Board should save all the stakeholders the time,
9 money and effort required to do so again in a brand
10 new proceeding, and instead, advance ex parte 711,
11 which currently hangs in regulatory limbo.

12 The general nature of the task force
13 proposal has given the rail industry wide latitude to
14 characterize it as broad as possible for the purpose
15 of attacking the entire concept of bottleneck
16 relief. The rail industry has exploited that lack of
17 detail, to characterize the report as concluding that
18 bottleneck relief should be available automatically,
19 simply because a railroad is revenue adequate.

20 The salient point of the report, however,
21 is that the bottleneck decisions were predicated and
22 affirmed by the 8th Circuit upon a need to balance

Page 226

1 the competing statutory goals of competition and
2 revenue adequacy. And that achievement of revenue
3 adequacy merits rebalancing those objectives.

4 I believe the purpose of this proceeding
5 is to assess the accuracy of that conclusion and to
6 flush out details as to how the Board might proceed
7 to reform the bottleneck rules. In that spirit, TFI
8 has expressed its agreement with the task force
9 conclusion, and proposed factors that the Board
10 should consider in responding to a shipper's request
11 for a through route that short hauls a revenue
12 adequate rail carrier.

13 The rail industry argues that legal
14 precedent founded in the great northern and the
15 Louisville and Nashville decisions, precludes the STB
16 from revisiting the bottleneck decisions. The rail
17 industry overstates the relevance of those 85 year
18 old plus decisions in today's very different rail
19 regulatory environment.

20 In prohibiting proportional rate
21 challenges, the great northern decision held that the
22 shipper's only interest is that the charge shall be

1 reasonable as a whole. But in 2000, the D.C.
2 Circuit challenged that conclusion in view of the
3 contract exception that sprang from the bottleneck
4 decisions, and I have on the screen a quote from that
5 decision in Union Pacific versus Surface
6 Transportation Board.

7 The Great Northern holding and the broader
8 principle that the reasonableness of its rates is to
9 be assessed on a through basis was based on an
10 understanding that the shippers only interest is
11 that the charge shall be reasonable as a whole. This
12 is no longer the case. By permitting a shipper to
13 enter into contracts that are beyond the review of
14 the Board, the Staggers Act entitles the contracting
15 shipper to, as FMC, the Complainant in this case
16 alleged, the benefit of its bargain.

17 Were its position to prevail, Union
18 Pacific would be in a position to recover for itself
19 the benefit of FMC's bargain with CSX as it could set
20 a rate that allowed it to obtain the difference
21 between a reasonable through rate and the FMC CSX
22 contract price.

Page 228

1 The foregoing precedent, coupled with the
2 achievement of revenue adequacy by at least three
3 Class I railroads, sets the framework for bottleneck
4 relief. In the bottleneck decisions, the STB adopted
5 the narrow contract exception referenced in the above
6 quote by applying that exception only to situations
7 when the bottleneck carrier could not directly serve
8 both the origin and the destination.

9 The need to assist railroads to attain
10 revenue adequacy by enabling them to reap
11 differentially higher rates over their long haul, was
12 the 8th Circuit's rationale for affirming the
13 bottleneck decisions. Notable, at no place in the
14 appellate decision, did the 8th Circuit ever cite to,
15 much less affirm the STB's assertion that Great
16 Northern mandated the outcome of the bottleneck
17 decisions.

18 Rather, the court emphasized that the STB
19 had reasonably exercised its discretion in giving the
20 revenue adequacy objective preference over the
21 pro-competitive objectives in the statute. Such
22 discretion can be exercised differently based upon

1 different circumstances.

2 I submit that at the very least therefore,
3 the Board can and should expand the contract
4 exception to all bottlenecks of a revenue adequate
5 carrier. Another key takeaway from this hearing
6 should be that the statute does not mandate
7 application of the anti-competitive conduct
8 requirements in the competitive access rules,
9 contrary to rail industry assertions, any more than
10 it mandates revenue adequacy considerations. The
11 Board has flexibility to exercise some discretion
12 through the balancing of
13 the competing rail transportation policies, and to
14 account for the vastly changed market conditions in
15 the rail industry as compared to when the competitive
16 access rules were adopted decades ago.

17 The rail industry is correct however, that
18 a rail carrier ordinarily is entitled to its long
19 haul, unless one of three enumerated exceptions
20 applies in the statute. They also are correct that
21 revenue adequacy is not expressly identified as one
22 of those exceptions.

Page 230

1 But revenue adequacy clearly has been a
2 relevant factor in the Board's previous decisions as
3 to whether and when it should exercise discretion to
4 invoke one of those exceptions. To the extent
5 revenue adequacy has been achieved, the Board is
6 justified in reconsidering the role and impact of
7 revenue adequacy in the exercise again of its
8 discretion.

9 If the Board does move forward separately
10 with bottleneck relief in general, as opposed to
11 reciprocal switching, TFI has offered four factors
12 for the Board's consideration of whether to
13 prescribe a through route that short hauls a carrier,
14 under the exception the task force identified in
15 10705(a)(2)(C). That exception focused its
16 attention -- states that the Board may short haul
17 railroad when the Board decides that the proposed
18 through route is needed to provide adequate and more
19 efficient or economic transportation.

20 TFI proposes that a shipper be deemed to
21 satisfy this exception when it makes the following
22 four showings. The carrier must be long-term revenue

1 adequate, pursuant to whatever definition the Board
2 may finally adopt. The definition proposed in the
3 task force report is conservative, which should give
4 the Board a high degree of confidence in the
5 financial health of the carriers that meet that
6 standard.

7 Number two -- no other transportation mode
8 provides effective competition over the road,
9 essentially a market dominance determination. This
10 requirement relates to whether the proposed through
11 route is needed to provide adequate and more
12 efficient or economic transportation. Competition is
13 widely recognized as the best regulator of
14 transportation service in the absence of
15 competition, the adequacy of service is likely to be
16 less than optimal.

17 Such competition can come from other modes
18 in addition to other railroads. If there is affected
19 competition from other modes, there may be no need to
20 establish competition from a second rail carrier.
21 Where effective competition for other modes is
22 lacking however, existing rail competition --

Page 232

1 allowing existing rail competition to function, can
2 enhance the adequacy and efficiency of rail
3 transportation.

4 Third, bottleneck rates are required only
5 to an existing interchange. I see my times up, can I
6 just grab for two minutes? The Board will not
7 require the creation of a new interchange capable of
8 handling the issued traffic where none currently
9 exist.

10 This acts as a check on rail industry
11 charges of open routing and efficiency losses. And
12 finally, the interchange must be operationally
13 feasible and safe for the traffic that would use it.
14 This factor would be an affirmative defense that
15 would be the railroad's burden to prove. This allows
16 railroads to demonstrate operational feasibility
17 where it truly is a concern.

18 If these factors bear a striking
19 similarity to the standards in EP 711 Docket, that is
20 no coincidence. Reciprocal switching is an express
21 exception to the long haul statute, and many of the
22 issues pertinent to reciprocal switch bottlenecks are

1 quite naturally pertinent to bottlenecks in general.

2 TFI commends the Board for its continued
3 consideration of bottleneck relief. It is apparent
4 from the testimony in this hearing that there is
5 substantial overlap and issues between the
6 bottleneck proposal and the task force and the
7 reciprocal switching proposals that have been
8 extensively argued in ex parte 711.

9 Whatever the outcome of this hearing with
10 respect to bottlenecks, TFI urges the Board not to
11 rewind the clock, such that stakeholders are
12 compelled to reargue the same issues that have
13 already been teed up for decision in ex parte 711.
14 Thank you.

15 CHAIRMAN BEGEMAN: Union Pacific?

16 MS. SANBORN: Chairman Begeman, Vice
17 Chairman Fuchs and Board Member Oberman and Board
18 staff, thanks for the opportunity to speak to you
19 today. The questions before you are very important
20 to the health and viability of the railroad industry.

21 I have been in the business of the
22 railroad for over 30 years. My time has been spent

Page 234

1 both in the east and the west. I've spent time at
2 CSX, where I was at one point Chief Operating Officer
3 and my time now at Union Pacific has included
4 positions as Regional Vice President of the west and
5 Regional Vice President of the north.

6 My present role is network planning and
7 operations and the scope of my geographic footprint
8 is literally from coast to coast. And I hope that
9 does help to inform some of the conversation that we
10 have and back and forth that we have today. You have
11 my written testimony. I'm going to have a few
12 comments here to begin with, it will not just be
13 reading that testimony to get us started.

14 The proposed bottleneck changes will make
15 it harder for us to do our job. Providing reliable,
16 efficient service for today and investing to provide
17 service for tomorrow is paramount. If we cannot do
18 our job well, our customers will feel it. We serve a
19 large variety of customers. Union Pacific alone, we
20 have 10,000 customers.

21 We have to figure out the competing
22 demands for service. Efficiently gather, move and

1 deliver for all on a collective basis, all while
2 customers win or lose business, enter or exit
3 markets, the overall economic heats up or cools down
4 and different sectors or geographies and at different
5 times.

6 We also do this in an outdoor environment.
7 We like to say that we're an outdoor sport. And when
8 I think about increasing interchange, I think about
9 thinking through the seasons and some of the
10 challenges that come before us, associated just with
11 weather and that outdoor sport.

12 It's fine for us to handle 4 feet of snow
13 over Donner Pass in California. It happens
14 routinely, and we have equipment designed to help
15 clear that route and get us back in business. When 4
16 feet of snow hit us in Chicago, and Chicago is a good
17 place to reference as Member Oberman has, many times,
18 during these last two days, that is a completely
19 different animal, partially because or maybe mostly,
20 because of the increased amount of interchange there,
21 right.

22 All railroads have to be able to improve

Page 236

1 their service at the same time in order to clear
2 through Chicago. If we increase more interchange
3 locations, have more and have extreme weather events,
4 the recovery for the customers that don't interchange
5 will be muted until both railroads or however many
6 railroads there are using that interchange location.

7 Also, I want to talk about service and
8 investment, as my job is to manage the operating and
9 service plan for the company as well as for looking
10 at future capacity investment and other types of
11 investments that I'll illustrate.

12 In terms of service, we do the best we can
13 to minimize variability and to move our customer's
14 products consistently and reliably. For that we must
15 have as much predictability as we can. It's best for
16 our customers and best for the railroad.

17 A key component to minimizing variability
18 and improving consistency of service is consolidating
19 traffic flows, and eliminating unnecessary car
20 handlings. By handling traffic and single line
21 service, we avoid the unnecessary variability and
22 inefficiency of interchange. Every unnecessary

1 handling introduces inefficiency, not only for the
2 cars being handled, but for the cars of other
3 customers using the same service plan and
4 infrastructure along the route.

5 Government regulations that would give
6 individual shippers power to make us change
7 operations we have designed to accommodate the needs
8 of many other customers, would be harmful and
9 counterproductive to those customers.

10 From an investment perspective, our right
11 to provide single line service is also a critical
12 part of our decision making on future investment.
13 The predictability of traffic moving across which
14 lines and terminals is paramount to making any
15 investment.

16 A railroad investment, particularly new
17 capacity is very costly and risky. It takes many
18 years from concept to become operational. Investment
19 can evaporate as markets change. Powder River Basin
20 coal in Wyoming is a great example, as is fracked
21 sand in Wisconsin.

22 Being able to count on single line traffic

Page 238

1 remaining on our network helps substantially reduce
2 uncertainty inherent and making the investment
3 decisions. There is still no guarantee traffic will
4 materialize, but if it does it will move on our
5 lines. The Board needs to remember that investment
6 isn't just about new capacity. We spend billions
7 each year maintaining our right of way. We need to
8 justify that investment as well.

9 Government regulations that would allow
10 shippers to freely elect interchange versus single
11 line service from year to year, would undermine any
12 predictability and planning either capacity or
13 renewal investment. If we are not investing for
14 growth or maintenance, customers will feel the pain.

15 I'd like to take a moment or two and talk
16 about how the planning process works at Union
17 Pacific, for both service or, creating our service
18 plan, as well as for capital investment. We
19 actually start this process for let's say calendar
20 year 2020, we start this process in July or August
21 where a commercial team provides a plan for what they
22 expect to take place by talking to their customers in

1 terms of volume.

2 We also look at external information like
3 global insights. And factor in what we expect the
4 economy to do, and other puts and takes around
5 tariffs and things. So, we take this in August or
6 July and then it's turned over to my team, and we
7 flow it across our network, figure out what kind of
8 demand we need for locomotives and crews, where they
9 might be. Where they might be needed.

10 So, we make decisions for all customers
11 affected based on these inputs, and all customers are
12 affected based on these inputs. From the investment
13 perspective, we do similar work. We think about
14 where might we be at capacity given what next year's
15 operating plan looks like. Where might we be at
16 capacity?

17 We also review projects that we justified
18 last year and the prior year that have not yet come
19 to be completed. And are they gaining the value that
20 we needed and return that we needed and/or expected?

21 So, we take those inputs, same inputs as
22 well and then think about them relative to the

Page 240

1 capacity investment. And start new projects in 2020
2 based on these facts of what we believe are facts.
3 This is very important for us to think about also in
4 our long-term planning, which is about a three to
5 five year perspective, and we think about geographies
6 or a network that are growing, and how we need to be
7 prepared for that in future investment and what kind
8 of triggers should we be looking for from year to
9 year in order to make that investment.

10 Having resources in the wrong place or too
11 many resources that we don't need, increasing our
12 costs, which also flows to our customers is really
13 what we try to avoid. And having as much
14 predictability as possible is what helps us make that
15 happen. Also, I want to talk a couple of minutes
16 about some of the remedies that I know the Board is
17 considering. Any leverage shippers might gain from
18 proposed bottleneck changes would be short lived.

19 The Board has expressed interest in acting
20 with an understanding of the long view. The Board
21 has also expressed concern about the negotiating
22 leverage of our customers. I cannot stand before you

1 today and say exactly how Union Pacific would
2 respond in the face of those changes.

3 We might decide that the cost of adapting
4 operations are high. But they also are outweighed by
5 the potential cost of reducing rates to keep traffic
6 on a network. After all, not all of these costs will
7 be borne by Union Pacific. Other customers will feel
8 the same pain.

9 It is certainly possible that the
10 bottleneck proposal might provide some customers the
11 leverage the Board seeks in the short term and UP
12 reduces rates to keep traffic on our lines. It could
13 be a combination of both. But in the longer run, and
14 I don't think it would take very long, railroads and
15 shippers would pay the price in terms of reductions
16 in investment, and lower service reliability.

17 Railroads lowering rates or increasing
18 costs would have to deal with progressively lower
19 margins. And you've heard today and yesterday a lot
20 of detail about what that might look like. I think
21 of it as a pie. I think of our margin as a pie, the
22 amount of capital that we can actually either utilize

Page 242

1 to invest in ourselves, or share buybacks, or
2 dividends, or pay down debt.

3 But the pie can shrink. If our margins
4 shrink, the pie shrinks. And as we talked, as you
5 heard talk about today, the proportion of that pie
6 will ever more likely go to investors as opposed to
7 investing in the network. And an ever-shrinking pie
8 is what results from that.

9 And rail industry likely, literally the
10 physical plant would degrade and that would impact
11 all of our customers would be impacted by that. And
12 lastly, I want to hit on one other point and that's
13 the looming, you know, future challenges in terms of
14 what goes on around us in the competitive environment
15 that we're in.

16 And one that probably doesn't get quite as
17 much, we did -- somebody hit on it in the last couple
18 of days here, but competitiveness from outside
19 forces, such as automated vehicles, changing
20 domestic, international markets, trade challenges,
21 those are pressures that are being applied to us even
22 now, and we need to be thinking about how do we

1 maximize our investment to deal with that? And in
2 many cases, that's going to be in technology, which
3 isn't necessarily a capacity improvement, but
4 nonetheless, a visibility improvement. Or, also an
5 improvement that allows us to compete with trucks on
6 the highway. Trucks that might be electric trucks or
7 automated vehicles. Only the most efficient
8 railroads who can invest in necessary maintenance in
9 future improvements, whatever those might be, will be
10 able to compete with agility in a dynamic
11 environment.

12 Our motto is building America. We've been
13 building America for over 150 years. We have faced
14 many challenges and we are prepared to face the
15 challenges of the future and deliver for our
16 customers.

17 MR. ROSENTHAL: Good afternoon Chairman
18 Begeman, Vice Chairman Fuchs, Member Oberman. I'd
19 like to thank you and the Board staff for the
20 opportunity to address the rail transportation task
21 force proposals today. Miss Sanborn explained
22 certain operational and investment concerns with some

Page 244

1 of the proposals, and particularly the bottleneck
2 proposal.

3 We've submitted written testimony
4 discussing our legal concerns with the bottleneck
5 proposal and the proposed rate increase constraint.
6 I'm not going to stand up here and repeat them.
7 You've heard testimony yesterday and today addressing
8 that and I don't think it has to be repeated. I'm
9 happy to take questions about it.

10 What I would like to say is that we
11 appreciate the work that was done by the task force.
12 We realize it was done in good faith to address
13 important issues that should be part of the dialogue
14 and we want to be part of that continuing dialogue.
15 Union Pacific is interested in engaging with the
16 Board in exploring potential approaches to address
17 the needs of small shippers to have access to the
18 rate review process.

19 We're also interested in engaging with the
20 Board on improving the Board's revenue-adequacy
21 metric to reflect the context of the S&P performance
22 information that was discussed earlier today and to

1 reflect the fact that rail investors have
2 alternatives.

3 With that said, again I'd like to thank
4 you for the opportunity to appear. Miss Sanborn and
5 I would like to thank you and we look forward to
6 answering your questions.

7 CHAIRMAN BEGEMAN: Thank you. I think
8 actually, Mike, I'll start with you since you are
9 still trying to sit down. One of the -- and really,
10 I want to thank everyone for their testimony.
11 It's -- you are, how ironic, I was going to say your
12 testimony always is as important as the first panel
13 and with Jeff here, that's probably why, right.

14 But really, throughout the last two days,
15 each panel has really provided unique perspectives, a
16 lot of common themes, a lot of differing examples, et
17 cetera and Mike, one of the things you mentioned
18 which we certainly appreciate this, you know, for you
19 representing UP, you said that UP would like to work
20 with the Board on various things, such as assisting
21 us in finding a methodology for small rates to be
22 considered, some other challenges.

Page 246

1 And I believe what you said was also
2 improving the revenue-adequacy metric. And my -- I
3 appreciate the offer, so don't misinterpret my
4 question, but yet, throughout the last two days from
5 the railroad witnesses, we've been told you can't do
6 anything with a revenue-adequacy metric. Even, I
7 would say whether it's improved or not improved.

8 So, if we improve it, I don't want to put
9 words in your mouth, then you'd be more open to the
10 Board taking certain actions based on that metric, or
11 what?

12 MR. ROSENTHAL: We think the Board has a
13 role to play. The statute gives the Board a role to
14 play in assisting railroads to attain revenue
15 adequacy. We think that you need a good metric to do
16 that. We think that in interpreting and applying
17 other portions of the statute, you're supposed to
18 give consideration to that policy, and you see that
19 issue weighed in decisions. How does revenue
20 adequacy play into various decisions that you make
21 where you have discretion as policy makers.

22 So, we think it's important for you to

1 have a metric that you can use that actually does as
2 accurately as possible, and we heard the testimony
3 yesterday and especially earlier today on how
4 difficult it is to obtain accuracy, but to get you
5 the best information possible. Because you're making
6 decisions based on a premise of whether the railroads
7 are revenue adequate or not.

8 That's why we're here. So, you need to
9 have the best metric available to decide whether
10 there is an issue or there isn't because the statute
11 requires you to look at that and because you do that
12 as part of implementing all of your rules.

13 CHAIRMAN BEGEMAN: It does indeed. And
14 you know the current metric that the Board uses, I
15 mean it certainly wasn't established by any of us
16 here. But you know, it is what we currently are
17 using and is it UP's position that the Board has
18 found UP revenue to meet the revenue-adequacy
19 definition that the percentage for many of the last
20 several years, probably more between with UP and NS
21 and here and there, BN and here and there sometimes
22 too, but is it your position that UP has not been and

Page 248

1 is not revenue adequate?

2 MR. ROSENTHAL: We think that if a proper
3 measure was applied, Union Pacific wouldn't be
4 considered revenue adequate and shouldn't be treated
5 so for your regulatory purposes. I think you saw --
6 I know you saw the presentation earlier today about
7 where Union Pacific and other railroads fall in
8 comparison with other companies that we compete with
9 for capital.

10 And so, yes, we think that unless you can
11 tell where we are relative, as the professor said
12 earlier today, you have to look relative. You have
13 to look at your next best option. And we think
14 measured by that standard, based on the work we've
15 done, it wouldn't be considered revenue adequate.

16 CHAIRMAN BEGEMAN: And is the metric
17 really the issue of replacement cost?

18 MR. ROSENTHAL: I don't know whether the
19 metric is really the issue of replacement costs.
20 We've talked about how difficult it might to be to
21 actually measure replacement costs and whether that
22 is necessarily the best way to pursue. I thought the

1 presentation earlier today was talking about pursuing
2 something that's more of a comparative approach,
3 because that's actually looking at the way the
4 investors are thinking about things and the way the
5 market operates. So, I don't think we have a solid
6 proposal at this point for translating what you saw
7 into the revenue adequacy into a formula.

8 But we think that something along those
9 lines is worth giving more thought to and developing
10 because, again, that's the way we see the world
11 working. And that's the world where your policies
12 are going to have an impact.

13 CHAIRMAN BEGEMAN: Just to switch topics
14 for a moment to the issue of the bottleneck. I'll
15 call it a proposal, from the task force, but I
16 believe that your testimony -- not your verbal
17 testimony, but you have suggested that the Board
18 doesn't have authority to make the changes that the
19 task force has raised. And so, I really would kind
20 of like to have a dialogue, not with myself, but
21 between with you and Jeff and anyone else who would
22 like to chime in.

Page 250

1 But you know, your both you know, very
2 skilled practicing practitioners that we are all very
3 familiar with and so, we could just kind of hear the
4 best you both have on what our legal rights or -- and
5 Jeff, I kind of asked you this yesterday as well, but
6 the obstacles that we would face. You said it's from
7 you?

8 MR. ROSENTHAL: Yes, true. Well, the
9 obstacle that you're going to face is through the
10 law, through the statute because the railroad's right
11 not to be short hauled, you know, not to have to
12 interchange if it can provide single line service,
13 doesn't reflect, with all respect to Mr. Moreno, it
14 doesn't reflect a balancing of policies that could
15 change with the achievement of revenue adequacy.

16 It's something that was mandated by the
17 law. So, it's a right and it can't be overridden
18 except under the specific circumstances identified in
19 the statute, which are essentially that the single
20 line route is unnecessarily long, or that a through
21 route is needed to provide relief for inadequate
22 service and there's proof that there's a need for

1 more efficient economic transportation.

2 And those standards really don't have
3 anything to do with revenue adequacy, and I don't
4 think you could find by a rule or some sort of
5 presumption, that because a railroad has achieved
6 revenue adequacy those standards are automatically
7 met in a particular case.

8 I think it's something you would have to
9 assess on a case by case method as the Board has done
10 in the past.

11 MR. MORENO: I would just say I didn't
12 make up the revenue-adequacy relevancy, it comes from
13 the Board's own precedent and bottleneck decisions
14 and then the 8th Circuit's affirmance of the
15 Bottleneck decisions. As I said in my testimony, I
16 don't believe that revenue adequacy, as a stand-alone
17 factor, necessarily qualifies for the statute. It's
18 what gives the Board flexibility in how it interprets
19 the statute for purposes of which objectives it's
20 seeking to accomplish through the short-haul rule.

21 And I -- the statute says what it says
22 with respect to the long haul, but also that includes

Page 252

1 the three exceptions. And I think two of them
2 potentially apply, the reciprocal switching -- which
3 we've already briefed extensively. And that one
4 clearly does focus on competition.

5 And then you have the adequate, more
6 efficient and economic rail transportation, which
7 also can be linked competition because competition is
8 part of what facilitates efficiency and economics.

9 MR. ROSENTHAL: Just because you can
10 appreciate the bait and asked for it. We're just
11 setting the case involving -- it was the Union
12 Pacific FMC case where this exception to the
13 bottleneck rule was actually decided it wasn't part
14 of the mid-American case because that case didn't
15 actually present the issue.

16 But that case was actually a different
17 case. In that case there had to be a route from
18 Union Pacific interchanging with CSX to complete the
19 route, I believe it was CSX. And CSX had a contract
20 rate. So, the parties agreed on the interchange
21 points. There was no short hauling involved. Union
22 Pacific was the longest haul to the interchange point

1 and the question was actually the form of the rate
2 whether Union Pacific had to quote a rate in a form
3 that could be challenged from the origin to the
4 interchange point, or whether it could quote a rate
5 that went all the way to the destination in
6 conjunction with the CSX rate.

7 And what the Board said and what the court
8 agreed, was that there was an interest in that case
9 in contrast that had to be balanced with the interest
10 of choosing the form of the rate in 10705. And their
11 revenue-adequacy concerns might have something to
12 play in there in the form of the rate, but it's very
13 different from the single-line service bottleneck
14 case where the question is the railroad's right to
15 the long haul and the statutory provisions that
16 clearly protect it, except for certain exceptions.

17 Which really don't have anything to do
18 with revenue adequacy and in fact, if you look at the
19 Board's past decisions, talking about even adequate,
20 more efficient and economic service, Miss Sanborn can
21 tell you and already has that interchange service,
22 inter-line service is going to be -- I don't want

Page 254

1 to -- more problematic. It's going to be less
2 efficient, less economic and that's what the Board
3 said in case after case when it touted the benefits
4 of single line service, that it was more efficient
5 and more economic.

6 So, there might be a case, might be some
7 situation where that's not true. And you might find
8 that going through a case-by-case test and shippers
9 have tried to do that and the Entergy case was one of
10 them. But it's a case-by-case inquiry that has to be
11 done. You can't say because railroads are revenue
12 adequate, we're going to absolutely presume that
13 interchange service would be needed for adequate,
14 more efficient and economic service.

15 MR. MORENO: If I can just -- I think
16 there's two cases we're talking about we need to keep
17 very straight what the subject matter of each case
18 was. There was the MidAmerican case which the task
19 force has cited to, and there was the FMC case, which
20 I put up on the screen as my slides.

21 Both dealt with different aspects of the
22 Bottleneck decisions. The MidAmerican case was the

1 8th Circuit's affirming of the Bottleneck decisions
2 with respect to a challenge that had been made by
3 shippers concerning the Board's balancing, so to
4 speak, of the competitive and the revenue-adequacy
5 factor.

6 And it's in that decision where the court
7 discussed revenue adequacy and referred to the
8 agency's own discussion of revenue advocacy in the
9 Bottleneck decisions. The FMC was an appeal of a
10 rate case in which the contract exception had been
11 applied. The contract exception was not ruled upon
12 in MidAmerican, because it wasn't ripe for purposes.

13 So, the first opportunity of any court to
14 rule on whether the contract exception was lawful or
15 not, was in the FMC case, and the quote that I put up
16 on the screen was with respect to that aspect of it.

17 CHAIRMAN BEGEMAN: Thank you both. And
18 Patrick did you want to?

19 VICE CHAIRMAN FUCHS: Sure. Jeff, let me
20 just start off and I think zero in. Setting aside
21 the statutory framework but just from a policy
22 perspective, why is it that you think that it would

Page 256

1 be a bad idea, or if you think it's a bad idea, to
2 have kind of open access generally without any
3 conditions?

4 MR. MORENO: I recognize -- and I think
5 Congress recognized, when it passed the Staggers Act
6 that pure open access does create and lead to
7 inefficiencies. But there's a balance here. We're
8 not -- what we're talking about when we're talking
9 about bottlenecks, is not pure open access where we
10 can come in and create an interchange and direct a
11 routing.

12 We're talking about using existing
13 interchanges, where that activity already takes
14 place. And when we are talking about bottleneck
15 relief, keep in mind there's two different scenarios
16 in which bottleneck relief could occur.

17 The one, the railroad's fans talking about
18 is the one where we take single line service and turn
19 it into two line service. You're adding interchange,
20 undoubtedly, and I don't think I can state -- sit up
21 here with a straight face and say adding interchanges
22 is desirable, from a shipper's perspective or from a

1 railroad's or a shipper's perspective.

2 But if the shipper has the option of doing
3 so, that will lead to use of the alternative route
4 when it is the more efficient option. In most cases,
5 the bottleneck carrier is going to start out with an
6 efficiency advantage resulting from their single line
7 alternative, which is going to allow them to price
8 and retain more of the revenue as profit than perhaps
9 the competing carrier could.

10 But now let's shift to the second, and
11 what I think is actually probably more common
12 scenario when it comes to bottleneck relief. And
13 that's where we're not adding an interchange, we're
14 changing the location of the interchange. And if you
15 look at Exhibit 2 in our TFI's written testimony, we
16 put several examples of those types of interchange
17 shifts.

18 So, for example, I'll take one that comes
19 to mind at the top of my head. There was a
20 gateway -- New Orleans. A live, chemical company
21 shippers shipped from the southwest to points in the
22 east.

Page 258

1 So, the traffic may originate on UP, but it's
2 terminated by the Norfolk Southern or CSX, perhaps
3 somewhere in the mid-Atlantic or northeast.

4 Well, if I'm at a chemical production
5 plant in Louisiana, pick St. Charles, I can -- UP,
6 I'm captive to UP. UP has the option because it's
7 the origin carrier of its long haul there, of taking
8 the traffic, usually East St. Louis is the
9 predominant location there. You could take it all
10 the way to Chicago, theoretically, to get its long
11 haul.

12 They avoid taking it to New Orleans and
13 handing it off to CSX or NS, which would give the
14 eastern carrier the long haul in that case. But
15 there may be circumstances in which that's the more
16 efficient routing to go, but we have no opportunity
17 to find that out or test that hypothesis out.

18 And it's that type of competition that the
19 shippers are also looking for, from both a service
20 and a rate perspective. So, if CSX can provide the
21 long haul more efficiently for a better price, then
22 we'd like the option of using CSX.

1 UP is interchanging traffic at both
2 locations, so we're not creating a new interchange.

3 VICE CHAIRMAN FUCHS: But Jeff, do you
4 think that even in a location where you're not adding
5 an interchange, don't you -- from just a policy
6 perspective and I want to get into how it pertains to
7 particular aspects of the statute, but even when
8 you're not creating an interchange, do you think that
9 if a carrier is already in a location with another
10 carrier, there should be no other criteria, it's
11 always a good thing to have open access in that
12 scenario?

13 Or, isn't there some -- you were
14 describing attention between competition and revenue
15 adequacy.

16 MR. MORENO: Yeah.

17 VICE CHAIRMAN FUCHS: And isn't there a
18 risk? I mean, you know, even in the place where
19 there's an interchange, that about revenue adequacy
20 indicating that the need for carriers to cover a
21 considerable fixed cost.

22 MR. MORENO: That's why I think revenue

Page 260

1 adequacy comes into this because there's less of a
2 need for them to do that, and this gets back to the
3 MidAmerican philosophy where the court was observing
4 that the agency had made the conclusion that the
5 railroad should be able to extend the origin
6 wherever, it should be able to extend its bottleneck
7 differential-pricing capability to the long haul.

8 VICE CHAIRMAN FUCHS: And I guess that's
9 what I'm exploring because you know, and
10 respectfully, there was discussion about kind of
11 competition and behaved more like a free market, and
12 because there were fixed costs and other things. The
13 rail industry is just a little bit different in that
14 competition in every situation, even if there's not
15 an extra interchange, isn't necessarily a good thing.

16 MR. MORENO: Yeah. And you're bringing up
17 a topic that came up on multiple panels yesterday.

18 VICE CHAIRMAN FUCHS: Yes.

19 MR. MORENO: The difference between what
20 we're talking about was bottleneck competition versus
21 SAC competition.

22 VICE CHAIRMAN FUCHS: Yes, yes.

1 MR. MORENO: And I think there's --
2 Professor Sappington, I think, finally cut to the
3 chase yesterday in explaining what the true
4 difference was. And that was the railroads are
5 calling SAC competition, long-term competition,
6 because it's at that level of competition that the
7 railroad can recover its total cost.

8 VICE CHAIRMAN FUCHS: Yes.

9 MR. MORENO: But then they were
10 necessarily equating bottleneck competition to short-
11 term competition, which leads to marginal cross-
12 pricing. Now, marginal cross-pricing is something
13 that would happen in a perfectly competitive
14 industry. But let's be realistic here.

15 VICE CHAIRMAN FUCHS: Right.

16 MR. MORENO: When we're adding bottleneck
17 competition to the equation, that's not perfect
18 competition. There's still going to be monopoly
19 profits to invest in there, that's a duopoly.

20 VICE CHAIRMAN FUCHS: Right, right, but it
21 will be coming down lower beyond possibly risking.

22 MR. MORENO: I don't quite agree with

Page 262

1 that.

2 VICE CHAIRMAN FUCHS: Okay.

3 MR. MORENO: Because when we're talking
4 about duopoly competition, that we're assuming is
5 that the railroads are lacking in pricing discipline
6 and maybe in a perfectly competitive scenario where
7 you have 100 competitors, it's going to be difficult
8 to hold that discipline and you're going to price
9 down to the marginal cost.

10 But when we're talking about a duopoly, UP
11 and BNSF for example, when it comes to that
12 competitive, UP knows its got what its costs are and
13 BSNF knows what its costs are, and neither -- and
14 both of them can assume that the other is not going
15 to price below their cost. So, there's going to be
16 some discipline there that's going to make sure
17 they're covered.

18 VICE CHAIRMAN FUCHS: Their total costs.

19 MR. MORENO: Their total costs.

20 VICE CHAIRMAN FUCHS: Right. I see. And
21 so, even though it will go in the direction --
22 directionally it will be less than they could if they

1 were, you know, completely -- had the person
2 completely captive.

3 MR. MORENO: Yeah, what you're
4 eliminating --

5 VICE CHAIRMAN FUCHS: You don't think it's
6 going to create any risk in the long run?

7 MR. MORENO: I'm sorry?

8 VICE CHAIRMAN FUCHS: You don't think it's
9 going to create any risk in the long run from a
10 fixed-cost perspective because the duopoly nature?

11 MR. MORENO: No. No, I don't think that
12 will because I do think that these are disciplined
13 pricing entities. What we're seeing, a perfect
14 example of this would be -- well, the airline
15 industry. They're an oligopoly. For years though,
16 after deregulation, they did start, they were pricing
17 competitively below putting each other out of
18 business, but they now kind of settled into a routine
19 now where they're not pricing below their costs
20 anymore. They were covering everything. A rail
21 industry in a duopoly situation is going to be better
22 able to resist those temptations than even an

Page 264

1 oligopoly like the airline industry.

2 VICE CHAIRMAN FUCHS: And so, in your
3 view, where it comes to now the task force
4 recommendation comes in, is it your view that that's
5 not much of a risk without any additional criteria in
6 the interchange, but if we have an affirmative
7 declaration, that railroads are above what they need
8 on a long-term basis, then that's an additional
9 protection to make sure that there's no downside
10 risk, or not as much downside risk.

11 MR. MORENO: And the factors that TFI has
12 proposed, we'd even add an additional layer, would be
13 the market dominance test, effectively, so that we're
14 only introducing rail competition where the non-rail
15 competition that may exist is inadequate or
16 ineffective, so that's going to further constrain the
17 number of places where this might be able to occur.

18 VICE CHAIRMAN FUCHS: And so, do you think
19 then it is better from your perspective, and maybe
20 just both legal and policy, is it better from your
21 perspective to consider competition on an
22 individualized basis where you have a fact-specific

1 finding as if you would see in 711, compared to
2 setting aside the geographic differences between
3 bottlenecks and switching.

4 Do you think it's better to have that
5 individual fact specific, or to have that
6 over-arching long-term revenue adequacy protection?

7 MR. MORENO: Well, I think there's some
8 combination of the two. Because in the factors, one
9 of the factors would be the long-term revenue
10 adequacy of the carrier that you're short-hauling.

11 VICE CHAIRMAN FUCHS: Even in 11102
12 situation?

13 MR. MORENO: Are you talking about
14 reciprocal switching?

15 VICE CHAIRMAN FUCHS: Yeah, I guess what
16 I'm asking is it a fact-specific finding on the
17 individual route like you would see in 711, or this
18 type of thing which is still it's somewhat -- but
19 it's really based on a long-term revenue adequacy
20 that creates the opening.

21 MR. MORENO: Because reciprocal switching
22 is already a subset of bottleneck, I don't see a

Page 266

1 revenue-adequacy constraint as being necessary for
2 that situation. I'm suggesting the revenue adequacy
3 in the (c)(3) exception as an additional check along
4 with the market dominance requirement.

5 VICE CHAIRMAN FUCHS: And just out of
6 curiosity, the (c)(3), and I know that's what the
7 task force put forward, there's nothing in (c)(2), in
8 terms of the unreasonable length that you think holds
9 any applicability?

10 MR. MORENO: Oh, I think it's already --
11 it almost speaks for itself in a sense because it
12 gives a very objective measure in that case and I
13 think it's always been available, so.

14 VICE CHAIRMAN FUCHS: Okay.

15 MS. SANFORD: Could I break in, some of
16 the sort of academic discussion that we're having and
17 certainly the legal interpretation of some of this.
18 But, you know, there's certainly a practical
19 application, too. I mean, we're talking about a
20 discrete customer that has the right to do this or
21 that across a shared geography, shared
22 infrastructure, shared network.

1 And it's maybe instructive in some
2 respects, take an individual case and dive down into
3 it and try to bat back and forth the policy and/or
4 legal and/or economic issues. But it's not -- I
5 can't sit here as both an operator and planner and
6 say that adding interchange locations in an
7 indiscriminate way because I have bottleneck rules
8 really is not going to impact other customers.

9 As part of what I said in my testimony,
10 it's part of what I wrote, it's part of what I said.
11 And that's simply because interchange going up and
12 down and not being able to predict it, is terribly,
13 terribly challenging to other customers who actually
14 use that route and/or use that interchange.

15 We have backed up much more easily and
16 things don't clear as fast. And in terms of
17 interchange, you know, it's a great example,
18 interchange with CSX at St. Louis, interchange with
19 CSX at New Orleans, I know both gateways extremely
20 well. They are not the same. Going through New
21 Orleans necessitates going over two separate
22 individual properties -- the NOPB, going over the

Page 268

1 bridge, and NS's back belt.

2 There's through trains, but you have to
3 navigate those individual handoffs finding your way
4 into New Orleans. Into St. Louis, you might use a
5 TRA, you might use ANS, you have optionality for
6 either. You might actually stay online UP at Dupo
7 Yard and interchange direct to CSX at Rose Lake, if
8 that's what you choose.

9 That could be the most efficient way. And
10 having a shipper figure out which one they want to
11 use impacts dramatically what the service plan needs
12 to look like, and can actually be degrading to that
13 interchange point and other customers that really
14 must interchange through New Orleans, customers whose
15 traffic wants to go to Mobile, Alabama, which would
16 make no sense to go to St. Louis.

17 But Mobile, Alabama; Pensacola, Florida;
18 maybe even Montgomery, Alabama. Those make sense to
19 go there. Shippers picking and choosing makes it
20 very, very difficult for the others that actually
21 need to use some of these interchange points.

22 MR. MORENO: Yeah, there's two points

1 here. I mean without getting into the debate of the
2 specifics of the merits of a New Orleans interchange.
3 Both the reciprocal switching factors and the TFI
4 factors include an operational feasibility component
5 that the railroad could raise an affirmative defense.
6 And the types of points that Cindy was making, that
7 would be the opportunity to present those arguments.

8 With respect to the predictability of
9 traffic flows and changing, shippers aren't changing
10 on a daily basis. We had testimony yesterday from CP
11 witnesses about it and said what happens is the
12 shippers enter into contracts. And this is how the
13 railroads can manage that. You get a contract, 1, 2,
14 3, more years and that gives you the predictability
15 of that traffic flow during the time of that
16 contract, and all of those contracts aren't going to
17 expire at the same time at the same interchange, et
18 cetera. Those can be managed.

19 Also, in the 711 Sub 1 testimony, the
20 shipper coalition put together, submitted the
21 verified statement of John Orrison, who came -- who
22 retired from BNSF. Prior to that was at CSX and at

Page 270

1 Norfolk Southern, including presented the CSX
2 operating plan in the Conrail merger proceeding. And
3 he said railroads all the time have to deal with
4 volume fluctuations and make these adjustments.

5 And the types of adjustments that would
6 come from reciprocal switching and volume fluctuation
7 are something that the railroads have ample tools to
8 manage.

9 MS. SANBORN: We may -- as I described, we
10 make this, we have to deal with changes and
11 customers' demands just based on demand for their
12 product, all the time. And geographical changes,
13 weather changes, we talked about that at the very
14 beginning in my testimony.

15 We're adding more to that. We're creating
16 more uncertainty. If you create more uncertainty for
17 us by definition, you will create more uncertainty
18 for our customers. None of us want that. This is
19 not about -- this is about the impacts to others, not
20 simply the impacts to the person that makes the
21 choices.

22 And I don't disagree that you might have

1 contracts coming up for renewal at different times.
2 To me, that just creates more of the bow wave? Or
3 more of a way that change has potential to degrade
4 service to others. And as the planner, these things
5 are very, very important to us, to be able to provide
6 an efficient, consistent, reliable service product.

7 VICE CHAIRMAN FUCHS: What do you say to
8 somebody who says that if you want to avoid those
9 inefficiencies for others, that you should then price
10 that person lower? The person that would create
11 those inefficiencies. What do you say to that
12 argument, which I think I've heard a couple times?

13 MS. SANBORN: I'm not sure I'm following
14 you.

15 VICE CHAIRMAN FUCHS: So, I think as I
16 understand, and correct me if I'm wrong. But what
17 you're saying is that through opening up some of the
18 competition, however it may be done, that the
19 addition of potential interchanges is going to create
20 inefficiencies for you and such that it may be an
21 efficient outcome for one particular shipper, but
22 those inefficiencies will run down throughout the

Page 272

1 network, so that you know, the rest of your customers
2 might not be as well off. That's what I understood
3 you to be saying before I asked. Is that roughly
4 right?

5 MS. SANBORN: Well -- continue on
6 because --

7 VICE CHAIRMAN FUCHS: My question is if
8 you wanted to avoid those negative impacts to
9 those -- I've heard this come up a point, from
10 shippers, if you wanted to avoid those impacts you
11 could price then the person who would create those
12 inefficiencies lower. So, yeah.

13 MS. SANBORN: When I think about pricing
14 decisions, you know, and I don't do -- one of the
15 things I don't do is pricing, but nonetheless, let me
16 try to take a stab at what you're describing. I
17 think that if that were the only mechanism that were
18 left for us to use, that would be dangerous in other
19 ways, too.

20 It's about being able to, as I
21 described, generate a positive return to make
22 investments. What we would like to be able to do is

1 have a consistent operation and if that interchange
2 actually needed to grow to be able to invest in that
3 location. And what you're describing is actually the
4 opposite, is that we would just figure out how to
5 continue to move stuff around by price, and
6 ultimately not operate where traffic wants to go.

7 VICE CHAIRMAN FUCHS: So, sorry, what
8 you're saying is even if you had the overarching
9 protection on a system-wide of revenue adequacy, and
10 there was some revenue hid from that pricing to avoid
11 those inefficiencies, on that segment you would see
12 that you wouldn't want to necessarily invest in that
13 segment because you're not fully recovering that.

14 Jeff, do you have a response to that?

15 MS. SANBORN: Well, it's a shared network.
16 It's really, really hard, you know, for taking
17 discrete examples and trying to dig down in and say
18 this is exactly what you would do, ignores so many of
19 the other things are part of the decision making that
20 we make for traffic that's on our lines, whether it's
21 planning for it or figuring out what the rates should
22 be.

Page 274

1 I don't see this particular conversation
2 finding its way into revenue adequacy conversation or
3 topic. Other than I guess that's how you're
4 introducing bottleneck or reducing taking away the
5 bottleneck provisions because of that.

6 But to me, I think of it just in general
7 as how would it -- revenue adequate or not, opening
8 up interchange, relieving bottleneck protections
9 creates a spider web of things that happen and if we
10 dive into one location, and say what if this, what if
11 that, we are ignoring so many other pieces of it that
12 there's not like one solution that's going to solve a
13 particular problem, like price.

14 VICE CHAIRMAN FUCHS: I hear you. But I
15 understood the big reason why price wouldn't is
16 because it degrades -- what you were describing, was
17 it degrades the investment incentives for that
18 particular area that might be subject to the policy.

19 MS. SANBORN: Again, it's shared. It
20 would degrade our investment incentive for our
21 business.

22 VICE CHAIRMAN FUCHS: Yes, and Jeff?

1 MR. MORENO: Part of the answer to that
2 comes in whatever the bottleneck rate is prescribed
3 at and if you're using the SAC or a cost play type of
4 thing, you're going to protect the costing of the
5 carrier that may have lost that traffic. But I think
6 there's also an equally important factor that's being
7 overlooked in this discussion, because this has been
8 an asymmetric discussion, is that the railroad is
9 losing traffic, but another railroad is gaining
10 traffic.

11 And that gain in traffic may promote
12 efficiencies on that carrier and the question is,
13 what's the net efficiency gain here? And competition
14 is what allows the traffic to flow to the line where
15 the net efficiencies are the greatest. So, I think
16 overall, that's the most economically sound solution
17 that we're trying to arrive at.

18 BOARD MEMBER OBERMAN: I just have a
19 couple of things I wanted to sort of wrap up from
20 earlier discussions. Jeff, I didn't realize this
21 when you were here yesterday, that you represented at
22 least two parties in the CF case. And so --

Page 276

1 MR. MORENO: Yes, as a very young
2 associate.

3 BOARD MEMBER OBERMAN: That's okay, your
4 name is on the pleading, it goes down in the record.
5 But so, I don't know if you heard my repartee with
6 Ray yesterday on this subject. And it is true, I
7 know at the time I went back to look at it that Koch
8 did not apparently in that case, this is what I
9 wanted to ask you about, argue that it was the --
10 Board violated the statute by even adopting the
11 revenue adequacy standard in the coal rate guidelines
12 as AAR is now arguing.

13 And I wonder if you had any insight as to
14 what happened in that case. Was it obvious to
15 everybody that the Board had the authority? I mean I
16 imagine if it was a winning argument, Koch Brothers
17 wouldn't have overlooked it. So, do you have any
18 insight into that?

19 MR. MORENO: You're asking me to dig
20 really deep into the recesses of my memory here. And
21 I do remember it being an issue because the Koch
22 actually put in SAC evidence to try to make it into a

1 SAC case. And I remember the Board rejected saying
2 it was the shipper's prerogative to choose which one,
3 but that's the extent of my memory.

4 BOARD MEMBER OBERMAN: Alright, I take it
5 on the substance of the issue you would disagree in
6 terms of whether we have the statutory authority to
7 enact a revenue-adequacy measurement.

8 MR. MORENO: Absolutely, I think you do
9 have the authority. I argued that yesterday in my
10 ACC presentation and I think it's been clearly
11 recognized by the courts in affirming the constrained
12 market pricing. It's inherent in constrained market
13 pricing because the entire point of rail rate
14 regulation is to determine the appropriate level of
15 differential pricing necessary to achieve revenue
16 adequacy and no more.

17 BOARD MEMBER OBERMAN: Let me say on this
18 subject, and I would just reiterate Mike and to you,
19 as well. If you have any more refined legal argument
20 to us as to how the statute, I forgot now, 10704 I
21 guess, that talks about reasonable and economic
22 return, how that language constrains, if it does, our

Page 278

1 discretion and picking these levels. I'd really like
2 to see it because so far, and I'm not criticizing
3 anybody, the discussion's been very general economic
4 principles, but we are constrained by the statute.

5 Or, if we're constrained, it's likely to
6 the statute, and I'd like to know the insight from
7 both sides here, how to construe it. I just have one
8 question. I'm guessing you don't have any hard
9 statistics, Justin, but I wonder if you had any
10 insight, at least in terms of your members, because
11 you talked about your members having great potential
12 to use bottleneck opportunities.

13 Any notion of how many interchange points
14 you're talking about? At least as it would affect
15 your industries.

16 MR. LOUCHHEIM: No, I do not know how many
17 interchange points. I will say for our members
18 operating in Canada, where they have interswitching,
19 I know, you know, Canada is not exactly the same as
20 the system in the United States, but I think, you
21 know, obviously it interconnects. And there are lots
22 of similarities.

1 They, I mean, they utilize it here and
2 there, interswitching. But they don't use it a ton.
3 I think Jeff made the point that for someone who's
4 got the spur to a facility, they probably already
5 have inherent advantages to continuing to use that
6 and they generally do.

7 It's mostly utilized actually in service
8 situations. Lack of power or labor to move the
9 product.

10 BOARD MEMBER OBERMAN: You heard the
11 argument yesterday that we can't draw any insights
12 from Canada because the entire country only has 100
13 interchange points and we have, I assume it's
14 accurate, thousands. And I'm just wondering in the
15 real world, though, how many times this issue would
16 arise to get to these points of how many uncertain
17 points there are for assuming there is uncertainty
18 for the railroad.

19 MR. LOUCHHEIM: I don't have -- I know you
20 were looking for a specific answer. I don't have the
21 specific answer to that question. However, a common
22 theme that I've heard over the last two days, over

Page 280

1 the last three months, since the Rate Reform Task
2 report was released, and in other measures, actually
3 in other in completely different modes, like in the
4 trucking industry like with truck rate reform, a
5 common theme that I experienced is communication from
6 the rail industry about how we should not do this to
7 change that, to update this, to reform regulations to
8 do that. You know, when it comes to status quo, it's
9 very much a message of we need to maintain the status
10 quo, and there will be various reasons and
11 presentations put forward that are silky smooth, but
12 at the end of the day, it's mostly just about
13 maintaining the status quo, is my experience, if I
14 did sum up all of it.

15 So, I don't have a specific answer to
16 that. I'm sure there are more interchanges in the
17 United States, sure bottleneck reform and updates and
18 modernization can absolutely work in the United
19 States.

20 BOARD MEMBER OBERMAN: Thank you. That
21 was all I had.

22 CHAIRMAN BEGEMAN: The last thing I want

1 to comment on and really I'm going to kind of direct
2 it at you, Cindy, and I really mean it in sort of --
3 I have good intentions for what I'm about to say.
4 But one of the things, at least for me, that I
5 struggle with when you try to you know, listen to all
6 different stakeholders, and really, you know, for
7 years I've been listening to stakeholders. Not just
8 in this job. And you know, everyone -- I think that
9 everyone is trying to be honest with their regulator
10 or their senator or their, you know, whoever we
11 happen to have been at the time.

12 And one of the things I really struggle
13 with when it comes to what Justin said as the status
14 quo theme, and I think you kind of hit the nail on
15 the head with that, from at least what I hear from
16 the rail industry when it comes to anything the Board
17 should do, which is nothing, because we need the
18 status quo, but yet you know, we have seen these
19 major operating changes imposed on your customers.

20 As an aside, for some of you who may not
21 know, Cindy was at CSX when they made their operating
22 changes and she lived to tell about it. It was not

Page 282

1 an easy time for anyone involved at CSX at the
2 point. And one of the nice things is I really got to
3 know Cindy, and I know how smart she is and she, you
4 know, you'd be smart to listen to her because she
5 does know what she's talking about.

6 But yet, as you know, you made crazy
7 changes. It was chaos. It was havoc. Companies
8 were practically being shut down, maybe some were
9 shut down, we just -- they just didn't call us. And
10 now you're at another company, not taking the same
11 approach and I commend you for that and I'm holding
12 you to that, that you will communicate with your
13 customers, you're not going to create havoc and shut
14 places down, but yet no more unit -- I'm going to
15 kind of embellish.

16 But, you now, no more unit trains for all
17 these folks that, you know, spent millions of dollars
18 to create unit train operations for their facilities.
19 So, it seems that the industry is fine for change as
20 long as it's their change, and maybe unpredictable
21 for your customer but it's predictable for you. So,
22 it's really hard to not be suspect.

1 MS. SANBORN: I understand. And let me
2 say this a couple ways. I think communication is the
3 key. And you know, I'll comment in a couple ways.
4 One, on the unit train conversion piece. You know,
5 we still run plenty of unit trains in the industry,
6 both sides of the Mississippi.

7 The ones that we targeted that we felt
8 like made the most sense to move into manifest were
9 unit train locations where you weren't loading a
10 whole train at one time. You were loading 20 cars
11 maybe on one day and then 20 cars on the next day.
12 Just based on the physical plant that the particular
13 customer had.

14 And it took anywhere from four to five
15 days to actually generate 80 to 100 cars and then we
16 would go and respond, jump into you know, spring into
17 action and find locomotives to operate the train and
18 find crew to operate the train. All the while a
19 local would have operated right by that facility all,
20 each of those five days and just go right by those
21 cars.

22 And so, the plan that we put in place was

Page 284

1 for that local to pick up those cars on each
2 individual day and move the cars to the manifest
3 network. And when you look at kind of the sum total
4 of that and many other changes that we've made, and
5 I'll speak obviously Union Pacific -- we've improved
6 car velocity to the point that you know, I guess --
7 well let me use cars per carload so that it doesn't
8 get impacted so much by the volume being down has
9 improved substantially, like 8 percent or so, just so
10 far in 2019. And that, with the customers owning --
11 70 percent of our customers own their equipment.
12 That's moving faster. So, it wasn't, you know, yes,
13 understand the investment but there is a better
14 service product, it felt like the service product
15 would be better.

16 We dealt with our customers with those
17 challenges, both from a service perspective in
18 startup, as well as those as an infrastructure. I
19 mean that's a case by case basis. The other thing I
20 think I do want to mention to you, and it's been part
21 of what I've -- it gets back a little bit more
22 broadly in that particular issue. You know, just

1 having spent the last two days here, you know, I was
2 struck by some of the commentary that I heard and
3 probably the thing that I thought about last night
4 when I went back to the hotel, was one of the
5 statements made by the gentleman from Olin.

6 And he said because I wrote it down, he
7 said I just want lower rates. And I understand that.
8 I get that, right? But when I think about, you know,
9 his example, him saying that and the other
10 commentary that he had. He was talking about moving
11 chlorine. And as I think about, as an operator, I
12 will put my operator hat back on. I'm a recovering
13 COO, so I can't help it. I'm going to have to put it
14 on every now and then.

15 Chlorine car comes into a hump yard and by
16 federal regulation on the safety side, when that car
17 is progressed in an entire train that has been
18 progressing to the hump for cars to be gravity fed
19 off at about one and a half to 2 miles in our case,
20 once that chlorine car goes over that hill,
21 everything stops.

22 Because that chlorine car must go all --

Page 286

1 navigate all the switches and find its way into its
2 target track and clear all the way before the next
3 car goes over. Normally, you would find you might
4 have three or four cars moving in that geography,
5 that component, that part of the hump yard because
6 you can continually slink -- put them in motion.

7 So, other customers' cars stop, right?
8 But let me just finish and I'm happy to answer
9 anything you want to ask me about. That car gets
10 then processed into a track. Then we build the
11 outbound train. We have to stagger those cars in the
12 train away from any working locomotive consist to
13 protect a crew that might get on that locomotive from
14 being in proximity to those cars, should something
15 bad happen. That's also federally regulated.

16 Now, we have a train. We're going to
17 operate over a geography. When we head into a high
18 threat urban area, that entire train is going to
19 reduce its speed, if it's going faster than 40 miles
20 an hour, to 40 miles an hour. Not to mention
21 wherever that car goes on our system, there is going
22 to be PTC invested in order to protect that movement

1 of that car and protect those around it.

2 None of these were in effect at the time
3 of the Staggers Act. All of these things we've
4 incurred and do so as part of our job. It's our job
5 to be -- to operate a safe environment. You asked,
6 also is the Board obsolete? And to me, I really -- I
7 think absolutely not, it's for all of these competing
8 challenges that we're talking about, right?

9 It's for the things that pop up managing
10 this chlorine car that are different than any other
11 car, but impact other customers as well. It's a
12 collective shared network. And I think that means
13 that, you know, as a Board, I truly appreciate that
14 your phone is ringing about rates. It's ringing
15 about bottles, I truly appreciate it.

16 But I mean, I just think we need to dig
17 deep and not be swayed by, you know, making
18 transportation policy decisions that feel good in the
19 short-term that may very likely have really negative
20 effects in the long-term.

21 North American railroads are the envy of
22 the world. Other countries wish they have what we

Page 288

1 have, and you know, I think Mike's commentary and I
2 would echo it, you know, we want to do what we can
3 do to make it fair and equitable to our customers,
4 all of them, not one indiscrete one, and then take
5 something away from others.

6 And I think that can be done by dialogue.
7 I know that's part of what this proceeding is all
8 about. I appreciate, genuinely, the opportunity to
9 talk about these types of things and your willingness
10 to listen. And for that, so let me answer whatever
11 it was that you were going to ask me.

12 CHAIRMAN BEGEMAN: Honestly, I was just
13 going to say there's a bit of irony in your comment
14 about Frank and Olin, and Jeff you may want to chime
15 in, but you know, what Frank really wanted, and again
16 this was -- he didn't to go to the Birmingham hump.
17 He actually wanted to cut a good portion of mileage
18 off of his route when he -- ideally, you know, he'd
19 like a different switch. It's just that the railroad
20 is forcing him to take that longer route. And so, it
21 just -- there's --

22 MS. SANBORN: There's the positive and

1 secure handoffs that we have to make with that type
2 of commodity. I mean there are interchanges that are
3 not manned 24/7 that that commodity simply cannot be
4 interchanged through.

5 CHAIRMAN BEGEMAN: Right, and at this
6 point, he -- the example I'm giving is not in any
7 reference to you, Miss Sanborn.

8 MS. SANBORN: I understand. There's
9 probably exceptions to every rule. I appreciate that
10 too. But I see -- I just I feel very strongly we're
11 in a position to, with enough frustration that we
12 hear, and you hear particularly, we just have to be
13 very thoughtful.

14 BOARD MEMBER OBERMAN: Cindy, I'm sorry.
15 I appreciate your thoughts and obviously you're a
16 very knowledgeable industry expert here. But it
17 doesn't kind of cap off these hearings to cite Frank
18 saying, I just want lower rates. I mean the
19 railroads per se, we just want higher rates. So, you
20 know, that's really ultimately what we're here about
21 and so, I don't know that that's a fair criticism.
22 Everybody is trying to optimize their business

Page 290

1 operations and you've got to live and work together
2 or neither of you would survive.

3 So, and that's what I think -- my answer
4 to the absolute question is really what you just
5 said. Somebody has got to balance it, or we could
6 all let you kill each other off.

7 MS. SANBORN: We're happy to have
8 referees. I don't think it's just about higher
9 rates. I think it's about fair rates and it's
10 allowing us to earn a return, so we can continue to
11 invest in our infrastructure.

12 BOARD MEMBER OBERMAN: Sure. But the
13 shippers would say there are fair rates as well.

14 MS. SANBORN: Well there's two sides to
15 every story.

16 BOARD MEMBER OBERMAN: Exactly.

17 MR. LOUCHHIEM: If I can speak to some of
18 those comments. And I'm sensitive to a lot of what
19 was just said. I mean, from, you know, there's a
20 chlorine site, and the TH and the toxic inhalation
21 chemical world, there is approximately 40 percent is
22 chlorine. That's not me. That's not me, that's my

1 counterparts in the shipping world.

2 But another 40 percent would be the
3 ammonia side and that is me in the fertilizer
4 industry. I mean, you know, we certainly
5 acknowledge some risk of moving TH materials, so and
6 we're pretty sensitive to that. We recognize that
7 part of that risk is going to include some additional
8 cost we would argue strongly that the cost paid and
9 borne by shippers who, by the way, own and maintain
10 all the tank cars that transport these materials,
11 none of which are owned or maintained by the rail
12 industry.

13 And in the TH world, you know, we just
14 moved, and we're moving into the interim car, to move
15 the materials. That is probably -- I would guess, I
16 don't want to swear my life to, that's probably the
17 safest rail car in the world. So, you know, we pay a
18 lot more to ship TH materials, so it's not like we're
19 definitely not trying to nickel and dime rail
20 carriers here at all.

21 I think you know, in general I think, for
22 these two days, we think there should be an

Page 292

1 assemblance of greater enhanced free-market
2 competitive access, but we're not trying to bankrupt
3 anyone or anything like that.

4 You know, our success is the railroads'
5 success as well, we don't want them going anywhere.
6 So, you know, I mean in 2014 for instance, for
7 shipments of ammonia, R/VC ratios greater than 180
8 percent, you know, we think that we paid a premium of
9 88 million dollars above non-TH chemical moves. So,
10 other non TH things, you know, we almost paid around
11 you know, close to 100 million dollars additional
12 just to move those materials and we pay more to route
13 them around high urban areas.

14 And I realize with chlorine going to water
15 utilities, often they might need to go into an urban
16 area because those water utilities receive that
17 product for water and I shouldn't be talking about
18 this, because that's not my industry.

19 But we certainly pay a great deal more to
20 move these materials. We recognize the risk. In our
21 experience, we've been getting priced out of rail
22 service, and to a large extent, that's of great

1 concern to us. Because, you know, if we could move
2 our product by pipeline, we do. Most ammonia moves
3 by pipeline. After that we'll move an awful lot by
4 water and to the waterways, which is you know, we're
5 fortunate in this country that are waterways feed
6 into the Corn Belt where most ammonia is used.

7 But after that, you know, our next choice
8 is by far, is rail, which is also not -- also would
9 be your next safest option for various reasons. And
10 so, unfortunately, we're being priced out of that by
11 a lot of pressure, and we certainly use motor
12 carriers, everyone does.

13 But, you know, we pay a lot to move our
14 materials by rail, so.

15 MR. BENEDICT: If I may, I just -- the
16 comment that, you know, we just want lower rates,
17 kind of bothers me. In the flammable liquids
18 industry and the fuels industry, we're in a similar
19 boat where we're operating entire fleets. We feel
20 like we made a significant investment to safety and I
21 think if we would leave with anything here, we just
22 want a fair system and a healthy system for all.

Page 294

1 I don't think we just necessarily want
2 lower rates. That's why, you'll see some of like,
3 TFI proposed we -- they have an idea for revenue
4 adequacy, but there's some flexibility there. So, I
5 think, you know, we're willing to work but we just
6 want an even playing field for all.

7 CHAIRMAN BEGEMAN: Thank you.

8 BOARD MEMBER OBERMAN: Thank you. I'm
9 going to excuse myself, thank you and I endorse
10 whatever Ann's about to say.

11 CHAIRMAN BEGEMAN: Hmm.

12 BOARD MEMBER OBERMAN: But Ellen will tell
13 me about that one.

14 CHAIRMAN BEGEMAN: So, again, I want to
15 thank all of the participants, of course the last
16 panel, but really everyone. This has been a very
17 informative last two days. I certainly want to
18 extend my appreciation, the Board's appreciation to
19 NASA for hosting us. Thank all of you for only
20 drinking water.

21 I certainly want to thank my colleagues.
22 Thank you, Marty. Thank you, Patrick. And there is

1 a long list of staff that I'm going to thank, and I
2 will give the list to Ted, so that you don't have to
3 worry about how to list some of these names, but if
4 you'll just indulge me.

5 Adil Gulamali, Allison Davis, Amy Ziehm,
6 Andy Read, Bill Brennan, Brian O'Boyle, Brian Reeder,
7 Chris Diamond, Coral Torres, Craig Keats, Don Sawyer,
8 Eden Besera, Elizabeth Webster, Emad Ahmed, Gabe
9 Meyer, Ian Anderson, Janie Sheng, Jon Smith, Jose
10 Rivera, Kim Hillenbrand, Lucy Marvin, Mike Boyles,
11 Mike Small, Mike Sullivan, Rachel Campbell, Raina
12 Contee, Regena Smith-Bernard, Rena Laws-Byrum,
13 Roberta Workman, Ted, who I won't do a hearing
14 without, thank you.

15 And our great staff who work behind us but
16 really, we would be nowhere without them: Lisa
17 Novins, Ellen Erichsen, Amanda Gorski, Val Quinn.
18 And just as a reminder, the record will be open until
19 February 13th. We look forward to your additional
20 submissions and really, thank all of you for your
21 time, it was greatly appreciated.

22 MR. MORENO: Madam Chairman, if I could

Page 296

1 just thank you all as well. I would have to say in
2 my career here as a result of this hearing, I have
3 not attended a hearing where the full complement of
4 Board members was as prepared and knowledgeable on
5 the subject matter and engaged as this one was. And
6 I think that's a huge tribute to your staff as well.

7 CHAIRMAN BEGEMAN: Thank you, Jeff.

8 Hearing adjourned.

9 (Whereupon, the hearing was adjourned at
10 3:37 p.m.)

11
12
13
14
15
16
17
18
19
20
21
22

A			
a.m 1:12 5:2	25:18 26:1,18 27:16,17	292:11 295:19	248:1,4,15 252:5
AAR 135:7 137:12	27:22 28:4,11,14,20,22	additionally 55:16	253:19 254:12,13 274:7
139:10 140:3 170:16	31:21 32:7,9,11 39:16	182:14	Adil 295:5
175:18 193:19 276:12	43:3 44:9 87:14,21	address 7:2,3 10:1,7	adjourned 296:8,9
AAR's 121:19 137:20	88:10 91:10 106:7	22:14 129:17,19 222:15	adjust 63:20 170:3
138:18 174:17 221:21	150:16	243:20 244:12,16	adjusted 54:18 63:7
ability 46:6 57:8 133:3,18	accumulated 30:19 31:16	addressed 214:13 224:21	105:21 169:22 180:2
141:17 148:1 151:20	31:19	addressing 209:15 244:7	adjustment 30:2 33:1
163:11 191:14	accuracy 120:10,13	adds 217:15	41:1,4 63:3 168:16
able 20:20 23:15 92:6,17	226:5 247:4	adequacy 1:3,5 7:4,6,8,9	169:18 170:2
95:9 112:21 113:1	accurate 7:21 11:18	7:12 8:17 9:12,18 16:8	adjustments 30:1 40:22
120:14 123:18 145:17	119:10 120:11 122:5	16:18 18:13 19:4,6,13	42:2 43:17 64:11 71:22
162:13 165:20,22	131:22 175:16 279:14	19:16,20 20:4,5,9 21:7	270:4,5
167:14 179:16,17	accurately 20:5 129:13	22:14,19 47:5,6,10	Administer 156:13
188:17 189:13 223:10	247:2	62:11 77:11 80:13,19	Administration 1:14
235:22 237:22 243:10	accuses 224:16	81:9 83:5 86:15 92:13	Administrative 156:14
260:5,6 263:22 264:17	achieve 133:11 221:6	92:22 93:11,18 102:22	158:15
267:12 271:5 272:20,22	277:15	103:7,21 111:2 126:22	admitted 79:3
273:2	achieved 133:9 138:3	129:18 130:17 131:21	adopt 184:5 199:11 231:2
abnormally 21:16	230:5 251:5	132:6,10,22 133:9	adopted 100:17 186:5,8
abolished 158:14	achievement 226:2 228:2	138:3,19 139:8 147:19	186:18 187:11 228:4
absence 77:2 231:14	250:15	154:10,20 155:21 157:3	229:16
absent 184:15	achieving 19:3 126:22	157:13,20 158:2 159:21	adopting 276:10
absolute 163:20 290:4	131:13	166:11 168:16 169:6,6	adoption 130:2 134:7
absolutely 193:1 254:12	acknowledge 291:5	169:16,17 177:19,20	ADR 202:10
277:8 280:18 287:7	acquisitions 28:18 142:17	178:7 184:8,16 185:11	advance 153:5 221:14
absorb 88:16	150:13 166:12	186:21 187:12 188:3	225:10
abstract 94:17 95:8	act 21:21 97:15 98:15	200:7 202:5 204:18	advanced 221:19
abstraction 11:22	133:8 139:6,7 227:14	213:14 214:1 218:6	advances 126:16
academic 138:1,2 266:16	256:5 287:3	226:2,3 228:2,10,20	advantage 257:6
ACC 216:13 277:10	acting 198:9 240:19	229:10,21 230:1,5,7	advantages 279:5
accelerated 32:14	action 283:17	231:15 232:2 246:15,20	advise 203:8 205:22
accept 142:15 200:12	actions 246:10	249:7 250:15 251:3,6	advocacy 255:8
accepted 28:16 32:9	active 162:16	251:16 253:18 255:7	advocate 221:8
181:5	actively 92:20	259:15,19 260:1 265:6	advocating 201:9,10
access 134:21 135:14	activist 164:6	265:10,19 266:2 273:9	Aeronautics 1:14
147:14 216:3 220:13	activity 202:14 256:13	274:2 276:11 277:16	Affairs 3:6 4:4 128:5
229:8,16 244:17 256:2	acts 232:10	294:4	141:1 217:10
256:6,9 259:11 292:2	actual 24:14 25:3 39:3	adequate 8:22 9:6,16,22	affect 41:15 120:10,13
accessibility 175:2	63:17 122:5 125:2	13:17,22 16:9,11 18:2	278:14
accessible 216:9	156:18 159:14 187:7	18:20 19:18,19 20:2,7	affiliate 31:1,1
accessorial 130:7	200:19	20:10,17,22 22:1 55:4	affiliates 2:7 31:2
accidents 154:3	adapting 241:3	78:4,9,17 80:20 83:10	affirm 228:15
accommodate 237:7	add 8:4 99:9 135:17	84:6,7,16 101:6,14	affirmance 251:14
accommodating 209:4	136:1 157:9 163:14	103:11,12,16 105:18	affirmative 232:14 264:6
accompanied 128:13	189:12 206:14 264:12	131:13,16 132:16 133:3	269:5
accompanying 221:11	adding 73:4 256:19,21	133:11,19 134:15	affirmed 225:22
accomplish 251:20	257:13 259:4 261:16	135:15 136:3 146:17,22	affirming 228:12 255:1
accomplished 83:9 132:4	267:6 270:15	152:4 184:11,21 185:12	277:11
account 48:12 63:14 79:8	addition 146:1 172:7	185:17,19 186:7 190:6	afford 134:8 223:6
229:14	200:22 201:19 212:14	190:7,16 191:2 192:14	AFPM 209:21 211:4,16
accountant 44:18	213:3 219:9 231:18	192:17 194:10 195:22	213:16 214:12 215:8,12
accountants 31:21 44:19	271:19	198:21 200:4 201:1	215:12 216:1
accounting 16:13 18:1,4	additional 135:17,19	214:10,22 215:17,20	AFPM's 213:6
19:4 20:13 21:3,4,18	190:8,17 191:20 198:7	225:19 226:12 229:4	afternoon 137:7 140:20
	264:5,8,12 266:3 291:7	230:18 231:1,11 247:7	155:16 209:12 217:7

<p>243:17 ag 171:20 172:3,14,15 agencies 125:1 126:4 158:18 214:17 agency 22:3,6 65:22 125:7,12 126:1 158:17 206:3 260:4 agency's 255:8 aggregate 58:9 aggressively 224:11 aggrieved 187:2 agility 243:10 ago 6:16 8:7 51:8,12 76:17 110:5,11 127:3 162:13 220:9 223:17 229:16 agree 6:20 79:4 83:19 93:15 117:6 118:22 154:17 192:9 193:14 214:1 261:22 agreed 170:9 252:20 253:8 agreement 226:8 agrees 135:12 agribusiness 128:5,20 agricultural 135:3,22 agriculture 137:5 ahead 49:21 81:12 85:2 211:1 Ahmed 295:8 AID 112:3 aided 215:3 aimed 147:22 155:10 aiming 115:2 airline 263:14 264:1 airlines 112:13 Alabama 268:15,17,18 ALJ's 158:6 all-encompassing 128:20 allegations 78:14 allege 134:10 alleged 159:7 227:16 alleviate 56:20 Allison 295:5 allocate 148:3 196:3 allocating 196:2 allocation 73:8,18 141:12 150:1,6 196:12 allow 24:22 152:17 238:9 257:7 allowed 98:3 110:16 220:7 227:20 allowing 22:10 78:9 151:9 232:1 290:10 allows 232:15 243:5 275:14</p>	<p>Alphabet 17:14 Alright 70:22 126:5 188:19 277:4 alter 88:20 177:21 altering 130:19 alternate 136:6 alternative 14:13,14 24:7 26:9 27:4 43:21 44:7,9 91:11 94:17 111:4,5,10 111:17 134:18 136:11 151:12 152:20 176:17 208:2 219:16 220:13 257:3,7 alternatives 15:10 94:20 95:2,22 245:2 Amanda 295:17 Amazon 109:15 America 243:12,13 American 3:18 56:17 129:22 132:14 133:22 137:5 209:9,20 287:21 Amex 125:19 ammonia 218:11,12,15 218:22 291:3 292:7 293:2,6 amortization 30:19 amount 35:5 64:20 77:4 139:14 152:1,22 161:20 162:12 164:1 175:13 219:7 235:20 241:22 amounts 20:21 ample 131:6 270:7 amplify 130:10 Amy 295:5 analogy 9:19 78:21 analysis 25:17 26:9,10,14 26:22 27:2,6 28:14 29:5 29:8 33:4 34:12 36:22 46:22 54:9,11,20 58:18 59:12 91:11 140:7 143:20 169:8 174:3,7 analyst 2:20 25:15 26:11 48:6 183:4 analysts 48:9 116:5 analytical 114:7 analyze 185:14 and/or 86:3 239:20 267:3 267:4,14 Anderson 295:9 Andy 295:6 anecdotally 60:19 anhydrous 218:11,12,22 animal 235:19 Ann 93:4 Ann's 294:10 announced 173:13</p>	<p>announcement 7:1 annual 7:14 8:3,16 16:7 16:10 17:2 18:22 19:21 50:10,19 102:22 103:18 144:20 145:21 196:1 annualized 48:20 annually 9:12 20:1 48:17 48:19 58:13 60:2,5 129:1 142:3 150:4 ANS 268:5 answer 16:15 39:14 66:6 90:17 100:1 106:9 110:15 140:18 159:22 171:4 189:11,15 192:5 217:4 275:1 279:20,21 280:15 286:8 288:10 290:3 answering 245:6 answers 180:12 anti-competitive 174:3 193:6 229:7 anti-trust 25:14 27:20,22 28:8,18,19 29:2 125:1,9 antiquated 120:16 anybody 28:22 81:17 98:20 125:14 158:16 191:19 195:12 278:3 anybody's 171:2 anymore 263:20 apologize 5:13,21 84:21 107:2 apparent 233:3 apparently 120:9 158:11 223:15 276:8 appeal 173:14 255:9 appear 31:3 245:4 appearing 155:17 appears 13:20 55:2 187:16 appellate 228:14 applaud 214:2 applauds 215:8 apples 54:5,6 63:10,10 applicability 67:1 266:9 applicable 134:22 135:18 application 156:11 229:7 266:19 applied 17:3 101:20 186:18 242:21 248:3 255:11 applies 229:20 apply 23:20 77:19 132:15 134:3 252:2 applying 228:6 246:16 appreciate 68:21 93:19 127:17 137:17 188:22</p>	<p>203:19 207:8 211:2 244:11 245:18 246:3 252:10 287:13,15 288:8 289:9,15 appreciated 23:3 209:9 295:21 appreciates 219:4 appreciation 63:13 136:15 294:18,18 appreciative 205:12 approach 92:9 94:11 131:22 136:13 173:11 173:16,19 174:5 208:12 214:6 223:22 249:2 282:11 approachable 175:15 approached 16:21 approaches 244:16 appropriate 54:3 61:19 69:8,10,14 71:5,7,10 80:16 124:14 135:20 168:5 202:7,8 222:19 222:20 277:14 appropriately 80:20 87:16 92:12 approve 93:10 approximately 129:2 145:18 148:11 290:21 arbitrate 208:6,8 arbitration 15:4 169:3 208:5,12,12 area 84:21 85:2 87:11 215:6 274:18 286:18 292:16 areas 60:10 115:19 163:20 292:13 arguably 55:5 103:19 argue 86:11 110:7,12 127:6 163:9 192:16 276:9 291:8 argued 233:8 277:9 argues 226:13 arguing 276:12 argument 90:2 91:19,20 91:22 92:1,2 138:18 271:12 276:16 277:19 279:11 arguments 93:2 179:1 224:21 225:6 269:7 array 173:20 arrays 173:20 arrive 275:17 arrived 81:14 82:3,17 83:13 art 206:22 articulated 206:14</p>
---	--	--	---

<p>aside 73:15 98:10 255:20 265:2 281:20 asked 7:2 35:2 73:21 76:12 90:22 100:13 101:2 113:6 124:7 125:6 250:5 252:10 272:3 287:5 asking 93:10 112:7 124:5 124:17 201:12 265:16 276:19 aspect 114:6 121:16 170:13 178:3 255:16 aspects 112:18 217:12 254:21 259:7 assemblance 292:1 assertion 228:15 assertions 229:9 assess 54:3 89:20 226:5 251:9 assessed 227:9 assessing 59:11 94:9 assessment 21:6 59:11 60:16 62:10 asset 30:17 41:16 63:15 64:6,17 146:3 148:7,14 assets 30:15 31:1,1,2,3,4 31:16,17,18,20,21 41:5 41:6,9,11,14 53:8 62:3 63:13 64:21 65:5 66:19 67:9 106:1 143:19 148:15,17,19,21 149:7 149:11 153:18 163:13 213:5 assist 19:17,19 20:6 21:10 78:16 84:5 228:9 assisting 245:20 246:14 associate 3:6 276:2 associated 196:17 235:10 association 3:10 128:8,20 133:22 209:22 224:8 assume 60:8 190:19 200:1,2 206:15 262:14 279:13 assumed 169:5 assuming 262:4 279:17 assurance 131:14 assure 199:14 astounding 149:11 asymmetric 275:8 ATC 73:18 Atkins 3:8 141:2 201:6 203:7 205:10,19 207:3 attach 38:8 attacking 225:15 attain 228:9 246:14 attaining 19:20</p>	<p>attempt 129:17 attempts 142:8 attended 296:3 attention 5:8 77:16 102:21 105:9 136:17 230:16 259:14 Attorney 3:15 attract 20:21 22:16 92:6 attractive 151:4 186:20 attributed 196:18 197:14 Auditorium 1:13 August 238:20 239:5 Austin 2:17 3:9 141:3 authored 119:7 authority 90:19 98:17 130:13 135:8 249:18 276:15 277:6,9 automated 170:19 242:19 243:7 automatic 194:12,15 automatically 225:18 251:6 automation 148:4 autonomous 126:16 127:10 availability 122:6 available 17:17 112:2 152:2 215:16 225:18 247:9 266:13 avalanche 134:9 avenue 171:16,18,20 188:8 average 11:1 16:17 18:9 30:8 35:19 36:1 38:21 39:8 48:16 49:7 50:9 52:5,9,18,21 53:2 55:6 69:2 148:16 149:19 218:17 averaged 50:19 averages 30:7 avoid 203:20 236:21 240:13 258:12 271:8 272:8,10 273:10 avoiding 151:16 aware 57:3 97:12 182:17 185:15 awful 293:3</p> <hr/> <p style="text-align: center;">B</p> <hr/> <p>back 5:18 10:20 22:13 25:10 29:6 32:16 37:11 39:6 45:1,17,18 49:22 55:17 66:11 67:4 83:12 95:6 96:10 97:8 98:5 111:19 112:22 114:12 115:22 145:2 151:8,10</p>	<p>151:22 157:8 158:21 159:3,13 161:7 167:20 168:22 170:9 175:21 178:1 182:16 191:16 193:7 195:9,15 197:22 198:14,18 205:21 218:11 221:20 224:11 234:10 235:15 260:2 267:3 268:1 276:7 284:21 285:4,12 backdrop 100:7 103:14 127:13 backed 267:15 background 22:7 backward 23:4 62:7 143:17 backwards 70:1 bad 44:19 65:16 89:17 113:14 201:13,13,14,16 202:2,3 205:7 223:19 256:1,1 286:15 bad-mouth 220:11 bait 252:10 balance 30:12,16 32:2 53:10 54:12 95:11 142:9 150:7 152:22 153:13 225:22 256:7 290:5 balanced 137:1 151:3 253:9 balancing 229:12 250:14 255:3 ballast 161:12 ballpark 34:22 Baltimore 153:7 bank 180:8,11 182:9 bankrupt 292:2 banks 180:9 181:2,4,10 181:16 bar 169:3 barely 200:14 bargain 227:16,19 barge 122:11 167:8 barrier 135:13 136:11 base 32:8 148:7 153:2 169:3 190:14 based 7:5,7 10:21 11:6 23:2 26:18 32:7,9,10,11 32:13 37:4,7 39:15 41:16 42:18 46:1,7,14 49:9 53:6 54:4 55:8 61:21 69:6 75:7 82:10 82:14 91:19 93:9,14 95:13 100:21 103:15 107:17 118:5 121:3,12 121:13,21 122:19 141:6</p>	<p>141:16 149:7 160:13 203:14 207:20 212:21 213:7 227:9 228:22 239:11,12 240:2 246:10 247:6 248:14 265:19 270:11 283:12 basic 16:5 29:5 basically 14:2 172:10 195:19 Basin 237:19 basis 16:10 30:8 31:18,20 31:20 41:21 49:15 50:11 54:11,19,20,22 55:5 56:8 57:5 62:12 81:19 106:7 134:4 143:19 168:5 180:8 193:11 195:5 227:9 235:1 264:8,22 269:10 284:19 basket 59:1 bat 267:3 Baumol 74:5 Baumol's 75:22 bear 5:9 232:18 bears 111:2 217:13 becoming 19:17 20:7 78:17 84:6 136:10 bedrock 126:12 began 50:6 162:10 Begeman 5:3 15:14 46:17 47:17,22 93:20 99:8 100:3 101:21 102:5,12 102:17 103:2,10,22 104:4 106:10,17 108:12 109:21 110:1,14,17 127:16,22 129:5 137:8 140:21 155:15 160:1,10 163:4 164:22 166:7 167:22 175:5,22 176:15 204:1 205:10,17 206:6 207:14 208:21 209:12 217:5,8 233:15,16 243:18 245:7 247:13 248:16 249:13 255:17 280:22 288:12 289:5 294:7,11,14 296:7 beginning 22:12 66:15 104:18 115:21 166:8 270:14 behalf 128:7 155:17 205:11 behaved 260:11 behavior 174:3 belief 139:11 believe 171:2 believe 13:5 28:13 48:22</p>
---	---	--	---

49:10,21 53:7 54:2,5 56:1,14,18 57:5,19 61:11 73:6 83:6 92:12 93:20 99:16 101:20 110:9 127:12 135:20 138:22 139:17 140:2 152:16 159:20 166:10 174:20 181:17,22 185:15 204:11,16 214:3 215:15,20 216:20 226:4 240:2 246:1 249:16 251:16 252:19 believed 92:16 believes 129:12,19 132:9 132:18 133:7 176:20 214:12 bellied 138:9 belt 92:9 268:1 293:6 benchmark 132:13 168:17 169:21 170:3 176:20 177:16 benchmarking 122:13,22 216:14 Benedict 3:19 209:11,18 293:15 benefit 5:9 55:12 70:2 114:18 115:1 146:10 149:18 152:14 154:4,13 189:8 192:1,6 219:20 227:16,19 benefits 115:15 144:4 174:22 192:3 254:3 benefitting 211:16 benign 104:7 Besera 295:8 best 23:18 25:2 62:10,14 65:21 67:7 70:19 90:10 111:5 154:4 157:12 205:19 231:13 236:12 236:15,16 247:5,9 248:13,22 250:4 beta 68:11 better 8:14 15:10 36:9,12 45:4,4 62:14 63:18 64:14 70:11,13,18,19 110:4,6,10 122:18 127:3 162:10 176:11 179:15 180:20 198:4 200:5 201:5,13 258:21 263:21 264:19,20 265:4 284:13,15 Beyer 150:8 beyond 123:15 133:16 150:5 219:8 227:13 261:21 biased 42:21	big 34:14 38:10 60:9 89:12,21 114:13,13 202:2 223:16 274:15 biggest 103:8,17 104:1 127:9 215:6 Bill 295:6 billion 119:3 120:1 148:12,20 149:11 150:4 163:1 165:14 178:16 217:18 billions 120:3,3 238:6 bind 13:8 biomedical 167:9 Birmingham 288:16 bit 12:21 36:12 58:16 61:14 100:11 108:19 112:5 114:1 118:2 138:21 163:8 177:13 189:16 210:19 213:2,12 260:13 284:21 288:13 black 42:8,12 blame 6:18 blindly 223:18 block 218:12 blocks 210:3 Bloomberg 181:11 182:16,17 blue 42:10,11 BN 247:21 BNSF 140:8,15 223:17 262:11 269:22 BNSF's 140:11 board 1:1 3:14 6:15 7:2 7:11 8:6,21 13:6 14:16 16:6,12,15,16,18 17:2 18:12,21 19:1,7,15,18 20:6,8 21:10,20,22 22:10 46:20 47:3,5,15 48:1 52:17 57:6,21 62:21 63:1,4,5 67:1 69:1,11,12 73:3 76:7 77:1,10,14 78:7,7,12,18 80:17,22 81:12 82:9,12 83:3,5 84:5,14,18 85:1 85:5,15 87:10,20 88:1 90:1 91:9,12,13 92:21 93:3,8 94:4 95:3 96:8 96:19 98:8 100:8 101:11 103:20 105:6,17 106:5 111:22 113:17 115:18 117:5,10,22 119:18 120:22 121:7,17 122:15 123:6,14,22 124:4,16 125:5,21 126:5 128:10,11 129:4 130:13,16 131:14,20	132:17,20 135:7 136:7 136:16,20,22 137:10 140:4,8,11 141:9 142:4 150:6 154:19 163:17,22 166:10,15 168:10 175:12 176:2 177:2,13 182:11 184:3 185:5 186:4,12,15 187:6,22 188:7,11,19 189:2,7,10 189:19 191:4,9 193:5 193:14,17,21 195:4,11 195:14 197:2 199:20 200:7 203:2 204:7 205:14 206:11 207:5,12 207:18 208:4,4 209:13 214:8 215:9 216:10 217:22 219:17 221:14 223:22 224:1,4 225:8 226:6,9 227:6,14 229:3 229:11 230:5,9,16,17 231:1,4 232:6 233:2,10 233:17,17 238:5 240:16 240:19,20 241:11 243:19 244:16,20 245:20 246:10,12,13 247:14,17 249:17 251:9 251:18 253:7 254:2 275:18 276:3,10,15 277:1,4,17 279:10 280:20 281:16 287:6,13 289:14 290:12,16 294:8 294:12 296:4 Board's 17:18 18:2 102:21 129:7,14 134:21 180:15 183:20 185:17 191:1 214:6 215:8,17 216:1,15 219:1,4 230:2 230:12 244:20 251:13 253:19 255:3 294:18 Boards 13:8 boat 293:19 body 12:12,14,20 185:10 boiling 118:7 bolt-on 150:12 bond 142:6 bones 186:1 bonus 224:7 book 26:12,13 33:15 53:6 53:20,21 54:7,20 148:10,13,17 156:9 books 31:5 41:14 149:9 boost 217:14 Booth 2:12,15 15:17,21 borne 241:7 291:9 borrowing 95:16 bothers 293:17	bottleneck 7:7 13:12,13 13:21 14:1,20 134:13 134:17,20 135:11,21 136:4,9 139:16,17 213:14 215:7,21 218:5 218:7,8 219:8 220:14 221:4,18 222:13,17 223:3,22 224:12 225:15 225:18,21 226:7,16 227:3 228:3,4,7,13,16 230:10 232:4 233:3,6 234:14 240:18 241:10 244:1,4 249:14 251:13 251:15 252:13 253:13 254:22 255:1,9 256:14 256:16 257:5,12 260:6 260:20 261:10,16 265:22 267:7 274:4,5,8 275:2 278:12 280:17 bottlenecks 229:4 232:22 233:1,10 256:9 265:3 bottles 287:15 bottom 37:8 39:8 54:17 107:17 bought 162:4 boutique 48:7 bow 271:2 box 39:7,8 Boyles 295:10 brand 41:7 225:9 Brandeis 157:6 breadth 90:5 break 14:2 208:15,20 266:15 breakdown 99:14 Brennan 295:6 Brian 295:6,6 Bride 12:3 bridge 268:1 bridges 53:8 119:8 148:22 briefed 225:7 252:3 briefly 19:11 29:20 bright 39:2 46:11 bring 25:22 64:4 73:6 78:14 96:1,17 186:20 188:2,17 bringing 184:13 260:16 brings 62:18 199:18 200:9 broad 24:4 101:15 102:15 140:5 212:18 225:14 broadband 114:11,15 broadening 214:5 broader 10:6 12:9 38:12
--	---	--	--

86:3 120:5 220:12 227:7 broadly 98:6 101:20 284:22 Brookings 112:22 Brothers 276:16 brought 28:20 104:6 162:2 171:7,10 193:19 201:11 215:14 BSNF 262:13 bucket 196:14,18,19 197:5 budget 141:12 budgeting 148:2 Buffet 223:16 build 286:10 building 210:3 218:12 243:12,13 built 119:16,18 bunch 75:21 burden 232:15 Burling 4:11 business 2:12,15 7:16,18 7:19 15:18,21 20:12 27:10,13,13 60:10,20 91:8 97:7,10 98:2,2 108:16 110:10 141:12 142:18 143:16 145:7 150:11,13 155:11 172:9 181:7 183:6 233:21 235:2,15 263:18 274:21 289:22 businesses 92:18 110:4,6 110:7,13 button 172:7 buy 95:6 96:9 151:10,22 165:22 buybacks 95:17 147:15 151:15,19 242:1 buying 151:3	68:11,13 70:9 107:18 116:14 121:4 125:9,16 125:17,19 132:8 183:21 calculations 10:9 25:5 40:16 46:7 53:6 65:15 65:15 67:22 90:8 107:13 120:9 122:19 142:2 calendar 238:19 calibrate 23:10 California 235:13 call 23:21 35:8,22 42:15 104:19 143:22 146:16 156:13 162:15 220:22 249:15 282:9 called 156:14 calling 261:5 calls 116:4 118:6 Campbell 295:11 Canada 220:19 278:18 278:19 279:12 Canadian 2:8 candid 194:20 cap 12:9 49:13 99:21 101:13 139:11,15 193:20 194:15 198:10 201:15 289:17 capability 260:7 capable 232:7 capacity 128:9 153:6 166:2 179:14 236:10 237:17 238:6,12 239:14 239:16 240:1 243:3 CAPEX 99:4 111:20 113:7,11,12,20,20 116:9,13,18 117:8,15 118:2,5,12 160:12 CAPEX-to-depreciation 54:13 capital 16:14 17:7,19 18:5,8,15,20 20:12,14 20:18,20,21 21:5,11,19 22:2,16 24:3,17 27:2,5 29:10,11,19 30:11,21 33:12,14,18,18,19 35:9 35:20 36:3,5,16 39:9,13 39:17,20 40:5,11,13 42:9,9,18 43:2,8,8 47:7 47:9,12 51:17,21 52:16 52:17,22 53:1,3,13 54:1 54:7,10,16,18 55:1 56:16 57:2,11 63:4,6,19 67:22 69:12 70:16 77:5 81:16,20,22 91:8 92:3,6 92:8 94:12 95:7,9,11,13 95:19 96:16,17,21 97:4	97:20 106:7 107:6 109:12 115:21 116:3,6 117:4,13 132:8 141:11 141:12,17,20,20 142:2 142:11,12,21 143:2,10 143:12,14,15,17 144:2 145:11 146:8,17,20 148:2,8 149:6 150:1,6 150:16,22 151:3,21 152:8,16 153:3,10,15 161:19 163:9 164:8 166:18,21 180:2,10,15 180:15 181:2,12 182:8 183:8,14,17,20 184:1 189:20 190:13,15,16 191:1 192:21 195:21 198:16 201:16 214:15 238:18 241:22 248:9 CAPM 68:1,22 69:10 70:6 180:21 181:5,8,10 capped 166:17 167:17 caps 10:8 11:5,5 13:15,16 14:7 101:5 102:15 142:13 152:14 captive 14:18 51:15 59:14,20 60:20 61:12 81:18 123:10 131:16 133:10 134:8 189:14 191:19 193:12 194:9 212:11,13 215:1 258:6 263:2 capture 60:15 CapX 52:1,5 53:15,17,19 car 144:12,18,20 145:16 145:22 146:7 162:18 189:5 190:11 192:17 196:8 218:17 236:19 284:6 285:15,16,20,22 286:3,9,21 287:1,10,11 291:14,17 care 114:16 115:14 career 210:19 296:2 careful 7:20 12:18 114:22 165:9 203:17 carefully 194:18 199:12 carload 59:5 284:7 carloads 171:9 210:13 carrier 80:19 136:11 140:1 198:21 214:22 215:16 220:16 222:16 223:4 226:12 228:7 229:5,18 230:13,22 231:20 257:5,9 258:7 258:14 259:9,10 265:10 275:5,12 carrier's 133:9	carriers 19:19 20:1 50:18 52:3 78:9 104:9 126:21 131:4,12 133:15,19 139:18 208:2 215:19 218:22 231:5 259:20 291:20 293:12 carries 153:7 carry 20:6 cars 145:18 148:14 162:3 164:3 165:16,22 213:7 237:2,2 283:10,11,15 283:21 284:1,2,7 285:18 286:4,7,11,14 291:10 casa 14:14,14 case 52:14 61:6,8 66:1 73:7 88:10 123:18 124:10 125:9,13 134:21 139:7 140:2,3,8,14 157:7,10 159:5 172:16 184:13,20,22 185:4,4 185:21 186:10,11,13,21 188:2,17 198:20 199:10 199:14,17,19 200:7,9 201:1,9 227:12,15 251:7,9,9 252:11,12,14 252:14,16,17,17 253:8 253:14 254:3,3,6,9,17 254:18,19,22 255:10,15 258:14 266:12 267:2 275:22 276:8,14 277:1 284:19,19 285:19 case-by-case 254:8,10 cases 28:17 125:16 134:9 157:4 158:6 159:5 171:10 174:18 185:10 185:13 214:9 243:2 254:16 257:4 cash 30:1 41:17,19 49:2 49:18 66:16 68:4 69:1,3 69:6,11,14 143:10,22 145:2 147:11,14 149:12 150:19 151:1,7,8,12 163:11 167:11,19 181:19 182:1,3 183:7 183:19 catastrophic 202:5 203:4 catch 118:15 categories 120:15 196:4,5 categorize 196:6 category 149:3 196:9 caught 162:6 cause 216:18 cautious 203:17 Caves 121:8,18 ceiling 14:21 75:6 139:8
---	---	--	--

ceilings 154:15
Center 2:5 6:11
centered 46:13
certain 76:2 123:7 156:21
165:13 175:13 179:14
201:18 202:17 243:22
246:10 253:16
certainly 59:21 60:21
79:17 112:9,14 122:3
162:4 177:11 182:13
188:14 204:21 205:8
207:5 241:9 245:18
247:15 266:17,18 291:4
292:19 293:11 294:17
294:21
cetera 160:13 161:2
245:17 269:18
CF 184:13 186:9 275:22
chain 217:13
chair 9:1 15:14 209:12
Chairman 5:3 15:13
44:15 46:17 47:17,22
48:1 58:1,14,22 59:9
60:6 61:4,7 62:9,22
63:21 64:2,22 65:6,11
65:20 66:22 67:6,15,21
68:3,15,21 69:17,20
70:5,14,20 71:12 72:7
72:18,21 73:12 75:2,15
76:5 81:6,13 82:11,16
83:11,17,21 84:8,13
93:20 99:8 100:3
101:21 102:5,12,17
103:2,10,22 104:4
106:10,17 108:12
109:21 110:1,14,17
111:18 113:5 115:11
126:8 127:16,22 128:1
129:5 137:7,8 140:20
140:21 155:15 160:1,10
163:4 164:22 166:7
167:22 168:1 169:14
170:12 171:6 173:6
174:17 175:5,22 176:15
177:18 178:22 179:21
181:1,15,21 204:1
205:10,17 206:5,12
207:14 208:21 209:12
217:5,8,8 233:15,16,17
243:17,18 245:7 247:13
248:16 249:13 255:17
255:19 259:3,17 260:8
260:18,22 261:8,15,20
262:2,18,20 263:5,8
264:2,18 265:11,15
266:5,14 271:7,15

272:7 273:7 274:14,22
280:22 288:12 289:5
294:7,11,14 295:22
296:7
challenge 129:14 177:3
255:2
challenged 136:14 227:2
253:3
challenges 226:21 235:10
242:13,20 243:14,15
245:22 284:17 287:8
challenging 61:2 154:16
178:18 182:15 215:3
267:13
chance 76:18 177:22
207:9
change 38:11 63:15 89:13
96:18 100:7 103:14
140:7 165:3 184:2
237:6,19 250:15 271:3
280:7 282:19,20
changed 15:5 45:21
58:16 74:22 145:13
162:9 172:18,18 189:5
229:14
changes 23:16 32:19
57:22 148:2 160:21,22
183:21 213:8,14 215:8
216:6 218:5 234:14
240:18 241:2 249:18
270:10,12,13 281:19,22
282:7 284:4
changing 43:15 161:1
212:8 242:19 257:14
269:9,9
chaos 282:7
chapter 26:13 112:7
characteristics 69:7 89:9
characterize 225:14,17
characterizes 139:10
charge 129:10 131:16
133:10 136:5,14 189:13
191:12,16,17 211:9
226:22 227:11
charged 147:1
charges 130:8 136:10
232:11
charging 191:18 192:22
Charles 258:5
chart 38:5 43:11 44:1
45:19 60:15 99:10
109:16 116:8 179:22
charts 38:6 43:5 45:3,3
45:18 108:21 109:2,4
chase 261:3
cheaper 56:7

check 122:19 232:10
266:3
checks 224:8
chemical 171:7,20,21
210:3 257:20 258:4
290:21 292:9
Chemistry 132:14
Chicago 2:12,14 15:19,21
25:16 85:18 119:4
120:2 157:21 235:16,16
236:2 258:10
Chicken 224:20
Chief 114:9 234:2
chilled 11:22
chime 99:8 100:9 249:22
288:14
chlorine 140:10,15
285:11,15,20,22 287:10
290:20,22 292:14
choice 151:11 192:4
293:7
choices 270:21
choose 34:5 109:10 135:6
150:18 268:8 277:2
choosing 253:10 268:19
chose 24:3 102:11
Chris 295:7
Cindy 4:8 269:6 281:2,21
282:3 289:14
Circuit 139:7 225:22
227:2 228:14
Circuit's 139:4 228:12
251:14 255:1
circularity 67:16
circumstances 72:13 74:9
82:14 229:1 250:18
258:15
citations 157:11
cite 79:15 228:14 289:17
cited 131:10 136:2
254:19
cites 85:8
City 140:11,16
claims 175:14
clarify 47:17 99:22
Clark 3:11 127:21,22
128:3 168:8 171:21
188:13
class 44:18 48:14 64:1
94:15 129:21 131:4
132:1 137:12 154:2
222:2 228:3
classes 148:14
classic 72:14 172:4
classification 114:15
Claus 224:7

clear 8:17 20:8,16 22:13
37:19 57:15 77:17 90:7
101:19 105:20 106:20
114:17 117:2 133:7
136:9 143:4 151:21
175:5 188:21 216:14
235:15 236:1 267:16
286:2
clearer 187:1
clearly 5:7 118:5 119:16
120:16 127:2,4 134:2
149:5 163:10 165:8
178:7 180:7 214:1
215:19 230:1 252:4
253:16 277:10
clients 48:8 57:13
cliff 179:7
clock 233:11
close 46:17 55:5 92:19
153:20 198:16 209:7
292:11
closer 50:16 52:7 53:20
65:3 88:22 89:2 115:15
174:7,10
closes 43:14
closest 51:2
closing 44:6
CN 46:21 208:7
coal 51:11,15 60:19,21
61:3,9,10 126:11 127:6
139:3 184:9,22 196:8
196:14,17,19 199:4,22
237:20 276:11
coalition 225:1,3 269:20
coast 234:8,8
code 68:12,14 139:2
coffee 5:6
coin 70:18
coincidence 232:20
colleague 141:3
colleagues 6:19 141:2
160:20 208:17 294:21
collecting 112:1
collective 235:1 287:12
college 9:21
color 42:16
combination 49:11 55:13
152:21 241:13 265:8
combine 37:1
combined 35:3
come 5:22 6:2 14:16
25:10,19 29:6 45:8
65:15 78:14 81:18 97:4
116:18 121:9 149:5
155:6 194:6 195:9,17
197:22 198:14 199:2

205:2,20 223:14 231:17 235:10 239:18 256:10 270:6 272:9 comes 46:19 163:15,19 172:11 173:17 214:17 214:22 251:12 257:12 257:18 260:1 262:11 264:3,4 275:2 280:8 281:13,16 285:15 comfortable 16:1 coming 118:10 193:7,18 198:7 205:17 261:21 271:1 commend 282:11 commends 129:4 233:2 comment 47:18 58:8 94:2 110:20 176:10 204:13 281:1 283:3 288:13 293:16 commentary 76:20 104:6 285:2,10 288:1 commenting 94:5 comments 6:13 8:19 15:2 25:11 48:11 99:9 138:8 170:9 184:18 186:3 211:3,14 212:1,12 214:16 216:13 221:10 225:1 234:12 290:18 commercial 217:14,18 238:21 commercially 130:7 187:19 Commission 158:16 Commissioner 128:1 140:21 193:3 Commissioners 13:3 commit 12:12,20 commitment 12:11 13:4,7 13:10 153:6 commitments 151:16 committed 149:20 committee 3:11 6:15 8:21 9:3 111:21 128:9 commodities 58:7 123:3 157:10 commodity 51:7 58:15,17 59:6 98:21 101:13 173:20 196:6 199:6 212:21 289:2,3 common 30:13 70:1,15 112:9 222:3 245:16 257:11 279:21 280:5 commonly 181:5 communicate 282:12 communication 280:5 283:2	Communications 158:16 community 199:13,13 compact 172:21 companies 17:4,6,19 21:4 22:4 26:17 27:15 33:5 34:10,20,21,22 35:16 35:17,17,21 36:7 37:2 38:2,7,15,17 39:9,12 40:3,4,12 41:15 48:11 52:9 53:19 54:6 97:3 99:3 119:17,20 128:21 130:22 142:12 143:2 151:15 171:7 182:2 217:11 248:8 282:7 company 2:6,8 4:7 18:7,9 18:9 26:14,16 37:4,5,6 38:4 41:20 42:17 47:8 71:1 97:5,9 106:8 141:22 142:8 145:10 147:11 151:20 152:6,7 154:3,4 155:8 167:7 181:12 183:7,13 198:16 236:9 257:20 282:10 company's 31:3 comparable 37:5 45:6 56:8 66:2 156:21 177:6 comparative 47:4 107:5 184:7 249:2 compare 21:4 23:18 24:1 29:14 51:17 123:1,4 125:4 176:7 compared 45:11 51:7,18 94:16,19 95:2 99:2 101:16 119:12 123:10 154:12 187:14,15 229:15 265:1 compares 48:19 51:6 174:18 comparing 94:9 111:8 comparison 33:17 45:7 54:6 94:20 111:4,4 168:2,5,6,13,14 169:2 173:11,12,16,18 174:5 174:21 177:3 212:15 248:8 comparisons 156:5,16,16 159:1 compelled 233:12 compelling 214:7 compensation 219:16 compete 20:18 21:5,11 24:3,8,10 92:17 95:9 127:14 148:1 155:9 243:5,10 248:8 competing 17:7 18:20 47:12 60:1 95:11,18,19	95:22 96:16,17 226:1 229:13 234:21 257:9 287:7 competition 14:4 61:12 77:2,20 78:1 97:18 98:3 98:7 112:15 121:14 122:10,11,12 126:15,17 132:3 135:11 138:11 218:10 219:6,7,20 220:16 221:6 222:12,14 222:21 225:2 226:1 231:8,12,15,17,19,20 231:21,22 232:1 252:4 252:7,7 258:18 259:14 260:11,14,20,21 261:5 261:5,6,10,11,17,18 262:4 264:14,15,21 271:18 275:13 competitive 8:11 22:18 24:17 51:3,15 56:3 59:17,19 60:3,9,12 61:13 82:1,6 121:2,20 122:6 123:2,5,12 125:3 127:4,11 134:21 135:14 138:4,17 190:2 216:3 217:21 220:21 222:5 229:8,15 242:14 255:4 261:13 262:6,12 292:2 competitively 263:17 competitiveness 242:18 competitor 60:5 127:9,15 competitors 51:2,2 118:21 156:22 262:7 Complainant 227:15 complaint 133:5 134:4 complaints 139:14 208:10 complement 296:3 complete 6:3 252:18 completed 239:19 completely 52:12 142:17 167:12 235:18 263:1,2 280:3 completing 132:5 complex 211:1,19 complexity 90:8 219:3 compliance 154:6 complicated 91:15 194:13 complications 216:18 component 41:18 236:17 269:4 286:5 composed 13:8 composite 55:7 composition 170:3 comprehensive 131:22	195:12 computerized 170:19 concept 11:20 26:21 95:8 111:8 131:20 192:13,14 225:15 237:18 concepts 23:6 27:18 90:14 93:12 177:19 190:21 221:17 conceptually 74:15 concern 103:8,10,17 104:1 117:22 120:7 222:16,19 232:17 240:21 293:1 concerned 30:14,15 107:16,18 183:13 concerning 255:3 concerns 124:11,12 214:13 243:22 244:4 253:11 conclude 136:15 concluding 225:17 conclusion 21:8 28:3 216:14 226:5,9 227:2 260:4 conclusions 121:22 concretely 93:5 concur 130:20 conditions 8:11 76:3 130:9 229:14 256:3 condominium 224:8 conduct 26:13 27:2,5 29:5 36:21 67:19 229:7 conducted 26:1,10 conducting 129:4 136:16 confidence 151:19 231:4 confidently 152:10 155:5 congested 56:11 154:16 congestion 56:9,20 congratulate 137:10 200:16 Congress 19:15 20:8,16 21:7,9 22:6 77:10,17 79:11 80:1,2 86:1 90:4 90:5 92:4,11,16 98:16 111:14 123:16 124:7 133:8 256:5 conjunction 253:6 connects 140:3 Conrail 270:2 conscious 56:21 consequences 201:22 203:18 219:15 conservative 131:1 149:2 231:3 consider 47:6,15 57:20 113:10,10 215:9 226:10
---	--	--	---

<p>264:21 considerable 132:17 136:17 259:21 consideration 8:9 214:14 217:1 222:18 230:12 233:3 246:18 considerations 229:10 considered 63:1 213:18 214:10 245:22 248:4,15 considering 167:16 215:11 240:17 consist 286:12 consistency 236:18 consistent 8:5 139:6 180:7 271:6 273:1 consistently 49:16 56:6 107:15 170:22 193:10 236:14 consists 128:21 consolidated 30:14 31:2 49:3 consolidating 236:18 consolidation 129:22 consortium 180:9 constant 59:2 constantly 155:8 182:20 constants 38:16 constitutes 134:1 constrain 83:18 264:16 constrained 74:2 83:14 142:13,16 152:7 153:9 277:11,12 278:4,5 constraining 82:19 constrains 277:22 constraint 7:5 10:2 16:18 20:4 77:11 99:17,20 132:12 134:1 138:19 139:1,11 141:6 154:10 169:17 184:6,17 185:12 185:20 188:3 202:5 209:5 213:15 244:5 266:1 constraints 57:18 101:4 131:15 139:5 214:19 construct 175:11,13 194:2 constructive 89:15 175:21 construe 88:12 206:19 278:7 consumer's 186:11,13 201:8 consumers 201:1 210:10 216:21 217:3 consuming 172:9 containing 129:11</p>	<p>Contee 295:12 contemplates 57:21 contended 135:7 contention 88:14 91:18 133:22 contentions 88:15 contentious 114:10 CONTENTS 2:1 3:1 4:1 context 8:10 16:5 23:14 23:21 37:15 38:19 45:20 56:2 106:21 244:21 continually 61:2 286:6 continue 110:5 127:14 149:18 152:12 153:17 164:9 165:11 166:3 170:20 171:17 272:5 273:5 290:10 continued 3:1 4:1 56:15 143:16 233:2 continues 118:11 137:3 continuing 19:19 244:14 279:5 continuously 150:5,9 contract 49:22 135:1,4 227:3,22 228:5 229:3 252:19 255:10,11,14 269:13,16 contracting 227:14 contracts 138:14 227:13 269:12,16 271:1 contrary 21:18 140:13 229:9 contrast 218:10 219:21 253:9 controls 29:11 58:17 convenience 181:16 182:9,12 183:10 convenient 181:14 182:21 conversation 223:9 234:9 274:1,2 conversations 205:13 206:10 223:10 converse 73:9 conversion 283:4 convey 221:3 convince 205:20 convincing 13:7 COO 285:13 cools 235:3 Coral 295:7 core 93:1 113:17 142:19 149:21 150:2,13 163:15 163:19 165:14 Corn 293:6</p>	<p>corporate 33:15 Corporation 2:7 correct 63:5 181:7 184:15 188:5 189:9 229:17,20 271:16 corrected 45:3 correlation 179:2 cosigned 6:14 cost 10:10,10,11,12 11:1 11:6,7,14,14,16,20 12:7 16:14 17:19 18:5,8,15 21:19 23:3,3 29:10 32:19 33:9,10,11,12,12 33:13,18,19 35:9,20 36:3,5,16 39:9,13,17,20 40:5,13 42:9,9,18 43:1 43:8 47:7,8 52:16,22 53:1,3 54:4 55:1 56:13 61:22 62:7,12,16,17 63:3,6,19 64:3,14 66:5 67:9,22 69:12 70:16 71:16,20 72:11 73:8 74:17,21 75:6,9 76:3 81:16,19,20,22 87:13 87:19 88:5,8,11 91:10 94:8,12 106:7 107:6 109:12 114:19 120:8,11 120:20 127:9 132:7 138:15 141:19,20 142:10 143:2,10,15,20 144:1,3,19 145:11 146:8,17,20 148:6,10 148:16,20 149:6 150:16 150:21 151:21 152:8,16 153:3,9 156:16 159:2,4 159:5 164:18 166:17,21 178:8,17 180:2,10,14 180:15 181:2,12 183:8 183:17,20 184:1 185:6 189:20 190:12,15 191:1 192:21 195:20 198:16 201:16 214:14 216:5 219:3 241:3,5 248:17 259:21 261:7 262:9,15 275:3 291:8,8 cost-based 136:13 costing 10:12 119:2 275:4 costly 188:16 237:17 costs 10:13,22 11:1,20 61:15 62:1,2 63:8 65:12 71:17 72:16 73:19 74:10 75:17 88:21 142:2 145:16 146:3 148:16 149:5,7 151:18 156:17 174:14 182:8 216:9 240:12 241:6,18</p>	<p>248:19,21 260:12 262:12,13,18,19 263:19 Council 132:15 counsel 3:7 4:10 128:15 141:2 223:20 count 55:20 80:14 237:22 counter 182:8 countered 49:9 counterparts 291:1 counterproductive 237:9 countries 287:22 country 158:9 279:12 293:5 couple 6:13 8:6 34:1 43:16 45:8 63:9 76:17 78:5 79:21 139:9 160:2 165:1 185:3 219:12 222:1 240:15 242:17 271:12 275:19 283:2,3 coupled 228:1 course 16:11 22:20 44:15 61:7 105:6 110:21 139:4 173:17 178:21 186:17 204:12 294:15 court 90:18 228:18 253:7 255:6,13 260:3 courts 32:21 79:12 277:11 cover 115:19 259:20 covered 22:11 262:17 covering 263:20 Covington 4:11 CP 269:10 Craig 295:7 crazy 5:20 109:4 282:6 create 119:2,22 127:13 154:11 187:19 196:3 197:20 213:20 216:16 256:6,10 263:6,9 270:16,17 271:10,19 272:11 282:13,18 creates 201:17 265:20 271:2 274:9 creating 14:19 238:17 259:2,8 270:15 creation 232:7 credible 12:11 credibly 12:12 credits 31:12 crew 283:18 286:13 crews 239:8 crisis 34:2,3 40:14 178:1 crisp 188:15 criteria 169:4 259:10 264:5 critical 48:12 136:18</p>
---	---	---	---

158:5 164:11 167:15 178:11 237:11 critically 129:6 criticism 71:19 72:2 168:3 289:21 criticisms 71:18,19 73:13 171:12 criticize 195:12 criticizing 278:2 crop 172:11 217:14 crops 172:5 cross 37:1 74:4 75:5 76:4 122:19 149:17 161:12 cross- 261:11 cross-pricing 261:12 crossed 45:13 crystal 77:17 CSX 3:3 109:9 141:4,15 142:10 144:8,16 146:21 146:22 147:20 148:10 149:10 150:4 152:15 153:8,21 154:19 155:6 160:2,5 161:11 167:13 173:7 179:22 180:3,9 184:19,21 186:14 190:13,16 208:7 220:9 220:10,11 227:19,21 234:2 252:18,19,19 253:6 258:2,13,20,22 267:18,19 268:7 269:22 270:1 281:21 282:1 CSX's 141:5,11 144:13 178:2 curiosity 266:6 curious 101:21 102:21 208:9 current 7:14 49:22 51:6 99:18 100:6 101:15 103:14 130:5 142:11 148:15 170:3,21 175:3 176:12 200:6,20 201:4 201:8 202:19 217:17 219:4 247:14 currently 19:1 21:22 27:4 55:12 73:4 99:16 109:14 170:2 202:22 219:9 220:13 225:11 232:8 247:16 curtailed 133:12 customer 36:15 41:7 147:2 155:3 192:22 198:4 266:20 282:21 283:13 customer's 236:13 customers 22:18 35:2,2,6 36:13,13,14 44:4 45:12	115:14 142:19 146:10 154:5,7 172:3 210:9 218:20 234:18,19,20 235:2 236:4,16 237:3,8 237:9 238:14,22 239:10 239:11 240:12,22 241:7 241:10 242:11 243:16 267:8,13 268:13,14 270:18 272:1 281:19 282:13 284:10,11,16 287:11 288:3 customers' 270:11 286:7 cut 6:4 54:19 116:3,5 261:2 288:17 cutting 179:8 cycle 7:16,18,19 cycles 178:21 <hr/> <p style="text-align:center">D</p> <hr/> D 5:1 D.C 1:16 227:1 daily 269:10 damage 203:4 damages 175:13 219:17 dangerous 114:1 272:18 dark 196:22 dart 121:7 data 17:17 21:14 26:18 27:16,17 28:20 33:22 36:22 37:20 38:12 39:16,21,22 40:16,18 43:2,4 60:18 89:20 90:4 100:12 112:1 120:8,16 122:17 131:10 160:13 160:14 168:21,22 180:22 211:3 212:15 Davis 295:5 day 5:10 109:10 155:7 197:4 210:4 280:12 283:11,11 284:2 days 76:17 98:10,21 205:5 219:12 222:8 235:18 242:18 245:14 246:4 279:22 283:15,20 285:1 291:22 294:17 DCF 68:13 181:9 182:15 182:18 deal 38:10 59:17 104:10 113:14 241:18 243:1 270:3,10 292:19 dealing 114:9 212:13 dealt 254:21 284:16 debate 173:13 269:1 debt 30:12 33:13 48:10 70:10 142:9 151:1,4 242:2	decade 49:18 52:20 127:5 decades 229:16 December 1:11 decide 91:17 107:22 123:7 157:18 158:21,22 186:8 241:3 247:9 decided 159:10 252:13 decides 230:17 deciding 17:9,11 decision 75:5,7 108:6 139:4 176:4 191:14 226:21 227:5 228:14 233:13 237:12 255:6 273:19 decisions 27:16 141:7,21 143:8 148:5 149:7 180:1,4 183:15 215:21 216:2 225:21 226:15,16 226:18 227:4 228:4,13 228:17 230:2 238:3 239:10 246:19,20 247:6 251:13,15 253:19 254:22 255:1,9 272:14 287:18 declaration 264:7 declare 9:5 83:9 declared 8:21 decline 57:6 126:11 127:7 declines 116:17 decrease 44:6 decreased 44:1,3,5 deduct 32:5 41:2,3,3 deduction 31:11 deemed 101:6 103:16 177:4 184:11 230:20 deems 21:22 deep 276:20 287:17 deeply 120:14 203:7 defense 232:14 269:5 defensible 131:22 132:19 defer 93:3 106:1 deference 85:17 deferred 31:11,12,13,14 32:2,4,6 33:13 41:1,18 41:22 defined 16:12 20:10 21:7 125:12 defining 47:6 80:19 83:4 86:12 214:2 definitely 137:9 291:19 definition 18:3 27:1 33:2 33:6 35:7,19,20 39:15 39:17 40:22 42:5 43:21 44:2,7 75:11 80:12 84:6 86:22 125:8 126:2 130:17,20 131:1 132:10	132:18,21 191:2 207:1 213:13,22 214:3,5,8,21 231:1,2 247:19 270:17 definitions 44:9 degrade 242:10 271:3 274:20 degrades 274:16,17 degrading 268:12 degree 90:20 191:19 231:4 delegated 90:19 deliberately 203:8,10 delicately 114:5 deliver 235:1 243:15 delivering 153:21 delivery 113:2,3 delta 35:22 40:8 demand 28:15 demand 57:10 76:3 96:6 96:9,12 97:4 142:5 143:3 151:10 210:11 239:8 270:11 demanded 142:6 demands 234:22 270:11 demarcation 206:3 demonstrate 44:8 133:5 232:16 demonstrated 76:1 demonstrates 149:4 demurrage 130:7 207:20 208:6,8,10 213:8 denominator 29:19 30:7 30:10 32:10 41:2,9 42:1 116:12 148:8 densities 174:11 density 174:12,13 Department 15:18 dependent 9:8,20 67:13 67:18 depending 72:13 166:10 191:18 depends 10:9 12:15 107:12 191:9 depicts 50:5 deposits 150:20 depreciated 53:9 148:7 depreciation 31:16,19 32:13,14,15,17,20 53:13,18,20 54:8 depth 90:18 deregulated 112:12 deregulation 50:7,13 263:16 described 12:7 described 150:8,16 270:9 272:21
--	--	---	---

<p>describing 259:14 272:16 273:3 274:16 description 200:13 deserves 12:18 189:16 design 198:15,18 designed 152:15 202:11 235:14 237:7 designing 203:20 desirable 256:22 desire 135:15 despite 51:2 53:4 55:2,20 131:5 152:14 destination 134:18 172:1 228:8 253:5 destroy 203:11 detail 25:8 31:7 135:17 225:17 241:20 detailed 68:18 details 170:10 187:17 188:14 223:21 226:6 determinate 97:20 determination 9:15,18 18:13,22 86:15 102:22 103:19 135:8 231:9 determinations 16:8 17:3 19:21 92:22 140:6 determine 14:22 20:1 59:12 105:18 122:9 180:14,17 193:11 202:13,15 277:14 determined 10:12 134:15 191:15 195:14,21 determining 105:11 132:6 193:5 devastation 172:4 development 129:6 130:13 132:18 developing 47:15 92:20 131:21 132:10 210:20 249:9 development 159:8 deviation 113:2 devil 187:17 188:13 dialogue 5:19 103:3 244:13,14 249:20 288:6 Diamond 295:7 dictating 130:8 die 12:4 diesel 119:19 differ 62:8 118:1 difference 9:17 32:1 34:14 40:8 70:11 163:20 186:5 189:3 227:20 260:19 261:4 differences 23:5 265:2 different 25:19 33:16</p>	<p>36:14,19 42:5 44:2 46:3 65:16 84:4,11 107:7 123:17,21 124:2,6,9,17 157:17 158:3 160:22 180:12,13 183:1 184:7 192:5,13 195:18 204:9 204:10,20 205:3,3,5 210:13 212:20 213:12 221:6 223:4 226:18 229:1 235:4,4,19 252:16 253:13 254:21 256:15 260:13 271:1 280:3 281:6 287:10 288:19 differential 10:20 65:2 123:8,8 277:15 differential-pricing 260:7 differentially 57:8 133:3 133:19 228:11 differentiation 212:19 differently 34:11 228:22 differing 245:16 differs 7:18 69:6 difficult 40:8 67:3,11,19 192:15 197:1 247:4 248:20 262:7 268:20 difficulties 66:4 dig 273:17 276:19 287:16 digit 68:12,13 dime 291:19 diminish 155:1 diminution 118:14 direct 26:6 78:5 85:21 141:14 256:10 268:7 281:1 directed 159:8 direction 77:18 262:21 directional 119:14 directionally 54:10,21 262:22 directly 88:22 211:8 228:7 Director 2:19 3:16,19 4:3 155:19 209:19 217:10 Directors 128:10 150:6 directs 78:6 disadvantage 145:9 disagree 6:20 32:22 71:1 102:20 122:1 169:9 270:22 277:5 disagrees 133:21 disappointed 92:11 discipline 262:5,8,16 disciplined 263:12 discount 143:22 183:8</p>	<p>discounted 68:4 69:3,5 143:10 145:2 181:19 182:1,3 discourage 22:1 152:18 154:10 Discover 125:19 discovered 66:18 discovery 66:9 88:9 discrete 266:20 273:17 discretion 132:17 207:2 228:19,22 229:11 230:3 230:8 246:21 278:1 discuss 130:12 140:2 141:5 156:20 157:12 discussed 139:2 140:2 155:14 219:12 244:22 255:7 discussing 128:16 141:19 244:4 discussion 61:8 65:8,13 81:10 113:6 126:10 138:22 139:19 169:19 200:15 215:4 255:8 260:10 266:16 275:7,8 discussion's 278:3 discussions 150:5 204:10 222:21 275:20 dispute 208:2 disputes 187:20 disruption 134:10 Distinguished 2:10 15:16 distortions 201:18 distract 142:18 distribution 37:6,9 38:1 46:14 107:4,9,14,22 108:3,4,10 123:2,11 dive 211:21 267:2 274:10 divide 192:6 dividend 151:8 dividends 96:13 147:15 151:5,17 242:2 Division 3:13 DNA 53:15 docket 215:5 218:2 221:9 221:15 224:14,20 225:2 232:19 Doctor 121:18 document 157:16 documented 60:14 doing 8:3 12:21 16:6 23:22 26:15 28:1 32:5,6 40:3 42:21 69:15 83:4 93:15 104:12 111:12,12 115:8 118:9 120:16 128:3 159:17 161:13,15 161:16 165:12 182:20</p>	<p>190:20 197:11 202:6 257:2 DOJ 28:17 66:7 125:9,22 dollar 163:1 196:17 dollars 35:4 119:3 120:1 120:4 148:12,20 149:11 150:4 161:9 163:22 165:15 178:16 196:11 196:18 197:14 282:17 292:9,11 domestic 242:20 dominance 15:1,5 73:2,6 73:7 78:15,19 122:21 124:1,19 133:6 134:5 156:4 193:13 213:17 215:4 231:9 264:13 266:4 dominant 189:21 194:5 dominate 154:12 Don 295:7 Donner 235:13 door 86:2 dotted 35:13 double 53:18 56:10 doubled 49:7 doubt 110:4 Dow 17:12 downside 153:11 264:9 264:10 downstream 210:10 downturn 179:10 downward 165:5 170:4,7 dozens 158:10 Dr 111:20 121:8 dramatically 46:3 141:17 268:11 draw 105:8,17 121:22 146:13 279:11 drawn 80:13 dressed 224:7 drinking 294:20 drive 150:10,13 152:3 155:8 210:2 driven 97:16 drives 71:9 201:15 drop 202:6 dropped 50:8 due 101:17 219:3 Duff 68:6,10,11 dug 74:22 120:13 duopolies 130:1 132:2 duopoly 222:8 261:19 262:4,10 263:10,21 Dupo 268:6 duties 19:16 duty 19:17,22 20:4,6 78:3</p>
---	---	---	--

78:12 84:5 dwell 154:3 dynamic 56:3 73:3 170:5 170:7 243:10	134:10 136:11 206:19 211:21 222:6 230:19 231:12 235:3 251:1 252:6 253:20 254:2,5 254:14 267:4 277:21 278:3 economically 11:4 75:14 132:18 146:11 275:16 economics 2:11 12:10 15:17,18 22:20 27:12 43:19 44:18 94:3 95:1 113:9 160:15 195:6 252:8 economist 25:14 28:19 32:16 90:6 98:4 114:9 205:6 211:20 economists 27:20 28:13 80:4 178:1 193:18 221:22 223:12 economy 53:4 210:3 239:4 Eden 295:8 educate 69:4 effect 31:22 41:12,13 217:2 287:2 effective 77:2,20,22 219:15,22 231:8,21 effectively 54:19 101:9 264:13 effects 131:2 287:20 efficiencies 147:9 275:12 275:15 efficiency 10:18,19 11:9 11:12 71:22 144:14 145:14 150:10 155:2,9 161:17 174:22 178:13 232:2,11 252:8 257:6 275:13 efficient 11:4 56:5,21 75:4,14 76:3 78:8 152:3 198:4 210:6 212:5 216:16 217:20 218:13 230:19 231:12 234:16 243:7 251:1 252:6 253:20 254:2,4,14 257:4 258:16 268:9 271:6,21 efficiently 142:20 161:16 234:22 258:21 effort 19:19 136:17 225:9 efforts 137:11 214:2 216:8,10 219:4 egregious 193:1 either 38:16 63:15 72:19 78:20 79:13,19 182:7 203:12,19 238:12	241:22 268:6 elaborate 74:14 112:4 elect 238:10 electric 127:10 243:6 electronic 154:6 element 132:11 elements 135:19 elephant 78:21 elephants 79:1 eligible 73:10 eliminate 58:19 59:6,7 eliminating 236:19 263:4 Elizabeth 295:8 Ellen 294:12 295:17 Ellig 2:4 5:13 6:8,10 59:10 71:14 72:3,12,19 73:9 74:19 75:3,20 110:18,22 111:20 112:6 113:22 115:13 120:6,12 121:15 122:3 123:20 124:12,20 169:10 eloquent 47:18 Emad 295:8 embellish 282:15 emergency 219:18 Emeritus 2:14 15:20 emphasize 9:3 emphasized 228:18 empirical 12:15 39:3 114:14 169:8 empirically 70:12 employed 20:12 91:8 employees 179:9 empowers 147:21 enable 20:17 189:22 enables 191:12 enabling 228:10 enact 277:7 enacting 133:8 encourage 144:15 208:11 218:9 encouraged 154:1 encouraging 148:4 220:17 ended 117:19 endorse 294:9 enemy 132:20 energized 155:7 enforced 57:18 101:4 engaged 66:7 155:7 217:12 296:5 engaging 244:15,19 engineering 148:21 enhance 232:2 enhanced 292:1 enhancing 147:22 219:6	enjoy 154:13 enormous 64:20 ensure 78:3 137:2 144:9 entail 32:3 enter 135:1 227:13 235:2 269:12 entered 27:13 117:16 Energy 254:9 enterprise 143:14 entertained 110:19 enthusiastic 221:8 entire 34:18 36:1 191:20 210:16 211:15 216:21 221:16 225:15 277:13 279:12 285:17 286:18 293:19 entirely 99:2 entities 263:13 entitled 74:11,17 229:18 entitles 227:14 entity 30:14 65:20 66:5 enumerated 229:19 environment 61:3 130:5 138:17 151:2 187:19 193:6 226:19 235:6 242:14 243:11 287:5 environmentally 56:21 environments 138:4 envisioned 74:5 envy 287:21 EP 1:2,4 132:6,8 168:12 218:3 221:13 225:2 232:19 equal 24:18 31:21 79:12 92:17 96:4 152:22 equally 79:18 176:8 207:6 275:6 equated 147:18 equating 261:10 equation 177:14 261:17 equations 75:21 equipment 30:18 235:14 284:11 equitable 288:3 equity 10:18 11:11,17 20:20 30:13 33:10,10 33:11,12 48:10 54:14 75:7 92:8 132:8 142:5,9 era 132:2 Ericksen 295:17 es 14:15 especially 247:3 essence 101:8 essential 100:22 132:11 210:5 217:21 essentially 32:17 43:9
--	---	--	--

49:6 53:18 91:11 143:12 169:1 215:21 231:9 250:19 establish 130:16 231:20 established 133:17 247:15 establishing 129:5 136:5 estate 34:10,21 35:17 esteemed 6:19 estimate 54:10 148:15 estimated 70:16 estimates 11:7 65:7 estimating 65:12 et 160:13 161:2 245:16 269:17 evaluate 23:19 93:9 129:6 143:21 144:12 149:6 199:17 evaluated 24:11 112:12 evaluating 132:1 evaluation 25:15 evaporate 237:19 event 102:11 132:9 events 236:3 eventually 68:8 ever-growing 129:20 ever-increasing 130:6 ever-shrinking 242:7 everybody 40:1 42:22 106:22 119:12 194:20 210:18 212:5 276:15 289:22 everyone's 209:2 evidence 18:22 21:2 51:4 58:3 131:7 276:22 evidenced 131:9 ex 157:3,5,7 176:16 184:18 205:14 221:10 224:14 225:7,10 233:8 233:13 exact 17:1 25:5 26:20 105:20 exactly 22:5 33:2 63:14 90:8 153:21 191:4 206:13 241:1 273:18 278:19 290:16 examiner 156:9,12 example 23:1 40:1 47:5 66:20 72:8,14 81:1 125:11 144:13,18 145:7 145:15 146:19 147:20 166:13 182:16 190:10 196:7 197:7 201:9 212:21 237:20 257:18 262:11 263:14 267:17 285:9 289:6	examples 245:16 257:16 273:17 exceed 77:3 81:16 133:14 146:8 150:15 170:1 exceeded 52:21 exceeding 19:5 exceeds 60:13 143:10,15 144:7,10 148:10 exception 227:3 228:5,6 229:4 230:14,15,21 232:21 252:12 255:10 255:11,14 266:3 exceptions 158:7 229:19 229:22 230:4 252:1 253:16 289:9 excerpts 76:9 excess 51:4 148:20 150:4 179:13 189:19 excessive 58:4 exciting 164:19 exclude 34:6 41:22 excluding 148:12 exclusions 34:15 excursion 11:21 excuse 68:16 176:1 184:10 188:3 199:21 207:16 294:9 Executive 3:11 128:9 exercise 24:22 129:21 138:6 202:16 204:18 207:1 229:11 230:3,7 exercised 228:19,22 exhausted 150:18 197:17 Exhibit 257:15 exhibited 51:5 exist 232:9 264:15 existence 121:13 existing 62:2 112:20 129:7,14 150:11 184:9 202:9 216:3 231:22 232:1,5 256:12 exists 219:8 exit 235:2 expand 153:6 229:3 expansive 224:17 expect 57:10 60:10 89:13 144:19 165:5 238:22 239:3 expectation 145:10 146:7 expectations 49:9 67:13 67:18 expected 62:5 144:4 179:4 239:20 expecting 117:17 expedited 14:22 expended 136:18	expenditure 118:3 expenditures 95:7 113:20 115:21 116:3,6 117:4 118:5,13 expense 41:18,20 53:13 53:19,20 54:8 161:18 expensive 108:16 172:8 experience 138:9 141:15 206:1 280:13 292:21 experienced 280:5 expert 90:6 289:16 experts 137:13 expire 269:17 expired 6:2 explain 17:22 20:15 31:7 32:18 explained 32:16 243:21 explaining 261:3 explanation 74:6 exploited 225:16 explore 144:18 150:9,11 167:5 208:11 exploring 244:16 260:9 export 129:1 expound 147:13 express 217:22 232:20 expressed 226:8 240:19 240:21 expressing 136:15 expressly 229:21 extend 260:5,6 294:18 extensive 13:14 14:6 221:10 extensively 220:20 225:7 233:8 252:3 extent 11:10 59:18 97:19 117:9 136:3 138:13 171:14 204:15 230:4 277:3 292:22 external 239:2 extra 260:15 extracted 192:3 extraordinarily 149:1 extraordinary 19:8 extrapolate 146:14 extreme 236:3 extremely 131:1 148:22 267:19 eye 118:17	facilities 128:22 210:7 211:10,11 282:18 facility 172:2 223:2 279:4 283:19 fact 10:14 16:7 18:3 36:6 45:13 57:12 64:4 79:22 87:7 98:16 99:5 120:10 122:13 139:13 147:10 162:15 172:3,16 185:16 225:6 245:1 253:18 265:5 fact-specific 264:22 265:16 factor 155:22 159:21 162:21 189:12 230:2 232:14 239:3 251:17 255:5 275:6 factors 77:7 140:5,7 187:3 226:9 230:11 232:18 264:11 265:8,9 269:3,4 facts 18:19 36:5 140:14 191:10 240:2,2 fails 193:12 failures 219:11,14 220:1 220:9 fair 6:7 11:9,13 60:16 75:9,11 119:13 159:20 191:22 288:3 289:21 290:9,13 293:22 fairly 30:21 33:19 165:15 193:10 fairness 11:10 190:3 faith 244:12 Falhaber 74:5 Falhaber/Baumol 75:18 fall 104:13 248:7 fallen 104:14 221:1 falling 116:12 179:7 224:21 falls 111:16 familiar 19:13 102:18 250:3 famous 12:2,4 32:16 fancy 159:2 fans 256:17 far 12:13 36:20 38:4 148:10 149:5 150:21 165:3 201:5 204:7 213:22 214:3 215:2,6 278:2 284:10 293:8 farmer 217:15 218:20 farmers 217:20 218:14 fast 219:19 267:16 faster 13:18 59:13 120:2 145:18 188:16 284:12
F			
	face 94:13 241:2 243:14 250:6,9 256:21 faced 243:13 facilitate 135:10 facilitates 252:8		

<p>286:19 father 12:3 favor 42:21 44:8 favorable 74:20 favorably 169:12 FCC 114:9,17 feasibility 232:16 269:4 feasible 135:12 146:11 153:14 232:13 February 127:18 137:18 207:9 295:19 fed 285:18 federal 3:6 119:6 141:1 158:15 285:16 federally 286:15 feed 3:10 128:8 217:17 293:5 feedstocks 210:13 feel 114:3 188:10 207:15 214:9 215:12 234:18 238:14 241:7 287:18 289:10 293:19 feeling 85:14 213:1 feels 185:22 feet 235:12,16 fell 8:22 felt 283:7 284:14 FERC 158:16 fertilizer 4:2 209:4 217:6 217:10,12,20 291:3 fertilizer's 217:14 fertilizers 217:19 218:13 feudal 159:6 fewer 162:11 fewest 154:2 field 154:11 294:6 figure 7:21 10:12 11:1,15 11:16 31:22 37:2 47:20 79:14 81:8 88:2,9 111:11 122:8,20 124:14 181:11 201:3 234:21 239:7 268:10 273:4 figured 34:2 147:5 figures 11:6 54:12 figuring 112:8 273:21 file 123:18 124:10 133:5 185:4 187:3 filed 158:7 221:10 224:20 filing 134:4 139:14 207:22 filings 207:21 fill 74:7 final 15:3,6 125:5 126:9 139:6 153:14 163:2 176:3 187:9 213:18 finalizing 132:21</p>	<p>finally 8:16 13:11 122:18 231:2 232:12 261:2 finance 25:18 33:15 141:4,10,15 finances 9:4 131:3 financial 8:1,9 25:15,17 25:18 26:10,14,15 27:2 27:6 29:5,8,9,13 31:15 34:2,3,8,20 35:8,16 36:21 40:14 57:4 61:17 126:19 131:8 132:1 138:5 143:5 147:21 154:22 178:1 202:13,22 215:10 219:17 231:5 financially 9:8,20 127:2 find 47:3 77:22 78:21 118:8 122:17 126:6 164:14 171:16 251:4 254:7 258:17 283:17,18 286:1,3 finding 245:21 265:1,16 268:3 274:2 findings 16:16 92:21 fine 13:2 30:22 31:5 32:12 71:6 75:12 88:1 104:22 209:7 235:12 282:19 fingers 170:11 finish 121:1 286:8 firm 18:3 128:14 142:10 firm's 63:20 firms 16:9 17:7,17 18:1 18:19 24:2,4,7,7 25:4 29:14 33:7 34:7 47:11 48:7 81:1 94:9,11,21 96:5 first 5:13 7:10 10:8 16:18 19:13,16 23:22 25:22 26:22 29:16 35:13 48:13 50:8 69:18 72:10 73:14 77:13,18,22 81:11 85:16 130:15 135:1 137:10,22 150:3 152:12 153:22 156:3 162:1 173:8,17 178:6 186:1 194:4,8 196:11 200:21 207:15 212:4 245:12 255:13 first-hand 155:4 Fisher 28:7 fit 37:8 39:3 79:15 81:4 107:9,14 108:10 fits 37:6 fitting 108:3 five 128:2 240:5 283:14 283:20</p>	<p>fix 168:10 fixed 71:17 73:8 151:18 174:14 201:14 259:21 260:12 fixed-cost 263:10 flag 108:5,6 flammable 293:17 flaws 129:14 fleet 149:19 213:7 fleets 146:12 293:19 flexibility 151:16 229:11 251:18 294:4 flip 51:11 70:18 223:13 223:14,14 224:2 flipping 172:10 Florida 268:17 flow 19:21,22 41:19 49:2 49:18 68:4 69:1,4,6,11 69:14 96:7 145:2 181:19 182:3 239:7 269:15 275:14 flowing 99:5 flows 41:17 66:16 143:10 143:22 147:11 149:12 163:11 167:11 183:7,19 236:19 240:12 269:9 fluctuation 270:6 fluctuations 38:18 270:4 flush 226:6 FMC 227:15,21 252:12 254:19 255:9,15 FMC's 227:19 focus 113:11 114:6 129:16 142:19 167:14 173:14 216:10 218:4 252:4 focused 15:11 16:3 113:17 163:21 175:8 210:20 211:5 230:15 focuses 210:21 focusing 27:15 193:22 folks 7:2 64:4 111:2 114:5 171:15 179:3 209:4 282:17 follow 51:20 196:21 197:1 follow-up 46:18 207:9 followed 147:4 following 17:18 129:22 230:21 271:13 food 5:6 footing 92:17 footprint 234:7 force 87:16 100:16 101:9 101:16 104:6 129:6,9 129:13 130:11 131:10</p>	<p>132:13 133:2 134:2,16 135:5 136:21 137:11 142:17 169:15 170:5,13 170:17 184:6,16 186:19 187:12 193:20 194:18 196:4 200:12 204:4,7 204:20 209:17 218:5 221:7,18 224:11,17 225:12 226:8 230:14 231:3 233:6 243:21 244:11 249:15,19 254:19 264:3 266:7 force's 128:17 130:16,19 133:13 134:12 135:10 176:18 forces 61:13 138:3 218:21 242:19 forcing 288:20 forecast 70:3 forecasts 141:13 foreclosed 219:9 220:14 foregoing 228:1 foremost 23:22 212:4 forget 78:2 114:6 forgot 33:10 277:20 form 14:6 130:2 148:7 185:17 221:19 253:1,2 253:10,12 formal 133:5 forms 156:2 formula 29:16,17 86:9 107:20 159:10 194:12 200:11 249:7 formulas 159:2 formulated 169:20 forth 5:18 8:12 72:17 86:10 95:7 111:15 116:7 123:3 157:11 187:10 200:3 205:21 234:10 267:3 fortunate 220:3 293:5 fortunately 179:12 184:20 forum 78:13 forums 72:1 216:20 forward 23:4 49:14 61:10 62:6 65:4 70:4,9 88:17 143:19 165:9 185:14 188:18 209:2 214:7 215:11 230:9 245:5 266:7 280:11 295:19 forward-looking 182:10 found 18:13 63:2 100:13 102:1 140:8,11 166:5 169:13 171:15 179:6 215:16 247:18</p>
---	--	---	--

founded 226:14	262:20 263:5,8 264:2	147:7,10 161:17	goal 10:17 11:8,11,12,13
four 7:2 25:21 34:4 37:10	264:18 265:11,15 266:5	generating 41:9 163:11	11:17 21:13 91:12
115:19 139:5 204:22	266:14 271:7,15 272:7	167:10	103:11 221:7
230:11,22 283:14 286:4	273:7 274:14,22	gentleman 285:5	goals 226:1
FRA 98:12	fuel 3:18 56:5 58:19 59:7	genuinely 288:8	God 94:18 103:12 109:9
fracked 237:20	138:15 209:9,20	geographic 234:7 265:2	goes 15:22 42:12 43:12
fraction 60:11	fuels 210:2 293:18	geographical 270:12	43:14 200:8 206:13
fragmented 51:3	fulfilling 129:10	geographies 235:4 240:5	242:14 276:4 285:20
framework 19:12 29:3	full 296:3	geography 266:21 286:4	286:3,21
56:15 150:2 228:3	fully 53:9 139:1 163:2	286:17	going 7:3,11 11:3,16,18
255:21	195:12 273:13	George 2:3,9 6:12 15:16	12:12,19 16:4 17:9,10
Frank 288:14,15 289:17	function 124:5 202:16	getting 59:18 65:2 75:16	17:11,12,13,13 19:10
free 30:19 49:2 97:2,9	232:1	88:21 89:1 91:12	21:2 24:6 25:7,9,20
99:2 180:22 207:15	fund 48:8	113:14 123:9 159:18	26:5,8 28:2 29:6,7,14
218:8 220:17 222:21	fundamental 146:13	161:20 187:8 206:6	29:15,16 31:4 33:1,2,6
223:9 260:11	funded 154:14	269:1 292:21	33:20 35:8,9 40:20,21
free-market 292:1	funds 48:8 95:13 96:1,2	give 5:15 9:19 40:1 68:19	41:2,4,21 42:2,4,15
freedom 133:10	96:14 98:7 119:7 148:3	80:22 83:12 89:9 91:22	44:14 46:11 62:5 63:13
freeze 238:10	funny 194:17	92:1 102:10 139:22	64:5,15 65:4 67:5
freeze 197:21 198:6,6,9	further 12:13 131:9	151:8,11 165:2 166:13	69:22 83:8 85:7,20 86:7
200:22 201:10,17	147:6,13 174:4 206:22	167:20 171:5 177:7	86:7,14 88:8 89:6,18
freight 48:17 51:19 52:1	221:13 264:16	180:5,11,13 186:6	94:14 95:14 96:5,6,9
52:6 53:4 120:2 130:6	future 13:8 57:21 70:3	200:7 207:10,10 211:22	97:19 98:5 99:3 100:20
131:6 133:4 137:3	115:4 141:18 143:9,22	231:3 237:5 246:18	101:13 103:20 104:16
144:12,18 145:15	144:15 151:20 152:2,18	258:13 295:2	104:19 107:7 110:2
155:11 156:8,11,16	155:12 183:7 236:10	given 24:20 39:2 90:7	113:22 114:1 123:7
159:7 162:3,18 165:16	237:12 240:7 242:13	103:3 124:10,12 129:20	127:19 137:9 157:19
165:21,22 201:20	243:9,15	148:20 151:2 179:18	160:1 165:11,17 167:2
203:11 211:6 217:21	fuzzy 90:10	224:13 225:13 239:14	167:10 171:10 174:11
frequency 130:8		gives 90:18 246:13	175:22 178:20 187:20
Friday 1:11	G	251:18 266:12 269:14	191:17 199:18 200:12
frog 118:7	G 5:1	giving 19:1 188:8 228:19	201:14 202:3,6 203:11
fronts 171:13	Gabe 295:8	249:9 289:6	203:16,18 208:15,16
frozen 198:11	gain 240:17 275:11,13	GKG 3:12 128:14	211:21 221:12 223:3,6
frustrate 11:16	gained 48:18 174:22	glad 6:8 76:12 155:13	225:6 234:11 243:2
frustration 289:11	179:19	160:3	244:6 245:11 249:12
FTC 28:17	gaining 239:19 275:9	global 40:14 217:17	250:9 253:22 254:1,8
Fuchs 15:14 48:1 58:1,14	game 213:5	239:3	254:12 257:5,7 261:18
58:22 59:9 60:6 61:4,7	gap 43:13,14 45:21	go 5:13 10:20 22:12 25:7	262:7,8,14,15,16 263:6
62:9,22 63:21 64:2,22	gap's 44:6	25:9 29:7 30:17 34:2	263:9,21 264:16 267:8
65:6,11,20 66:22 67:6	gas 61:12 112:13 119:19	40:19 44:14 45:1,17,18	267:11,20,21,22 269:16
67:15,21 68:3,15,21	gateway 257:20	62:14 63:11 67:4,10	271:19 274:12 275:4
69:17,20 70:5,14,20	gateways 267:19	69:22 72:19 81:12 85:2	281:1 282:13,14 285:13
71:12 72:7,18,21 73:12	gather 90:22 234:22	87:18 89:5 109:1,6	286:16,18,19,21 288:11
75:2,15 76:5 81:6,13	geez 23:10	122:17 126:3 127:19	288:13 291:7 292:5,14
82:11,16 83:11,17,21	general 3:6 7:18 78:12	140:5,18 156:5,18,19	294:9 295:1
84:8,13 111:18 113:5	93:9,12 225:12 230:10	158:21 159:3,13 160:4	going-concern 41:21
115:11 126:8 128:1	233:1 274:6 278:3	161:7 164:14 167:1,4,5	gold 126:21
137:8 140:21 168:1	291:21	167:8,11 174:4 180:11	god 6:8 7:22 9:12 14:9
169:14 170:12 171:6	generally 32:9 105:5	181:1 182:16,17 185:14	15:13 29:12 61:8 76:7
173:6 174:17 177:18	126:21 171:19 201:12	185:22 193:5 195:2,15	82:2,4,7,19 86:17 96:22
178:22 179:21 181:1,15	256:2 279:6	197:9,18 225:3 242:6	97:1 99:7 104:7 105:1
181:21 209:12 217:8	generate 41:7 144:20	258:16 262:21 268:15	117:11 127:22 128:2,3
233:17 243:18 255:19	151:20 164:16,18	268:16,19 273:6 283:16	132:20 137:7 140:20
259:3,17 260:8,18,22	272:21 283:15	283:20 285:22 288:16	144:22 155:16 156:12
261:8,15,20 262:2,18	generated 50:21 143:13	292:15	164:14 166:4,5 167:10

171:3 175:19,20 176:6 178:13 184:3 193:4 198:12,18 203:13 204:3 205:7 209:12 216:15 217:7 220:17 224:2 235:16 243:17 244:12 246:15 259:11 260:15 281:3 287:18 288:17 goodness 199:4 goods 59:1 210:5 Gordon 3:15 155:15,17 Gorski 295:17 gosh 75:20 109:4 110:22 112:6 gotten 65:3 197:17 governing 19:12 government 4:4 9:9,21 50:2 70:10 210:22 211:17 217:10 222:9,10 222:15 237:5 238:9 grab 232:6 grain 3:10 128:8 171:1 176:6 grains 129:2 grandfathered 220:5 grants 119:6 graph 190:22 graphic 188:21 graphs 115:20 grasp 194:20 200:14 gravity 285:18 great 12:17 14:11 59:17 62:17 85:16 98:4,13 105:9 110:7,13 160:10 194:16 207:13 224:4 226:14,21 227:7 228:15 237:20 267:17 278:11 292:19,22 295:15 greater 25:8 39:10 147:17 152:6 218:21 219:20 292:1,7 greatest 96:15 218:7 275:15 greatly 127:17 295:21 grid 56:22 grossed 54:12,14 ground 164:9 group 2:19 24:7 26:17 35:15,15 36:2,6 37:5 47:21,22 48:5 49:19 58:1,8,18 59:3,21 60:17 61:5 99:22 100:5 101:3 101:18 102:3,8,13 103:1,6,13 104:3 107:5 109:18,22 110:3,16 116:8 117:9,12 119:13	126:9 127:1 162:19 168:6,13,14 169:2 173:11,12,16,18 174:5 177:3 180:8 group's 36:12 65:7 grouping 212:16 groups 34:7,18 35:10,12 36:19,21 37:8 45:7 168:2 174:21 grow 146:11 273:2 growing 155:10 240:6 growth 60:9 71:5,7,9 114:21 117:17 148:4 150:10,12,15 165:21,22 166:1 238:14 guarantee 238:3 guess 60:6 72:9 74:13 88:18 104:1,16 126:18 140:17 160:21 168:4 170:18 171:11 173:10 182:8 223:15 260:8 265:15 274:3 277:21 284:6 291:15 guessing 278:8 guidance 20:9 88:12 90:15,21 165:9 guide 222:21 guidelines 139:3,6 184:9 199:22 276:11 Gulamali 295:5 guys 173:5 174:15 211:2 gymnastics 222:7 <hr/> H <hr/> half 36:4 43:9 54:19 285:19 hand 91:5 108:18 137:5 211:8,8 213:11 216:11 handing 258:13 handle 129:1 235:12 handled 131:6 237:2 handles 145:22 handling 145:22 232:8 236:20 237:1 handlings 236:20 handoffs 268:3 289:1 hands 23:8 handsomely 131:7 hangs 225:11 happen 152:17 187:5 223:9,11 240:15 261:13 274:9 281:11 286:15 happened 38:9 117:18 276:14 happening 37:3 95:5 115:16,16	happens 42:6 152:5 189:14 235:13 269:11 happy 68:19 84:19 93:22 147:13 159:22 217:4 244:9 286:8 290:7 hard 40:7 93:15 175:11 175:20 179:17 182:7 202:9 220:10 273:16 278:8 282:22 harder 179:18 234:15 harmful 237:8 hat 285:12 haul 135:15 139:18 140:9 228:11 229:19 230:16 232:21 251:22 252:22 253:15 258:7,11,14,21 260:7 hauling 250:11 hauling 252:21 hauls 226:11 230:13 havoc 282:7,13 hazardous 72:14 212:22 head 3:5 55:20 140:22 257:19 281:15 286:17 heading 86:6 health 8:9 54:3 126:19 138:5 154:22 202:22 215:10 231:5 233:20 healthier 215:13 healthy 127:2 212:5 216:16 293:22 hear 5:7,16 16:4 35:21 83:11 91:18 98:12 108:17 167:18 196:21 204:13 250:3 274:14 281:15 289:12,12 heard 16:3 26:7 87:11 118:6 138:21 142:22 148:6 169:10 172:13 174:16 175:5 176:4 181:6,18,22 200:14 201:20 206:15 207:3,17 213:2,8 216:22 222:4 241:19 242:5 244:7 247:2 271:12 272:9 276:5 279:10,22 285:2 hearing 1:3,6 5:9 7:1 16:6 18:12 93:14 100:14 110:20 116:4 129:5,16 136:16 146:14 193:9 205:15,22 208:7 218:4 224:5 229:5 233:4,9 295:13 296:2,3 296:8,9 hearings 48:3 213:9 289:17	heart 193:4 heats 235:3 heavily 10:9 heavy 174:12 heck 9:1 hedge 48:8 heighten 126:17 held 93:21 137:18 139:5 164:9 226:21 help 26:7 44:20 47:9,20 56:9 144:15 150:13 152:2 160:18 161:3 234:9 235:14 285:13 helpful 61:16 71:12 84:19 90:16 107:3 119:21 135:3 186:3 188:21 196:5 205:4 206:18 208:13 helps 89:20 148:7 205:21 238:1 240:14 hesitancy 185:4 hey 120:14 167:5 Hi 217:7 hid 273:10 high 18:17 19:8 21:16 89:12,21 113:12 152:1 152:13,21 153:16 166:6 176:8 177:4 231:4 241:4 286:17 292:13 high-return 150:9 higher 16:13 24:15,16 52:8 59:7 72:15 96:7 133:10 142:1,5 146:1,1 151:16 152:14 183:17 228:11 289:19 290:8 highest 197:5,8 highlight 53:12 212:2 highly 21:5 34:9,11 45:5 74:15 114:10 222:6 highs 55:12 highway 56:9,13,20 154:14 243:6 highways 56:11 119:16 hill 285:20 Hillenbrand 295:10 Hine 4:6 historical 23:3,3 53:6 62:7 history 12:15,16 31:8,9 92:15 154:3,4 161:8 hit 139:16 167:1 224:11 235:16 242:12,17 281:14 hits 172:7 Hmm 294:11 hold 27:20 74:6,8 150:19
---	--	---	--

262:8 holders 142:5,6 holding 224:5 227:7 282:11 holds 72:15 76:14 204:17 266:8 hole 77:9 78:21 holes 78:22 holiday 117:21 162:19 163:12 165:1 holistic 8:10,14 honest 281:9 honestly 170:14 288:12 honing 180:20 hook 92:18 hope 165:20,21 209:1 234:8 hopeful 206:8 hopefully 89:1,8 104:15 horse 70:13 hosting 294:19 hot 207:18 hotel 285:4 Hotelling 32:15 hour 32:3 286:20,20 house 158:20 Howard 153:7 huge 119:9 173:14 296:6 hula-hoop 97:6 hump 285:15,18 286:5 288:16 hurdle 144:1,1,7,10 145:2,6 180:1 183:16 hurt 198:13 hypothesis 258:17 hypothetical 74:1 81:15 144:12 147:8 152:9	I I's 154:2 Ian 295:9 ICC 77:13 92:12 156:6 157:3,4 203:9 idea 9:2,12,17 11:19 89:9 113:3 121:5 123:3,9 175:2 177:8 201:13,13 201:14 202:2,3 256:1,1 294:3 ideally 66:1 288:18 ideas 205:5 identified 229:21 230:14 250:18 identifies 129:13 ignore 79:18 182:10 ignores 273:18 ignoring 274:11	II 1:7 illegal 199:22 200:2 Illinois 120:1 illustrate 53:11 145:12 236:11 illustrates 49:3 144:11 147:20 illustration 196:10 illustrative 146:15 196:15 imagine 199:1 276:16 impact 42:8 58:19 59:6,7 102:8 105:7 141:6,17 198:20 230:6 242:10 249:12 267:8 287:11 impacted 242:11 284:8 impactful 129:10 impacts 268:11 270:19 270:20 272:8,10 imperfect 22:21 45:5 89:18 177:12 imperfections 89:20 implement 55:14 57:6 79:7 112:9 123:8 133:2 implementation 10:5,7 12:10 implemented 92:13 144:17 163:3 216:19 implementing 247:12 implied 54:15 100:6 importance 151:3 important 37:14,17 44:10,22 47:2 48:3 50:6 56:2,14,19 57:19 72:22 77:14 79:18,18 80:11 92:5,16 111:15 136:22 161:5,6 164:5 182:8,11 195:16 209:16 233:19 240:3 244:13 245:12 246:22 271:5 275:6 importantly 53:5 144:8 149:16 impose 203:10 imposed 281:19 imposing 130:6 135:13 139:8 imprecise 107:1 184:2 imprecisions 173:15 improve 22:17 111:22 129:7 171:17 202:10,20 208:4 210:16,18 235:22 246:8 improved 49:11,19 52:18 55:3,13 112:18 127:9 144:14 147:21 169:7 246:7,7 284:5,9	improvement 49:10 56:1 62:19 243:3,4,5 improvements 49:1 145:14 146:9 243:9 improving 55:19,22 138:5 155:2 236:18 244:20 246:2 inaccessible 219:3 inaccurate 122:1 inadequacies 120:7 inadequate 118:9 250:21 264:15 inappropriate 138:6 165:7 incentive 96:5 153:16 274:20 incentives 155:1 274:17 incentivizes 127:13 include 20:10 41:5,5,10 63:12 144:3 148:21 149:13 168:22 178:1,3 269:4 291:7 included 234:3 includes 59:16 71:16 105:22 141:11 144:2 178:11 251:22 including 48:18 52:1 53:8 137:4 142:3 153:4 168:18 177:10 218:3 270:1 inclusion 177:6 income 29:22 30:3,5 31:11,12,13,14 32:4,6 41:8,10,18,22 95:12 146:2,5 incorporate 47:3 92:21 incorporated 91:3 incorporating 27:11 increase 7:5 10:8 13:15 13:16 14:7 43:7 60:3 132:12 139:11 144:22 146:2 153:1 157:4 214:19 218:16 236:2 244:5 increased 11:5 50:9 51:8 58:11 59:13 109:3 117:3 138:13 147:11 163:10 213:15 235:20 increases 10:2 50:20 51:1 142:7 157:6 213:1 increasing 13:18 58:12 60:21 138:12 152:1 235:8 240:11 241:17 increasingly 56:19 incremental 10:14,15,22 11:2,14,15,20 72:5,6,16	75:17 incurred 287:4 index 59:2,10 indicated 93:20 indicating 55:18 259:20 indication 20:3 indicator 114:20,20 115:11 122:4 indicators 124:2 indifferent 102:7,9 205:7 indiscrete 288:4 indiscriminate 267:7 individual 77:9 82:14 84:10 105:11,15 134:3 154:9 155:22 158:3 159:11,21 179:22 193:21 198:20 237:6 265:5,17 267:2,22 268:3 284:2 individualism 198:19 individualized 193:11 202:18 264:22 individually 84:17 indulge 295:4 industrial 34:17,19 36:6 36:12 159:8 212:16 industrials 36:7,8 44:1 industries 45:12 52:1 104:20 111:10 112:12 125:7 184:13 186:10 212:18,20 278:15 industry 8:11,12 12:17 14:9 16:14 18:15 26:14 42:17 49:4,12 50:3 51:5 51:12 52:14 54:3 55:4 56:3,5 57:2,22 59:15 68:5,12 69:7 87:11 96:20 97:2,11,14,17,18 97:21 98:1,6,19 100:21 109:7 111:9 114:2 117:11,19 119:15 122:7 126:12,19 131:9 137:3 138:6,12 171:21 172:3 202:3 203:11 205:11 206:4,9 210:1 211:12 211:13 212:8,11,17 215:10 216:21 225:13 225:16 226:13,17 229:9 229:15,17 232:10 233:20 242:9 260:13 261:14 263:15,21 264:1 280:4,6 281:16 282:19 283:5 289:16 291:4,12 292:18 293:18,18 industry's 52:16,21 53:1 53:3 55:1 224:10,13
---	--	---	---	--

<p>ineffective 219:2 264:16 inefficiencies 256:7 271:9 271:11,20,22 272:12 273:11 inefficiency 236:22 237:1 inefficient 75:19 179:15 inexact 113:4 infer 28:11 inflation 13:19 49:11 50:22 59:14 133:18 inflation-adjusted 50:11 influence 44:10 103:19 103:20 141:21 173:4 influencing 116:13 inform 63:5 234:9 information 19:2 26:18 39:18,22 43:3,4 47:4 93:22 101:17 239:2 244:22 247:5 informative 46:8 294:17 infrastructure 3:20 52:13 56:19 97:1 98:11 118:9 118:22 119:8,11 149:22 150:3 161:21 163:15,19 164:11 165:11 166:1 209:19 213:4 237:4 266:22 284:18 290:11 infrastructures 131:18 inhalation 290:20 inherent 150:17 238:2 277:12 279:5 Inigo 12:2 initial 66:10,11 67:4 137:20 145:3 initially 174:6 215:14 injury 154:1 inner 81:8 innovation 82:2,6 148:4 155:2 innovative 129:11 inorganic 150:11 input 204:13 205:5 inputs 180:14,16 182:15 239:11,12,21,21 inquiries 206:16 inquiry 84:12 254:10 insight 111:16 143:7 276:13,18 278:6,10 insights 239:3 279:11 inspire 155:2 instance 198:5 199:16 292:6 instances 139:9 192:20 Institute 4:2 209:4 217:6 217:11 institution 13:6</p>	<p>institutional 57:13 institutions 34:8,20 35:16 instructed 19:18 20:1 22:6 87:3 105:17 instructive 78:22 267:1 insult 101:15 insurance 71:22 72:18 intangible 41:5,6,10 105:22 106:1 Intel 17:13 intelligence 88:16 intend 93:17 intending 203:10 intensive 57:2 intent 133:7 198:17 200:17 intentionally 121:15 intentioned 203:13 intentions 281:3 inter-line 253:22 interchange 140:12 232:5 232:7,12 235:8,20 236:2,4,6,22 238:10 250:12 252:20,22 253:4 253:21 254:13 256:10 256:19 257:13,14,16 259:2,5,8,19 260:15 264:6 267:6,11,14,17 267:18,18 268:7,13,14 268:21 269:2,17 273:1 274:8 278:13,17 279:13 interchanged 289:4 interchanges 135:6,12 256:13,21 271:19 280:16 289:2 interchanging 252:18 259:1 interconnects 278:21 interest 30:1 140:5,14 151:2 154:18 157:17 215:7 216:6 218:7 226:22 227:10 240:19 253:8,9 interested 23:6 94:21 195:17 207:19 244:15 244:19 interesting 47:1,2 102:1 104:6 interim 291:14 interject 204:2 206:12 interjecting 113:19 intermodal 51:8 56:10 154:7 198:2 internal 66:17 125:18 international 242:20 interpret 23:15 39:19</p>	<p>40:17,18 42:22 43:2 79:22 80:8 89:7 90:19 135:5 interpretation 104:9,11 195:18 266:17 interpreted 85:11,13 185:10 interpreting 39:21 246:16 interprets 251:18 interrelate 90:13 interrupt 176:1 interswitching 220:20 278:18 279:2 intervention 19:9 218:10 219:21 222:10,11,15 intro 204:3 introduce 15:15 141:1 introduces 237:1 introducing 264:14 274:4 introductory 114:8 intrusive 200:19 intuitively 7:11 invest 17:9,11,12,13,13 48:9 57:17 95:13 101:7 103:12 108:15 110:14 127:14 146:11 147:22 151:9 153:13,16 155:10 164:7,10 166:5 167:6,8 167:19 183:5 191:14 192:17 242:1 243:8 261:19 273:2,12 290:11 invested 27:2,5 29:10,19 30:11 33:18 40:11 43:7 143:12 148:8 149:10 151:14 286:22 investigation 12:18 investigations 98:18 investing 98:14 113:13 141:22 146:7 149:20 152:12,21,22 153:19 160:17 234:16 238:13 242:7 investment 16:13 18:10 21:17 27:16 66:10 72:9 96:3 97:20 114:16,16 114:18,19 115:1,4,8 131:10 141:7,21 143:7 143:9,11,16 144:9,12 144:22 145:3,12,20 146:15,20,21 147:8,12 147:16 148:5,9 149:6 150:2 153:2 160:12 162:18 163:1 178:21 179:22 180:3 183:14 189:3 190:11,14 191:1</p>	<p>191:16,21 192:2,14,21 223:16,19 236:8,10 237:10,12,15,16,18 238:2,5,8,13,18 239:12 240:1,7,9 241:16 243:1 243:22 274:17,20 284:13 293:20 investments 22:17 62:1,1 62:2,5,16 64:10,12 66:11,12,14 67:4,5 141:5,18 142:22 143:13 143:18,21 144:15 145:8 146:16 149:8,13 150:10 150:15,20 151:13 152:2 152:4,19 153:5 161:11 164:15 167:16 178:20 184:1 190:13 213:4,9 236:11 272:22 investor 17:8 57:20 109:13 151:8 166:18 183:4 investors 22:1 50:1 57:16 95:20 96:6,9,12,13 97:7 97:9 99:11 102:14 103:8,17 104:1 142:11 142:14 143:3 145:7 151:11 152:17 153:12 164:12,12 166:11 183:8 242:6 245:1 249:4 invests 166:18 invite 90:1 206:17 invited 5:18 invoke 230:4 involve 75:5 involved 125:14,15 206:7 252:21 282:1 involves 75:21 76:4 involving 252:11 iron 220:10 ironic 245:11 irony 288:13 IRR 144:6 irrelevant 76:11 isolation 76:22 issue 7:3,10 8:17 10:5,6,7 12:10,11,17 48:3 63:3 64:3,17 73:16 91:17 114:2,10 156:18 158:4 158:19 162:8 172:14 176:22 209:16 211:8,19 246:19 247:10 248:17 248:19 249:14 252:15 276:21 277:5 279:15 284:22 issued 6:16 158:12 204:6 232:8</p>
---	--	---	--

<p>issues 47:13 62:18 63:1 64:15 71:21 73:16 114:13,14 128:16 129:20 136:19 139:17 140:19 208:6,8 232:22 233:5,12 244:13 267:4 issuing 136:20</p> <hr/> <p style="text-align: center;">J</p> <hr/> <p>J 2:9,16 3:16 15:16 155:18 James 1:13 Janie 295:9 Jeff 209:6 223:21 245:13 249:21 250:5 255:19 259:3 273:14 274:22 275:20 279:3 288:14 296:7 Jeffrey 4:5 Jerry 2:4 6:10 job 107:20 178:13 234:15 234:18 236:8 281:8 287:4,4 Joe 203:15 John 3:5 140:22 141:8 175:22 192:12 193:2 269:21 joined 167:12 joining 211:16 Jon 295:9 Jose 295:9 judge 89:19 Judges 156:13,14 158:15 judgment 111:7 123:6 July 238:20 239:6 jump 81:6 111:19 168:2 283:16 jumps 21:8 163:7 jurisdiction 123:15 justified 230:6 239:17 justify 19:8 136:14 143:15 146:7 152:4 238:8 Justin 4:3 217:9 278:9 281:13</p> <hr/> <p style="text-align: center;">K</p> <hr/> <p>Kansas 140:11,16 Keats 295:7 keep 12:5 79:8 94:4 99:4 137:9 152:15,20 153:2 172:20 173:3,19 197:20 198:15 212:7 223:6 241:5,12 254:16 256:15 keeping 99:6 118:16 keeps 193:7 198:7,7,11</p>	<p>Kevin 2:9 15:15 34:6 37:9,10 39:5 44:14,16 111:3 Kevin's 27:8 key 219:6 229:5 236:17 283:3 kick 13:16 190:18 191:3 209:6 kicks 13:21 kid 9:21 kill 290:6 killed 12:3 Kim 295:10 kind 10:6 13:2 16:17 46:19 47:3 60:13 62:6 64:20 65:4 69:1,6,6 74:4,22 80:21 81:13 82:21 92:8 98:22 102:1 102:7 109:16 113:19,20 114:3 122:15,17 124:17 125:22 143:3 144:9 153:21 154:10 158:11 163:12 165:18 167:17 175:2 177:15 179:10,21 182:10 183:14 184:13 208:9 211:7 212:13 213:18 216:8 239:7 240:7 249:19 250:3,5 256:2 260:10 263:18 281:1,14 282:15 284:3 289:17 293:17 kinds 10:3 14:19 23:2 46:6 64:9 119:6 125:1 knew 66:10,11,16 know 5:20 7:16 9:19 13:4 13:5,9 14:8,13,15 17:8 19:15 22:22 23:1,17 31:10 34:3 36:5 37:14 40:6,6,17 44:17 47:14 60:9,18 61:9,11,11 62:14,15 63:2 64:3,8,18 65:7,12 66:1,2,3 69:1,4 70:7,17 71:14,16,21 72:22 73:1,22 74:1,6 75:11,17 76:16,17 78:5 78:14,20 79:1 80:10,12 80:14,16,18,21 81:4 82:9,18 83:5,6,22 84:3 84:3,5,17 85:12 87:10 87:10,11,12,13,14,15 87:18 88:4 90:4 92:2,4 92:5,7,9 93:12,17 100:3 100:9,9,10,11,22 101:2 102:21 104:4,18,19 105:22 106:1,2,4,8 107:12 108:4,6,12,13</p>	<p>108:18 111:7,11,13,14 111:20 112:10,14,17,20 113:1,3,8,8,15 114:10 114:11 115:7,9,15 116:20 118:8,12 119:4 119:8,20 120:15,20 122:6,10,11,16 123:4,6 124:1 125:1,3,13 126:4 126:9,15 139:12,13 140:8 150:19 160:4 161:1,7 166:4 167:6 169:3,7,8,8,10,11,18,20 170:2,14 171:11,12,14 171:17 172:14,15,20,20 172:22 173:2,3,7,12,15 174:6,18,20,20 175:1,5 175:9,21 176:2,6,14 177:5,10,13,16,20,20 178:5,14,15 179:8,14 180:17,18 181:17 182:5 182:9,11,14,19 183:12 185:5,6,13,13,14,16,17 187:3,5,16,20 190:4 192:20 195:17 196:22 197:14 198:19 199:5,6 199:18,21 200:15 204:2 204:5,18 205:7 206:13 206:21 208:8 212:7 215:9 216:22 220:10 221:20 222:5,18 223:1 223:3,10,11,11,14,15 223:19 240:16 242:13 245:18 247:14,16 248:6 248:18 250:1,1,11 259:18 260:9 263:1 266:6,18 267:17,19 272:1,14 273:16 276:5 276:7 278:6,16,19,19 278:21 279:19 280:8 281:5,6,8,10,18,21 282:3,3,4,5,6,17 283:3 283:4,16 284:6,12,22 285:1,8 287:13,17 288:1,2,7,15,18 289:20 289:21 290:19 291:4,13 291:17,21 292:4,6,8,10 292:11 293:1,4,7,13,16 294:5 knowing 177:16 186:16 knowledge 124:14 knowledgeable 289:16 296:4 known 12:11 209:21 knowns 88:11 166:19 201:7 222:4 262:12,13 Koch 276:7,16,21</p>	<hr/> <p style="text-align: center;">L</p> <hr/> <p>L 4:10 labor 279:8 laboratory 25:3 lack 225:16 279:8 lacking 231:22 262:5 lag 58:4 lagged 51:1 52:22 53:3 laid 79:11 196:5 Lake 268:7 land 148:12 lane 56:8,8 198:2 language 79:17 86:3 91:7 105:4 277:22 large 49:13 55:9,20 133:11 212:16 234:19 292:22 larger 15:7 largest 128:19 lastly 35:1 151:10 242:12 late 27:12 113:1 118:15 159:6 latitude 225:13 launch 154:5 law 3:12 15:3 128:14 156:13,14 158:15 250:10,17 lawful 255:14 laws 93:13 Laws-Byrum 295:12 lawyer 85:12 93:5 94:2 97:13 lawyers 100:15 layer 264:12 laying 56:12,13 lead 222:14 256:6 257:3 leading 48:7 114:19,20 leads 261:11 learn 23:12 24:14,19 learned 180:18 181:7,8,8 learning 167:13 leave 63:19 64:15 78:20 160:4 187:8 208:14 210:14 293:21 leaves 151:5 lectern 5:15 lecture 32:4 left 6:1 45:19 146:15 147:3 208:22 272:18 left-hand 30:17 43:6 190:22 198:13 legal 85:13 87:8 90:2,13 91:19,22 92:1,18 94:2 128:16 130:12 135:18 225:6 226:13 244:4 250:4 264:20 266:17</p>
---	---	---	--

<p>267:4 277:19 legally 87:5 132:19 legislative 3:14 92:15 155:18 length 186:7 266:8 lengthened 214:4 let's 5:19 18:11 43:5 73:15 76:14 87:20 144:16 161:11 165:20 165:21 166:21 167:5 195:15 196:10,15 197:6 197:9,19 200:1,2 238:19 257:10 261:14 letter 175:18 level 19:4,5,21 21:22 23:16 38:20 39:2 46:12 54:15 84:15 154:8,9 160:16 161:4,13 165:12 184:1 190:8 197:18,21 198:6,6,9 199:5,6 201:11 261:6 277:14 levels 19:20 20:19 38:22 49:22 55:14,19,22 56:16 144:14 278:1 leverage 142:7 240:17,22 241:11 levered 34:9,11 liabilities 31:13,14 liability 32:2 liberty 223:5 license 80:22 life 107:21 291:16 lifecycle 153:18 light 5:22 6:1,4 21:1 145:3 174:12 lightning 114:4,6 limbo 225:11 limit 175:11,13 limitation 174:21 limitations 39:16 40:16 46:8 limiting 133:18 line 21:17 35:13,18 38:1 38:7 39:2 42:8,10,11,12 42:15 45:14 46:11,12 49:19 51:22 54:7,13 81:5 83:4 105:8,17 106:5 109:19 153:2 163:6 164:22 165:3 167:8 174:12 222:3 223:4 236:20 237:11,22 238:11 250:12,20 254:4 256:18,19 257:6 275:14 lines 45:22 78:5 161:1 237:14 238:5 241:12 249:9 273:20</p>	<p>Link 112:3 linked 252:7 liquidating 147:16 liquids 293:17 Lisa 295:16 list 1:6 41:7 295:1,2,3 listen 80:3 110:19 281:5 282:4 288:10 listened 221:21 listening 101:12 221:22 281:7 literally 217:19 234:8 242:9 literature 26:4 27:8,9 28:2,9 112:20 litigate 186:7 litigated 125:22 186:9 litigating 187:21 litigation 27:22 29:2 66:8 66:8 125:19 186:11 188:12 little 12:21 36:9,12 41:12 41:13 42:13 61:14 86:3 93:5 100:11 112:4 114:1 118:2 138:21 163:8 165:12,13 166:22 177:13 189:16 202:3 210:19 213:2,12 220:3 223:2,13 224:20 260:13 284:21 live 257:20 290:1 lived 178:20 240:18 281:22 lives 148:22 LLP 2:17 3:9 4:6,11 loading 283:9,10 loads 145:22 154:16 local 283:19 284:1 location 236:6 257:14 258:9 259:4,9 273:3 274:10 locations 220:4,6,18 221:2 236:3 259:2 267:6 283:9 locomotive 149:19 162:7 162:18 286:12,13 locomotives 113:15 117:14,20 148:14 149:15 162:3,4,14,16 165:17,20 239:8 283:17 logistical 218:19 logistics 211:9 long 31:10 49:15 70:7 71:4,6 114:8 135:15 139:18 148:22 160:5 178:19 185:18,20 195:8</p>	<p>228:11 229:18 232:21 240:20 241:14 250:20 251:22 253:15 258:7,10 258:14,21 260:7 263:6 263:9 282:20 295:1 long-lived 183:22 long-term 7:4,5 55:5 86:16 101:6 103:7,16 103:21 118:3,3 130:17 131:13,15 132:10,21 133:2,18 134:15 135:14 136:3 154:9,20 177:19 178:2 185:12 195:21 198:21 213:13,22 214:21 215:16 230:22 240:4 261:5 264:8 265:6,9,19 287:20 longer 9:8 13:22 59:11 227:12 241:13 288:20 longest 252:22 look 7:11,13,19,20 8:10 9:4 24:13 28:10,16,20 30:11 33:7,20,21 34:18 35:9 36:13,14 37:20 38:1 42:14 43:5 45:2,19 50:16 52:20 59:14 64:9 76:21 77:6 78:10 80:22 86:17 88:13 95:10 99:5 102:17 103:1,5,18 105:14 106:22 109:4 112:10,10,14,17 113:1 115:7,9 116:8,15,20 122:5,9,17,22 124:1,21 124:22 125:2,12 126:3 126:19 143:18 144:16 156:2 161:7,16 168:19 174:6,10 175:10,14 180:7,15 183:7 186:12 196:1 199:3,14,16 215:2 239:2 241:20 245:5 247:11 248:12,13 253:18 257:15 268:12 276:7 284:3 295:19 looked 38:12 109:4 176:5 193:10 looking 7:16 8:1 17:15 23:4,4 26:16 30:16 34:17 43:15 49:21 59:15 62:4,7 70:4,9 82:14 89:2 90:12,21 91:9,15 96:14 106:5 109:15 112:21 123:13 123:21 143:17,19 180:19 183:5 191:13 197:13 209:2 236:9 240:8 249:3 258:19</p>	<p>279:20 looks 13:14 44:21 52:15 86:17 159:15,15 197:4 239:15 looming 242:13 lose 178:15 235:2 losing 275:9 losses 232:11 lost 87:5 174:22 275:5 lot 7:10,12 8:2 12:18 22:11 24:14,20 37:22 38:8 39:1 45:13 65:3 72:4 76:15 79:6 93:13 95:4 108:15 111:10 112:11 116:4 120:6 122:4,7,13 123:12 137:22 138:15 162:4,7 162:13 163:19 169:8 173:13 177:1 179:13 182:13 185:5 196:20 200:13 204:9,10 208:10 211:21 212:19 216:22 241:19 245:16,16 290:18 291:18 293:3,11 293:13 lots 278:21 Louchheim 4:3 217:7,9 278:16 279:19 LOUCHHIEM 290:17 loud 175:5 Louie 157:6 Louis 258:8 267:18 268:4 268:16 Louisiana 258:5 Louisville 226:15 low 38:21 46:10 57:4 89:12,21 145:8 149:1 150:20 151:2 153:14 low-density 172:14 lower 36:17,17 45:10 59:8 142:15 145:6 146:2 147:9 153:1 241:16,18 261:21 271:10 272:12 285:7 289:18 293:16 294:2 lowering 241:17 lowest 154:1 216:7 LTL's 50:21 Lucy 295:10</p>
--	---	--	--

M

<p>magnitude 41:17 main 122:4 168:20 maintain 22:17 56:14 77:1,4,14,19 153:17 161:20 280:9 291:9 maintained 291:11 maintaining 52:12 77:15 96:21 98:10,11 238:7 280:13 maintenance 117:15 146:3 165:10,14 238:14 243:8 major 162:8 213:12 281:19 majority 60:8 98:1 121:19,20 143:1 makers 246:21 making 32:7 45:12 64:10 73:20 97:7 111:19 120:3 141:5 146:10 155:22 158:4 159:22 161:11 176:4 177:2 178:21 179:9 180:3 183:14,22 192:1,14 204:3 215:15 237:12,14 238:2 247:5 269:6 273:19 287:17 manage 236:8 269:13 270:8 managed 269:18 managers 48:9 55:9 managing 2:19 287:9 mandate 90:9 229:6 mandated 228:16 250:16 mandates 88:7 229:10 manifest 283:8 284:2 manned 289:3 manner 75:14 133:12 manufacturers 3:18 209:10,21 210:9 manufacturing 172:2 210:1 211:11 map 86:11 margin 49:8,9,10 241:21 marginal 10:22 11:2,14 11:16,19 261:11,12 262:9 margins 49:1,4,6,18 117:2 146:2 178:13,15 241:19 242:3 Mark 2:13 15:19 25:7,9 46:5,17 91:5 92:1 mark-ups 10:21,22 market 14:22 15:4 17:16 22:4 49:17,20 50:1 51:7 67:17,18 70:8 73:2,6,7</p>	<p>78:15,19 84:10 94:19 122:20 123:22 124:19 129:1,21 130:5 131:8 133:5 134:5 138:3,7 154:13 156:3 168:19 172:17 177:9,11,12 189:21 191:11 193:13 194:5 202:16 213:17 215:4 218:9 220:17 222:21 223:9 229:14 231:9 249:5 260:11 264:13 266:4 277:12,12 market's 67:13 marketplace 23:19 24:5 24:17 81:1 130:1 137:2 143:6 145:9 markets 123:4 125:4 235:3 237:19 242:20 marks 149:16 markup 11:13 73:18 markups 11:11,19 Marty 83:12 99:9 111:19 294:22 Marvin 295:10 Maryland 128:6 mastered 200:16 material 57:7 58:4 materialize 144:4 183:19 238:4 materially 51:1 53:7 127:9 materials 72:15 128:11 210:7 212:22 291:5,10 291:15,18 292:12,20 293:14 math 147:4 mathematically 76:1 Matt 22:9,11 25:6 35:21 76:8 81:7 85:21 86:6 90:22 99:6 104:16 106:19 206:16 207:8 matter 34:16 71:8 75:3 76:2 105:12,19 114:15 204:18 254:17 296:5 mattered 106:17,19,20 Matthew 2:16 mattress 17:10 maximize 142:9 243:1 maximum 73:17 166:19 McGowan 28:8 McGraft 157:5 mean 16:20 20:10 39:11 47:6 65:14 72:3,10 75:13,22 80:9 82:8 84:1 87:7,9 91:6 92:8 94:6 98:9,10 99:12 102:4,5</p>	<p>103:2 104:4 109:14 115:13 121:21 135:5 163:7 166:13 172:1 176:10 181:6 182:3 185:15 191:6 192:19 193:1 194:17 201:7,14 223:8,12 247:15 259:18 266:19 269:1 276:15 279:1 281:2 284:19 287:16 289:2,18 290:19 291:4 292:6 meaning 16:12 90:11 103:4 meaningful 19:2 100:19 116:11,16 117:13 137:15 187:13 188:6,8 meaningfully 138:16 means 12:6,6 39:14,15 80:6 100:16 134:16 184:18 287:12 meant 80:3 204:4 measure 20:5 22:20,20 23:5,11,17,19,19 24:14 26:2,6 27:17 28:6,21 29:8,13,18,19,21 30:5 42:10 45:14 58:16 59:16 62:16 63:20 64:13 65:21 66:15 71:16,20 81:9 87:22 88:3,20,22 89:5,6,9,15 89:17,19 120:20 161:13 178:3 248:3,21 266:12 measured 24:16 29:20 45:20 47:10 178:8 184:6,8 248:14 measurement 121:22 123:19 154:21 277:7 measures 23:2 24:6,9,12 25:1 28:4 29:1 37:14,16 38:14 39:4 45:4,5,6,6 46:2,5,9,15 62:6 63:16 97:22 107:1 121:13 280:2 measuring 18:21 19:7 26:20 86:16,18,19 88:11 124:6,9,18 186:17 203:1 meat 186:1 mechanical 8:8 mechanism 272:17 mechanisms 190:18 191:3 median 18:3,7,9,18 21:19 35:14 36:1,2,9,15,20 38:4 47:8 104:21 medium 50:16</p>	<p>meet 202:19 231:5 247:18 meeting 119:22 192:21 meetings 158:10 221:11 member 3:11 15:14 48:1 76:7 78:18 81:12 84:18 85:1,5,15 88:1 90:1 91:13 93:3,8 94:4 95:3 96:8,19 98:8 100:8 101:11 115:18 117:5,10 117:22 119:18 120:22 121:17 123:14 124:4,16 125:5,21 126:5 128:9 128:21 137:8 163:22 184:3 186:4,15 187:6 187:22 188:7,11,19 189:2,7,10,19 191:4,9 193:14,17 195:4,11 197:2 199:20 202:1 203:2 206:11 207:5,12 209:13 217:8 224:1 225:3 233:17 235:17 243:18 275:18 276:3 277:4,17 279:10 280:20 289:14 290:12,16 294:8 294:12 members 5:18 6:14 137:12 138:10 141:8 154:19 172:19 208:13 210:2,8 211:7,22 212:3 212:6 213:6 214:20 215:7,12 216:7 218:1,8 218:18 219:10,14,20 220:2,2,20 221:12 223:1 224:8 278:10,11 278:17 296:4 membership 158:20 Memorial 1:13 memory 276:20 277:3 mention 79:2 212:10 213:3 284:20 286:20 mentioned 46:17 82:20 92:19 125:8 126:10 172:8 211:17 245:17 merchandise 154:6 mere 134:7 merely 135:10 merger 270:2 mergers 28:18 merits 226:3 269:2 message 34:13 40:17 87:9 207:3 221:3 280:9 messages 79:6 82:9 met 169:4 251:7 method 70:2 158:22 176:11,12 251:9</p>
--	--	--	---

<p>methodologies 17:18 121:12 129:15 132:15 181:9 183:1 219:1,5 methodology 17:2 54:4 65:9,10,18 69:14 73:18 74:21 105:21,21 132:5 132:14 134:7 168:14,15 180:21 181:6,14 183:2 188:17 196:20 245:21 methods 33:13,13 metodologia 14:15,15 metric 27:6 40:6,10 108:10 143:18 203:14 203:15 244:21 246:2,6 246:10,15 247:1,9,14 248:16,19 metrics 55:21 Meyer 295:9 Mi 14:14,15 Michael 4:10 microphone 223:20 mid-American 252:14 mid-Atlantic 258:3 MidAmerican 254:18,22 255:12 260:3 middle 18:8 40:13 151:6 midstream 211:4 Midwest 172:5 Mike 245:8,17 277:18 295:10,11,11 Mike's 288:1 mile 56:12,13 mileage 288:17 miles 149:13,17 164:2,2 196:8 285:19 286:19,20 million 35:4 105:13 107:11 149:14 196:11 196:16,18 197:14,15 210:12 292:9,11 millions 210:4 217:19 282:17 mind 8:8 74:22 160:3 173:18 256:15 257:19 mine 6:17 minimize 236:13 minimizing 236:17 minimum 139:1 minus 29:10 31:16 33:18 35:9,20 39:9 107:6 minute 5:4,11 93:4 221:20 minutes 6:1,5 44:13 128:2 232:6 240:15 misconception 8:18 misinterpret 246:3 mission 83:9</p>	<p>Mississippi 283:6 mistake 46:1 98:4 mistakes 167:14 misunderstanding 76:20 mix 51:6 58:15,17,20 59:6 64:17 172:18 MMM 196:20,21 197:4 Mobile 268:15,17 mode 231:7 model 69:4,6,8 71:6 130:4 144:17 162:10 182:4 216:9 modernization 280:18 modes 51:19 231:17,19 231:21 280:3 modification 176:17 modifications 168:16 204:15,16 modified 168:13,14 204:9 modifies 136:7 moment 18:11 39:6 176:1 204:2 238:15 249:14 moments 220:9 money 17:9 95:6,16,20 95:21 96:6 97:8,8 99:4 100:21 108:15 166:1,3 179:10 225:9 moniker 16:2 monopolistic 222:8 monopolize 71:13 monopoly 82:19 83:14 261:18 Montgomery 268:18 months 172:10 280:1 Montoya 12:2 Moreno 4:5 223:21 224:3 250:13 251:11 254:15 256:4 259:16,22 260:16 260:19 261:1,9,16,22 262:3,19 263:3,7,11 264:11 265:7,13,21 266:10 268:22 275:1 276:1,19 277:8 295:22 morning 6:8 15:13 76:7 91:2 110:20 111:8 127:22 128:2 184:3,4 194:1 morning's 223:12 mother 172:6 motion 286:6 motivate 188:4 motor 218:22 293:11 motto 243:12 mouse 77:9 78:21,22 mouseholes 79:10 mouth 104:17 246:9</p>	<p>move 88:20 98:5 104:16 127:10 173:1 192:22 210:6 215:11 230:9 234:22 236:13 238:4 273:5 279:8 283:8 284:2 291:14 292:12,20 293:1,3,13 moved 172:18 176:2 291:14 movement 14:2 97:16 134:4 135:2 194:5 286:22 movements 168:18 169:1 169:4 171:1 177:6,10 177:12 217:2 moves 292:9 293:2 moving 32:10 64:14 85:21 173:4 237:13 284:12 285:10 286:4 291:5,14 multi-stage 68:3,13 69:3 69:13 70:1 181:8,18 182:1,3,15,18 multi-stages 69:1 multi-year 7:13,22 8:7,15 16:17 55:12 116:20 multiple 49:17 50:1 180:19 183:11 219:10 260:17 multiples 109:19 183:11 multiplier 148:18 149:2 Murphy 2:9 15:15 22:8,9 37:13 44:17 61:20 62:13 63:9,22 64:8 65:1 65:10,14 85:17 86:8 88:18 91:2 94:1,6 95:18 96:11 97:12 111:3 121:8 -muted 236:5 mutual 48:8</p> <hr/> <p style="text-align: center;">N</p> <hr/> <p>N 5:1 nail 281:14 nailed 66:5 name 6:9,12 48:5 128:3 140:22 158:6 209:18 217:9 221:11 276:4 names 295:3 narrow 228:5 NASA 294:19 Nasca 3:16 155:18 Nashville 157:22 226:15 nation's 56:11 128:19 154:18 155:11 national 1:14 2:8 3:10</p>	<p>128:8 137:4 nations 221:2 natural 61:12 87:12 94:11 112:13 naturally 51:3,14 89:14 103:18 116:13 233:1 nature 172:6 214:15 225:12 263:10 navigate 268:3 286:1 near 152:16 165:18 198:16 nearly 141:14 148:12 149:14 160:8 162:16 224:18 necessarily 11:3 60:14,15 63:11 75:13 81:21 90:6 109:15 163:9 190:19 243:3 248:22 251:17 260:15 261:10 273:12 294:1 necessary 77:4 243:8 266:1 277:15 necessitates 267:21 need 20:20 24:3 38:19 40:18 44:13 64:16 77:16,18,22 87:12 91:17 92:5,7 95:13 108:15 129:19 160:21 161:8,10 167:2,3 170:1 175:6 176:11 202:18 203:17 204:16 206:15 221:4 225:22 228:9 231:19 238:7 239:8 240:6,11 242:22 246:15 247:8 250:22 254:16 259:20 260:2 264:7 268:21 280:9 281:17 287:16 292:15 needed 20:19 22:16 92:7 213:10 230:18 231:11 239:9,20,20 250:21 254:13 273:2 needs 7:20 77:11 78:15 78:16 148:9 155:12 169:18 170:2 190:8 193:10 196:18 217:1 237:7 238:5 244:17 268:11 negative 145:4 272:8 287:19 negotiate 156:18 negotiating 240:21 negotiations 199:8 222:20,22 neither 110:18 262:13 290:2</p>
---	--	---	---

<p>net 21:18 30:18 31:17 62:19 63:20 143:8 148:10,13,17 195:19 196:2,2,9 275:13,15 network 4:8 56:18 145:19 149:1 150:14 161:1 162:11 198:12 201:18 215:13 216:18 234:6 238:1 239:7 240:6 241:6 242:7 266:22 272:1 273:15 284:3 287:12 networks 22:17 never 6:6 28:21 41:21 70:12 new 3:13 27:10,10 56:13 62:1,1,1,16 95:14 96:17 134:7 144:17 145:6 146:9 149:11,14 154:5 155:8,18 156:7 157:21 172:11 176:11 184:8 186:5,17 225:10 232:7 237:16 238:6 240:1 257:20 258:12 259:2 267:19,20 268:4,14 269:2 newer 149:19 nexus 129:17 NGFA 127:20,21 128:11 128:19 129:4,12,19 130:10,15,18 131:19 132:9 133:1,7,13,21 134:6,12 135:4,9,12 136:2,12 137:16 138:8 168:2,12 169:7,11 170:9 172:19 176:16,19 177:5,20 186:2 188:10 NGFA's 128:14 135:18 136:15 138:10 170:18 170:21 171:2 187:18 nice 25:3 282:2 nicely 44:12 nickel 291:19 night 285:3 nitrogen 218:13,14 noisy 26:19 28:5 37:3 nominal 63:6 non 292:10 non-bottleneck 135:2 non-competitive 191:11 non-contract 133:16 non-exempt 133:16 non-goodwill 41:5,6,10 105:22 non-price 112:18 non-rail 264:14</p>	<p>non-railroads 43:22 non-railway 30:3 non-TH 292:9 NOPB 267:22 Norfolk 2:6 46:21 220:8 258:2 270:1 norm 145:10 normal 68:18 223:9 Normally 286:3 north 56:17 129:22 159:8 234:5 287:21 northeast 258:3 northern 226:14,21 227:7 228:16 Notable 228:13 notably 51:8 53:2 61:1 note 50:7 212:3 noted 71:15 130:18 notes 222:1 notice 204:13 noticed 61:17 177:21 noting 50:22 52:11 notion 10:18 75:7 94:17 278:13 notions 94:7 November 128:12 Novins 295:17 NPV 143:8 144:8 145:4 146:6 NS 185:19 247:20 258:13 NS's 268:1 number 38:3 41:1,4 69:5 71:8 73:1 78:2 87:5 88:4 94:18 104:5 107:11 108:20 121:10 123:13 126:12 149:17 164:3 169:13 172:2 175:6 180:6,17 189:17 208:1 231:7 264:17 numbers 16:19 32:7,8 numerator 29:18,21 30:6 32:8 41:8,16,22 nutshell 32:3</p> <hr/> <p style="text-align: center;">O</p> <p>O 4:5 5:1 O'Boyle 295:6 o'clock 208:16 Oberman 15:14 48:1 76:7 78:18 81:12 84:18 85:1,5,15 88:1 90:1 91:13 93:3,8 94:4 95:3 96:8,19 98:8 100:8 101:11 115:18 117:5,10 117:22 119:18 120:22 121:17 123:14 124:4,16</p>	<p>125:5,21 126:5 128:1 137:8 140:22 163:22 184:3 186:4,15 187:6 187:22 188:7,11 189:2 189:7,10,19 191:4,9 193:3,14,17 195:4,11 197:2 199:20 202:2 203:2 206:11 207:5,12 209:13 217:9 224:1 233:17 235:17 243:18 275:18 276:3 277:4,17 279:10 280:20 289:14 290:12,16 294:8,12 obfuscate 59:19 objections 224:19 objective 228:20 266:12 objectives 226:3 228:21 251:19 obligations 139:20 observations 137:20 observing 260:3 obsolete 287:6 obstacle 250:9 obstacles 250:6 obtain 182:7 216:4 227:20 247:4 obtaining 219:18 obvious 189:11 276:14 obviously 19:6 52:13 63:2 71:14 72:22 80:13 90:18 108:14 126:11 173:12 177:8 186:22 203:2,5 205:6 218:18 278:21 284:5 289:15 occasion 102:20 occasionally 6:5 occur 134:11 219:14 222:18 256:16 264:17 occurring 89:13 OD 171:7,8,9 offer 15:3,6 137:20 176:3 213:18 246:3 offered 230:11 offers 187:9 office 160:14 195:6 officer 156:19 234:2 oh 33:9 74:19 75:20 82:16 89:17 103:11 104:7 109:4,9 110:22 112:6 120:14 168:14 174:2 181:21 199:4 266:10 oil 129:2 okay 5:20 6:6 10:1 11:8 13:11 14:11 58:2,2 59:9 61:7 71:12,13 73:12</p>	<p>76:5 83:17 84:18 85:1 113:22 114:8 120:18 160:10 184:4 197:8 262:2 266:14 276:3 old 40:1 98:9,21 120:9 156:6 159:3 172:17,17 226:18 oligopoly 263:15 264:1 Olin 285:5 288:14 omit 79:13 omitted 76:10 omitting 76:13 once 38:1,11 133:9 150:17 167:1 195:6,21 197:17 224:9 285:20 one-fifth 56:13 one-half 44:5 ones 68:14 124:3 283:7 online 172:11 268:6 open 86:2 93:21 127:18 137:18 188:15 223:6 232:11 246:9 256:2,6,9 259:11 295:18 opened 205:15 opening 224:22 265:20 271:17 274:7 operate 34:11 128:22 220:20 273:6 283:17,18 286:17 287:5 operated 283:19 operates 201:20 249:5 operating 29:22 30:5 49:1,3,8,8 118:12 130:3 144:17,21 145:17 146:4 146:5,9 147:21 149:12 161:17 162:9,10 178:14 234:2 236:8 239:15 270:2 278:18 281:19,21 293:19 operation 97:21 98:7 273:1 operational 232:16 237:18 243:22 269:4 operationally 232:12 operations 4:9 95:14 211:5,10 213:10 218:19 220:11 234:7 237:7 241:4 282:18 290:1 operator 267:5 285:11,12 opinion 57:14 211:22 opinions 215:10 opportunities 94:8 96:3 150:12 166:5 278:12 opportunity 6:9 25:13 48:2 94:8,12 131:20 175:9 205:12 207:4</p>
---	---	--	--

209:14 212:9 216:15 217:22 220:15 233:18 243:20 245:4 255:13 258:16 269:7 288:8 opposed 113:19 170:22 173:3 211:15 230:10 242:6 opposite 22:6 117:18 273:4 opposition 137:13 224:13 opted 208:5 optimal 231:16 optimistic 12:20 14:8 optimize 289:22 option 102:10 248:13 257:2,4 258:6,22 293:9 optionality 268:5 options 17:15 21:17 47:15 122:6 125:3 150:18 oral 158:11,11 orange 42:15 order 56:19 100:19 114:17 123:8 158:21 179:10 180:16 188:17 236:1 240:9 286:22 ordered 140:15 orders 136:8 162:7 ordinarily 229:18 organic 150:10 organizations 130:22 origin 134:17 171:22 228:8 253:3 258:7 260:5 originate 258:1 originating 140:1 Orleans 257:20 258:12 267:19,21 268:4,14 269:2 Orrison 269:21 ought 16:6,16 91:9 outbound 286:11 outcome 75:19 152:12 153:15 222:22 228:16 233:9 271:21 outcomes 152:9 outdoor 235:6,7,11 outlier 109:8 174:2 outliers 173:22 174:6,8 outlined 221:17 outside 48:22 51:5 96:4 141:2 242:18 outweighed 241:4 over-arching 265:6 over-emphasize 131:2 over-recover 138:15	overall 8:10 49:20 135:2 139:15 157:13 213:20 215:13 235:3 275:16 overarching 273:8 overlap 233:5 overlooked 275:7 276:17 overly 154:16 overridden 250:17 overruled 134:14 overruling 135:21 overruns 144:3 oversee 211:4 oversight 111:22 137:1 222:9 overstaffed 179:14 overstated 53:22 54:1 110:9 overstatement 119:1 overstates 226:17 overtime 146:2 overwhelming 26:4 57:20 overwhelmingly 164:14 owned 291:11 owners 147:10,14 152:5 152:11 owning 284:10	paraphrase 166:9 paraphrasing 74:11 parenthesis 99:20 part 9:13 12:15 25:21 27:3 33:19 34:16 36:8 68:18 70:9 73:16 74:8 78:5 80:11 90:21 111:21 119:19 120:7 132:4 133:11 135:3 137:4 158:3 164:3 168:20 171:22 178:19 183:16 191:15 202:14 212:14 213:5 222:20 223:8 237:12 244:13,14 247:12 252:8,13 267:9 267:10,10 273:19 275:1 284:20 286:5 287:4 288:7 291:7 parte 157:3,6,7 176:16 184:18 205:14 221:10 224:14 225:7,10 233:8 233:13 partially 235:19 participant 5:17 participants 294:15 participated 221:10 particular 33:1 35:15 37:4 40:10 78:11 123:1 140:12 199:10 221:15 224:5 251:7 259:7 271:21 274:1,13,18 283:12 284:22 particularly 169:10 172:5 213:17 214:13,22 224:12 237:16 244:1 289:12 particulars 212:2 parties 46:19 252:20 275:22 Partner 2:16 3:8 4:5 parts 25:21 26:22 98:2 200:1 party 211:16 pass 192:12 235:13 passed 256:5 passing 37:21 224:7 Patelli 3:5 140:20,22 163:14 173:10 175:4 193:3,15 194:16 195:10 195:15 197:3 path 89:3 203:1 paths 88:19 Patrick 118:2 119:7 176:1 255:18 294:22 pause 146:13 pay 5:8 41:21 75:8 77:16	85:16 95:16 97:8 102:21 105:9 118:21 119:11,20 241:15 242:2 291:17 292:12,19 293:13 paying 74:9 119:3 159:16 pays 44:17 PC 128:14 PE 49:15 109:19 183:10 Pelkey 3:4 141:3,8 160:8 161:5 163:7 164:2 165:8 166:14 178:5 179:5 180:5 181:4,20 182:12 189:1,6,9,18 190:4 191:5 192:11 pending 132:5 187:9 221:15 Pensacola 268:17 people 9:2 13:5,9 26:11 73:22 94:13 96:1,4 100:20 102:10 114:3 158:10 159:16 191:18 196:21 199:2 208:9 217:18 perceived 50:1 188:1 percent 18:1,6,8,10,14 19:3 35:22 36:1,3,4,10 36:15,16,17 38:5,6 39:8 39:11 40:9,9,12 43:7,10 43:11,12,14,15 44:2,3,5 44:6 48:16,19,20 49:7,8 50:10,13,19,20,20 51:9 51:10,12,13 52:5,7,7,9 52:19,19 56:7 57:16 58:11,12 60:2,3,4,5 72:8 80:14 81:17 82:4,5 93:16 99:13 101:22 102:2,3,6,9,11,15 104:21 105:6,9,19,20 106:3,14,15,15,15 108:20 116:6 118:21 119:4,11 121:2,5,5,6,10 121:18 129:2 144:21 145:18 146:4 150:21 157:7 162:11 166:22 168:18 177:7 178:14,14 178:15 190:14 196:16 196:17 217:15 218:16 284:9,11 290:21 291:2 292:8 percentage 18:4,7,14 99:14 113:12,12 116:9 116:14 117:7 119:9,10 124:15,18 196:13 247:19 percentages 113:20
--	---	---	---

<p>percentile 107:10 perceptions 55:22 perfect 9:19 64:13 132:20 177:8,17 183:2 194:20 261:17 263:13 perfectly 88:22 147:3 194:19 261:13 262:6 perform 25:2 performance 8:1 26:16 29:9,13 35:8 36:2 45:9 45:20 48:13 57:1 61:17 110:12 112:11 143:3 147:21 154:8 200:19 202:13 244:21 performed 36:9 37:16 performer 222:17 performing 36:20 43:21 performs 24:14 period 7:13,17,22 8:2,7 33:8,9,21 36:2,10 39:12 42:13 49:4,7,15 52:4,10 66:19 70:8 116:20,22 116:22 117:1,17 162:5 172:22 177:20 179:20 184:22 permanent 117:21 permit 20:19 91:22 permitting 227:12 person 25:15 101:12 263:1 270:20 271:10,10 272:11 personal 13:2 154:1 195:4 206:1 personally 13:5 175:19 199:15 personnel 211:9 perspective 25:20 26:21 29:6 40:19 43:20 44:11 44:22 113:16 141:16 170:18 182:10 206:4 237:10 239:13 240:5 255:22 256:22 257:1 258:20 259:6 263:10 264:19,21 284:17 perspectives 180:20 245:15 pertains 259:6 pertinent 135:21 232:22 233:1 petrochemical 3:18 209:10,20 210:1 211:11 Ph.D 2:9,13 Phelps 68:6,10,11 philosophy 260:3 phone 287:14 phones 5:5</p>	<p>phrase 88:6 90:3 91:16 physical 242:10 283:12 pick 30:18 87:4 107:5 135:6 160:19 201:14 258:5 284:1 picking 198:7 268:19 278:1 picture 7:22 pie 241:21,21 242:3,4,5,7 piece 14:3,4 283:4 pieces 14:2 274:11 pipeline 293:2,3 pitching 204:21 pivoting 207:18 place 65:17 100:17 131:15 215:15 228:13 235:17 238:22 240:10 256:14 259:18 283:22 places 22:21 122:16 179:15 264:17 282:14 placing 22:2 plan 146:9 154:5 236:9 237:3 238:18,21 239:15 268:11 270:2 283:22 planner 267:5 271:4 planning 4:9 118:3 234:6 238:12,16 240:4 273:21 plans 141:12 plant 30:18 242:10 258:5 283:12 platform 154:6 play 81:8 182:22 187:4 194:22 246:13,14,20 253:12 275:3 playing 154:11 294:6 pleading 276:4 please 5:5 6:3 63:5 69:4 76:6 176:13 207:15 pleasure 15:15 141:1,9 plenty 283:5 plugged 169:2 plus 35:17 47:7 49:11 50:22 52:19 79:19 80:1 85:9 102:17 196:8 226:18 pockets 84:10 202:17 podium 137:6 point 43:9 46:14 53:11 59:10 67:8,12,12 73:20 80:17 83:5,8 88:8 90:12 97:17 100:9 102:14 108:5 109:17 111:1,13 111:19 114:7 118:15 121:1 127:8 140:12 162:2 170:20 177:1 182:1 184:12 186:20</p>	<p>187:7,18 191:8 192:11 193:22 194:16 195:15 198:19 208:1 212:18 213:11 215:22 220:12 222:16 223:20 225:20 234:2 242:12 249:6 252:22 253:4 268:13 272:9 277:13 279:3 282:2 284:6 289:6 pointed 88:10 189:4 points 18:5,7,15 172:1 252:21 257:21 268:21 268:22 269:6 278:13,17 279:13,16,17 policies 77:12 218:9 229:13 249:11 250:14 policy 108:6 210:21 246:18,21 255:21 259:5 264:20 267:3 274:18 287:18 policy-basis 135:13 political 100:11 politically 159:12 poll 100:22 polling 100:11 poor 26:6 pop 287:9 population 24:13 217:18 portfolio 48:9 portion 135:2 176:6 288:17 portioned 200:8 portions 246:17 pose 191:22 posed 189:7,11 191:21 position 127:3 170:22 174:19 175:3 178:7 211:18 227:17,18 247:17,22 289:11 positions 234:4 positive 55:18 131:8 143:9 144:8 146:6 202:14 220:14 272:21 288:22 possess 152:13 possibility 221:8,9 possible 59:22 60:7,17 73:5 76:2 97:19 114:5 225:14 240:14 241:9 247:2,5 possibly 151:17 261:21 post 175:7 potential 17:8 31:22 50:2 57:14,21 59:16 103:13 126:15 142:16 143:18 144:11 150:18 171:15</p>	<p>171:20 216:18 220:15 241:5 244:16 271:3,19 278:11 potentially 92:21 102:16 103:6 216:1 219:8 252:2 Powder 237:19 power 57:9 58:4 59:20 60:13 84:10 129:21 138:7 202:16 215:18 237:6 279:8 PP&E 54:12 practical 10:4,4 122:12 187:7 266:18 practically 194:22 282:8 practice 24:15 25:3 37:16 46:15 65:19,21 practicing 250:2 practitioners 156:12 250:2 pre-Chairman 175:7 pre-Staggers 203:9 precedent 134:22 226:14 228:1 251:13 precise 86:21 90:11,17 183:20 207:1 214:15 precisely 137:2 151:22 precision 130:3 precision-scheduled 55:15 preclude 21:12 221:5 precludes 226:15 predated 175:7 predatory 79:5 189:21 predicated 225:21 predicted 26:2 267:12 predictability 236:15 237:13 238:12 240:14 269:8,14 predictable 282:21 predominant 258:9 predominantly 181:4 211:5 212:11 prefer 151:14 preference 139:22 140:9 140:12 228:20 preferred 30:12 preliminary 137:16 premise 145:13 247:6 premium 70:8 144:2 292:8 prepare 12:4 prepared 240:7 243:14 296:4 prerogative 277:2 prescribe 230:13</p>
---	---	---	---

<p>prescribed 201:11 275:2 prescriptive 86:4 173:2 presence 77:20 present 21:2,15 35:10 48:2 90:2 143:8 234:6 252:15 269:7 presentation 5:15 16:2 22:8 25:21 27:3 87:4 104:18 111:7 121:19 188:21 248:6 249:1 277:10 presentations 93:10 280:11 presented 86:10 270:1 presenting 128:7 presents 48:13 preserve 151:15 President 3:4 4:8 128:4 141:4,10 234:4,5 pressed 142:21 164:7 pressing 116:5 pressure 117:6 118:4 164:6 218:19 293:11 pressures 116:2 126:22 160:20 164:4 242:21 presume 134:16 171:16 254:12 presumed 174:1 presumption 136:13 251:5 pretty 16:22 17:21 40:2,7 109:4 113:4 121:10 122:15 179:6 182:4 291:6 prevail 227:17 prevent 13:17 136:10 previewed 104:20 previous 43:11 143:1 209:5 215:5 230:2 previously 136:2,12 price 9:14 10:2 12:21 14:6,8 49:14 57:8 64:11 112:15,15,16 113:10 115:10,16 133:4 227:22 241:15 257:7 258:21 262:8,15 271:9 272:11 273:5 274:13,15 priced 75:16 133:19 292:21 293:10 prices 63:15 67:17 75:4 76:4 79:4 98:9,10 113:18 117:3 123:4 pricing 10:20 49:11 50:4 50:5,14,17,19,22 51:1,5 55:3 57:9,18 58:4,4,5,6 58:9,16,21 59:2,20</p>	<p>60:12 61:2 79:5 99:17 101:5,5 102:15 123:9 261:12 262:5 263:13,16 263:19 272:13,15 273:10 277:12,13,15 primarily 48:8 primary 71:17,18,19 72:2 158:19 Princess 12:3 principal 3:12 7:15 62:15 128:13 141:22 principle 22:14 220:17 227:8 principles 32:9 278:4 prior 62:21 87:12 102:14 116:22 117:1 149:18 199:12 201:21 211:16 219:13,13 239:18 269:22 priorities 150:7 priority 150:3 211:8 216:7 private 210:22 pro-competitive 202:14 228:21 probably 7:20 15:7 23:18 23:22 28:16 44:13 45:3 62:13,19 63:18 64:17 73:10 111:15 112:7 117:19 119:13 120:20 123:12 147:4 165:13,19 179:15 185:19 193:1 207:17 215:6 216:6 242:16 245:13 247:20 257:11 279:4 285:3 289:9 291:15,16 problem 7:14 10:16 11:12,21 12:8,9 13:10 67:11 72:4 104:8 108:1 120:19 145:1 159:13 174:5 175:8 203:15 274:13 problematic 254:1 problems 10:3 14:10,19 14:20 89:4 129:13 203:21 procedure 15:5,6 proceed 103:20 136:20 226:6 proceeding 6:14 8:20 15:2 122:21 124:1 132:7 186:2 225:5,10 226:4 270:2 288:7 proceedings 14:16 132:5 134:6 218:2 proceeds 151:12</p>	<p>process 84:17 129:1 141:5 148:2 159:19 175:1 213:6 214:15 221:16 238:16,19,20 244:18 processed 286:10 processes 129:8,15 172:21 219:18 produce 145:21 210:2,5 produced 48:20 producing 129:10 product 61:11 270:12 271:6 279:9 284:14,14 292:17 293:2 production 258:4 productive 14:17 113:14 206:9 productivity 49:12 55:14 82:7 114:21 164:17 179:19 products 135:22 210:4,11 210:14 236:14 professionally 221:1 professor 2:4,11,13 6:10 15:15,17,19,20,22 16:1 17:22 22:8,9 85:17 86:7 86:8 88:7 91:1,2 105:21 125:8 169:10 248:11 261:2 Professor's 16:2 professors 16:21 17:16 19:11 20:15 21:2,14 46:22 61:16 181:17,22 profile 152:14 197:5,8 profit 20:11,13 74:2 79:20,21 80:1,6,14,15 80:15 82:1,4,5,18,21 83:2,7,15,21,22 85:4,10 86:13,22 88:7 91:7 92:3 94:7,10,15,16,22 131:7 257:8 profitability 28:12 94:10 131:17 profits 19:8 81:3 82:20 83:14 147:6 261:19 program 6:11 208:5,12 progress 154:11 progressed 285:17 progressing 285:18 progressively 241:18 prohibited 133:15 prohibiting 79:5 226:20 project 119:2 144:2,7,7 153:4 183:18 projection 165:2 projections 68:4 182:5</p>	<p>projects 147:22 148:3 150:17 152:13,21 153:1 153:14,17,19 155:10 239:17 240:1 prominent 80:3 prominently 73:1 promise 12:22 174:17 175:10 promote 10:17,18 56:20 78:7 218:8 222:11 275:11 prompted 207:20 promptly 208:16 proof 137:14 250:22 proper 16:5 248:2 properly 82:19 83:14 154:20 216:19 properties 267:22 property 30:18 72:9 proportion 242:5 proportional 226:20 proposal 7:4,6 10:8 12:9 13:15,20 14:20,21,21 100:16 104:7 134:13 170:10 176:3,4 186:5,9 186:19 187:11 188:8 193:20 203:3,19 214:11 214:20 216:15 224:12 224:17 225:13 233:6 241:10 244:2,5 249:6 249:15 proposals 14:17 15:11 46:20 47:19 101:9 104:5 184:6 203:8 204:5,15 213:13,16 216:7,11,17 218:2,7 233:7 243:21 244:1 propose 27:4 168:13 proposed 10:2 14:6,12 15:3 123:22 130:13,22 132:13,14 136:21 150:17 176:3,17 177:6 200:12 203:5 214:6 226:9 230:17 231:2,10 234:14 240:18 244:5 264:12 294:3 proposes 187:12 230:20 proposing 204:8 proprietary 55:8 protect 135:14 253:16 275:4 286:13,22 287:1 protecting 14:18 protection 13:12 264:9 265:6 273:9 protections 7:7 13:13,21 14:1 134:13 274:8</p>
---	--	--	--

<p>prototypical 72:8 proud 155:6 prove 194:4 232:15 proven 219:2 provide 20:22 22:18 77:3 78:13 93:22 96:22 97:1 119:7 120:2 130:9 131:6 134:19 141:15 142:10 143:7 151:7 152:3 187:13 198:4 216:15 219:22 223:21 230:18 231:11 234:16 237:11 241:10 250:12 250:21 258:20 271:5 provided 35:1 163:17 190:9 194:11 211:14 212:12 245:15 provides 131:14 154:7 188:16 231:8 238:21 providing 165:9 209:14 234:15 provisions 253:15 274:5 proxies 65:13 proximity 122:11 286:14 proxy 22:21 26:7 62:3 PTC 162:21,21 163:4,13 286:22 public 1:6 48:10 140:5,14 154:18 publication 157:5 199:1 199:2,4 publicly 17:4,6,17 34:4 154:14 209:3 published 52:17 74:20 156:9 157:4 pull 100:21 162:13 181:10 182:17 purchase 144:18 purchases 149:19 Purdue 128:5 pure 256:6,9 purpose 105:16 225:14 226:4 purposes 65:7,13 75:12 80:18 83:3 105:11,16 196:10,16 197:12,12 248:5 251:19 255:12 pursuant 231:1 pursue 144:8 248:22 pursuing 82:13 171:15 249:1 put 15:9 26:8,9,21 29:5 31:4 32:1 40:18 43:19 44:11 46:19 61:9 76:9 77:10 86:1 88:17 91:14 95:20 96:14 104:5,17</p>	<p>153:12 158:6 160:15 162:7 189:3 246:8 254:20 255:15 257:16 266:7 269:20 276:22 280:11 283:22 285:12 285:13 286:6 puts 218:18 239:4 putting 16:3 19:13 44:22 46:20 213:19 263:17</p> <hr/> <p style="text-align: center;">Q</p> <p>qualified 139:21 qualifies 85:19 251:17 qualitative 193:13 quality 114:21 115:10 quantitative 193:12 quarrel 78:19 quarter 59:4 quarterly 55:9 116:4 quarters 153:22 question 12:15 16:5,15 16:22 22:15 66:7 72:10 76:13 79:16 99:15,16 100:1,5,6,12 101:1,2,3 101:8,12 106:9,15 120:5 125:6 126:9 146:14 160:6 161:6,6 164:3 166:8 173:7,11 184:5 188:20 189:8 191:22 192:5 193:4 207:16 246:4 253:1,14 272:7 275:12 278:8 279:21 290:4 questionable 74:16 questioning 85:22 questions 5:17 69:17 79:22 95:4 115:19 140:18 155:14 159:22 160:2,11 206:15 217:4 233:19 244:9 245:6 quick 163:14 166:8 168:1 195:3 201:7 quickly 31:15 40:20 206:12 Quinn 295:17 quite 8:13 34:10 38:21 57:15 58:16 108:19 117:18 120:9 161:14 233:1 242:16 261:22 quo 280:8,10,13 281:14 281:18 quota 165:1 quote 12:2,4 28:7 227:4 228:6 253:2,4 255:15 quoted 169:11</p>	<hr/> <p style="text-align: center;">R</p> <p>R 5:1 R/VC 168:6 197:6,9,19 292:7 R/VTM 168:7 race 70:13 Rachel 295:11 radical 13:14 rail 10:12 48:12,16 49:4,6 49:21 50:4,5,14 51:5 52:7,16,17,21 53:2,17 54:3 55:4,6,8,11,16,19 56:1,12 57:5,18 58:4,5 58:9,11,16 59:1,4,11,15 60:8,11 72:9 77:3,4 78:8,9 109:7 112:1,3 116:16 122:7,9 126:12 126:19 130:1 131:8 133:8 137:2,3,15 138:10 142:19 146:16 149:17 150:14 161:12 164:2 175:3 201:20 203:11 209:16 210:6,7 210:21 211:6,12 212:5 215:10,19 216:16,21 217:21 218:9,15,17 219:6,6,10 220:13,15 221:4,5,5 222:2,11,11 222:20 223:4 224:9 225:13,16 226:12,13,16 226:18 229:9,13,15,17 229:18 231:20,22 232:1 232:2,10 242:9 243:20 245:1 252:6 260:13 263:20 264:14 277:13 280:6 281:16 291:11,17 291:19 292:21 293:8,14 rail's 52:15 53:6,9 55:12 rail-to-rail 132:3 railcar 189:4 railroad 1:5 2:6 4:7 7:7 7:12 8:1 9:4 13:16,18 13:21 17:8 18:13 21:3 30:15 35:19 38:18 42:10,17 45:9 47:10 49:14 55:10 56:7 57:17 74:1 81:15,19,21 82:20 83:2,9 95:5 96:9 97:1 97:10,14 98:1 99:17 100:15,21 101:7,14,14 103:8 111:9 122:10 130:3 131:4,21 132:6 134:2,17,18 136:3,6,13 137:12 138:1 142:18,22 154:22 155:5 159:16 166:22 167:11,15,17</p>	<p>179:2 185:12 190:6,7 194:4 195:20 196:13 199:13 200:5 222:3 225:1,19 230:17 233:20 233:22 236:16 237:16 246:5 251:5 260:5 261:7 269:5 275:8,9 279:18 288:19 railroad's 8:9 35:6 36:18 67:4 131:17 135:15 139:20 185:16 200:19 232:15 250:10 253:14 256:17 257:1 railroading 55:15 railroads 7:17 8:21 9:5,7 9:16 17:7 18:19 19:1,17 20:6,17,20 21:6,10,15 21:21 22:2,3,15 24:1,2 24:8,9 33:4 34:4,16 35:1 36:4,8,11,20 37:8 38:20 41:13,13 42:8,21 43:1,10,10,20 44:3,8 46:10 47:12 48:4,10 50:7 51:14 55:21 56:16 57:9 59:18 60:20 61:1 64:5 65:3 78:4,16 84:5 92:5,16 95:10 96:21,22 97:2,17 98:13 99:1 103:15,15 105:18 106:6 107:8,14 108:15,18,22 109:11,19 110:3 111:11 112:13,21 116:1,5 117:16 118:20,21 119:3 119:11 120:3 121:3,17 129:21 130:6 131:3,16 132:2,16 133:22 134:10 134:14 135:11 154:18 155:9 157:14 159:17 162:6 164:13 166:17,18 170:1 184:7,11 188:1 193:9,19 199:8,16 202:15 203:4 214:9 224:15 228:3,9 231:18 232:16 235:22 236:5,6 241:14,17 243:8 246:14 247:6 248:7 254:11 261:4 262:5 264:7 269:13 270:3,7 287:21 289:19 railroads' 45:6,20 133:3 292:4 rails 48:14 49:1,16 50:17 50:19,21 51:7,18,21 52:4,11 53:14,21 54:13 56:4,9,17,22 57:4 60:3 61:9 101:5 116:21</p>
--	--	---	--

127:2,14 161:12 rails' 56:2 57:7 railway 2:8 30:4 31:1,3 Raina 295:11 raise 92:7 159:7 211:15 269:5 raised 146:14 193:22 211:7 249:19 raises 224:18 raising 20:19 60:1,5 133:15 214:21 ran 123:16 range 17:4 180:13 rankings 55:8,16 ratchet 197:10 ratcheting 197:11,20 rate 7:5 10:8 11:5,5 12:8 12:16 13:15,16 14:3,4,7 14:21 15:11 27:1,5 29:9 33:17 40:11 43:7 47:19 50:10 57:14 59:11,16 60:15,22 65:22 66:9,17 66:18,21 71:7 74:2 77:8 79:8 81:15,20 86:10 87:15 96:7 106:7 122:13,22 123:10,18 124:10 125:18 128:17 129:7,14,18 132:11,12 133:17 134:8,9,19 136:4 139:3,11 141:16 143:13 144:1,1,6,7,10 145:3,6 147:1,9 151:2 152:14 154:2,15 155:22 156:5,11,19,19,21 157:17 158:3,6 159:1 159:22 169:21 176:8 177:2 180:1,22 183:17 184:6,9 185:4 186:21 187:20 188:2 189:4 190:1,17,20 191:6,12 192:13,16,18,22 199:14 199:16,19,22 200:20 201:9,9,17 203:22 209:17 213:1,14 214:19 216:13 218:5,17 219:5 226:20 227:20,21 244:5 244:18 252:20 253:1,2 253:4,6,10,12 255:10 258:20 275:2 276:11 277:13 280:1,4 rated 197:5 rates 13:18 21:12 24:16 26:1,2,3 27:22 28:4,5 28:11,14,21,22 29:1 44:9 56:7,8 58:6,11,12 59:13,13 60:2,5 71:5,9	75:12,13 77:1,3,15,16 77:19 78:15 82:10,13 84:11 87:21 97:21 98:20 105:11,15 122:9 123:1,2,11,11 125:3 130:6 131:15 133:4,10 133:14,16 138:12 147:5 156:6,8,16,18,22 157:19 158:21,22 159:11,15,17 177:1,4,4 194:15 201:10,15 213:1 214:21 215:3 218:15 219:2 227:8 228:11 232:4 241:5,12,17 245:21 273:21 285:7 287:14 289:18,19 290:9 290:9,13 293:16 294:2 rating 214:16 ratio 10:11 54:14 144:21 146:5 178:14 rationale 10:19 228:12 ratios 10:10 118:12 292:7 Ray 141:2 199:15,21 203:3 205:18 206:17 276:6 Raymond 3:8 re-evaluate 86:21 132:7 reached 21:7 reaching 21:13 reaction 100:19 179:4 read 8:22 9:10 13:13 28:10 71:14 85:7 86:11 87:1 95:11 109:9 190:5 194:18,21 295:6 reader 112:3 reading 84:20 234:13 real 11:21 34:10,21 35:17 53:22 63:7,11,14 127:4 127:11 138:9 173:4 188:11 193:16 195:13 201:6 207:18 279:15 realistic 261:14 realities 39:4 reality 117:16 142:3 143:5 realize 38:2 123:15 124:20 244:12 275:20 292:14 really 6:4 11:18 24:22 29:21 33:16 34:15 37:2 44:7,19,20 45:1,16,18 62:16 73:11 74:5 75:6 85:20,21 86:20 87:19 88:13 92:8 100:1 106:16 108:1,13 109:3 109:6,7,12 119:1	138:11 160:15 161:4,18 174:4,11 175:8 193:4,6 193:11 194:17,18,22 195:3 198:2,3,15,20 199:17 201:13 203:21 204:17 205:4 206:12 208:3 209:2 211:2 212:6 216:15 240:12 245:9,14,15 248:17,19 249:19 251:2 253:17 265:19 267:8 268:13 273:16,16 276:20 278:1 281:1,2,6,12 282:2,22 287:6,19 288:15 289:20 290:4 294:16 295:16,20 reap 149:18 228:10 reargue 233:12 reason 23:22 32:13 85:18 105:2 113:5 116:18 138:4 183:16 187:6 189:12 224:6 274:15 reasonable 20:11 43:16 77:1,14,16,19 78:14 79:4,19 80:5,7,10,18,21 83:7,15,18,22 84:11 85:4,9,10 87:2,8,21 105:12 106:5 129:17 131:15 139:22 147:3 158:22 159:1 177:5 180:17 190:20 191:7,10 192:13 206:19 227:1,11 227:21 277:21 reasonableness 77:8 79:8 105:4 132:11 157:19 227:8 reasonably 228:19 reasons 23:1 62:8 88:3 89:4,4 124:21 163:10 171:3 174:7 176:2 280:10 293:9 rebalancing 226:3 rebate 197:12 rebounded 55:17 rebuild 165:19 rebuttable 136:12 rebutted 224:22 recall 112:19 121:9 162:5 receive 292:16 recesses 276:20 recession 178:4,11 179:3 recessionary 178:18 recessions 131:2 reciprocal 136:7,8 216:4 220:5,21 224:14,18 230:11 232:20,22 233:7 252:2 265:14,21 269:3	270:6 reclassification 114:11 recognize 89:18 108:14 182:22 183:2 256:4 291:6 292:20 recognized 231:13 256:5 277:11 recommend 123:17,20,21 124:9 132:19 recommendation 124:8 130:16 133:2,14 135:10 264:4 recommendations 128:18 129:7,12,16 130:12,19 135:5 136:21 137:13 176:19 recommended 130:20 recommends 135:19 154:19 reconsidering 230:6 record 93:21 127:18 137:18 160:12 276:4 295:18 recorder 5:7 recover 227:18 261:7 recovering 273:13 285:12 recovery 236:4 red 6:1,3 35:18 108:5 redirect 142:12 reduce 117:7 118:5 142:21 153:15 238:1 286:19 reduced 57:7,9 132:3 197:15,16 reduces 241:12 reducing 179:9 241:5 274:4 reduction 115:20 116:11 117:13,21 163:13 197:12 reductions 51:20 55:20 57:11 131:5 179:16 241:15 redundant 64:20 Reeder 295:6 refer 58:5 168:9 175:17 211:22 referees 290:8 reference 114:2 223:12 235:17 289:7 referenced 118:19 228:5 references 118:20 126:13 138:2 139:20 144:1 referred 169:12 255:7 referring 58:6 109:18
---	--	--	---

<p>207:22 refers 58:9 refine 131:20 refined 46:6 185:11 277:19 refineries 211:10 refining 210:1 reflect 41:9 49:1 142:2 151:19 244:21 245:1 250:13,14 reflection 13:2 reflective 177:9 reflects 49:10 110:11 reform 47:19 57:7,14 87:15 128:17 209:17 218:1,5,7 219:5 222:13 223:3,22 226:7 280:1,4 280:7,17 refreshing 194:19 regard 193:21 216:5 regarding 150:6 216:13 222:16 regardless 10:16 regards 126:17 Regena 295:12 regional 130:1 234:4,5 regularly 144:13 regulate 21:12 77:21 78:1 105:2 regulated 14:3 67:10 74:3 96:20 97:2,10,17 98:6,9,19 286:15 regulates 125:7 regulating 82:10,13 219:2 regulation 9:14 12:13,16 12:21 14:6,9 15:11 50:2 98:22 129:18 141:16 142:16 155:1 203:22 277:14 285:16 regulations 98:12,15 203:10 212:7 215:14 237:5 238:9 280:7 regulator 107:16 231:13 281:9 regulators 107:19 regulatory 2:5 3:5 6:11 6:11 12:12,14,20 19:8 20:3 56:14 57:7,21 98:17 100:6 103:14 113:17 127:13 128:4 137:1 140:22 142:13 144:5 172:21 175:1 218:1,10 219:5,21 225:11 226:19 248:5 rehash 225:6</p>	<p>reinvestment 131:18 reiterate 130:10 205:11 277:18 reiterates 131:19 rejected 138:19 277:1 relate 37:11 120:11 related 19:16 79:16 146:3 164:4 169:15 199:12 219:17 relates 162:2 231:10 relations 119:15 relationship 53:12,15 113:7 117:2 relative 24:11 26:15,17 28:12 38:21 39:16 48:14 52:16 53:22 54:19 94:10 111:17 239:22 248:11,12 released 280:2 relevance 226:17 relevancy 251:12 relevant 21:5 105:14 111:17 124:13 128:17 140:6 230:2 reliability 149:21 161:21 164:10 241:16 reliable 87:14 113:3 122:19,21 123:13 149:20 152:3 210:6 234:15 271:6 reliably 142:20 145:17 236:14 reliance 218:21 relief 74:11,18 134:8 186:18 187:8,13 188:8 190:3,8,17 192:8 194:3 194:11 199:10 200:6,18 218:8 219:18 221:19 225:16,18 228:4 230:10 233:3 250:21 256:15,16 257:12 relieve 56:9 relieving 274:8 rely 14:3 210:5 relying 184:1 remain 50:12 54:22 56:4 127:6 131:12 135:7 142:14 149:20 remainder 148:19 remaining 152:5 238:1 remains 56:15 remarks 22:12 71:15 remedies 240:16 remedy 215:22 216:4 219:15 remember 12:1 37:15</p>	<p>40:2 78:15,16 80:11 145:9 189:16 238:5 276:21 277:1 remind 116:10,15 176:15 reminded 92:14 reminder 5:5 127:17 295:18 reminds 78:7 removal 13:11,12 remove 7:6 13:20 removing 212:22 Rena 295:12 renaissance 50:6 rendering 111:6 renewal 238:13 271:1 reparations 173:3 200:22 repartee 276:5 repay 151:1 repeat 101:4 194:13 244:6 repeated 244:8 repeatedly 92:4 98:13 repeating 111:2 217:14 replace 64:5 149:7 153:17 replaced 149:14,17 replacement 32:19 54:4 54:11,18,22 57:5 61:15 61:22 62:2,12,17 63:8 64:3,14 65:12 66:4 67:9 81:19 87:13,19 88:5,8 88:11,21 91:10 143:19 144:19 148:6,10,15,16 148:19 149:5 178:8 248:17,19,21 replicated 64:21 reply 224:22 report 6:16 8:6 9:2,16,17 53:19 56:6 59:4,5 71:15 73:21 74:14 101:10 122:15 129:11 131:11 139:12 158:4,5,9,12 169:12,15,19 170:13 184:16 190:5 194:18 196:4 204:4,8,20 209:17 218:6 221:7,18 225:17,20 231:3 280:2 report's 218:6 reportable 154:2 reported 53:13,18 54:12 54:20 55:21 110:8,8 131:4 represent 31:14 155:6 216:20 representative 24:5 146:21</p>	<p>represented 275:21 representing 149:12 245:19 represents 32:14 35:14 35:18 141:20 148:9 150:3 209:22 217:11 reproducing 75:21 repurchase 151:13 repurchases 151:5 request 46:18 131:19 136:4 226:10 require 32:21 142:1 166:12 232:7 required 62:11 134:19 153:13 225:9 232:4 requirement 156:4 231:10 266:4 requirements 98:11 202:20 229:8 requires 92:3 139:21 222:6,9 247:11 requiring 216:2 requisite 134:5 research 2:4,18 6:10,15 8:6,20 25:22 27:11,14 48:6,7 101:18 122:14 researched 129:12 researching 181:13 reset 172:7 resist 263:22 resolution 208:3 resources 240:10,11 respect 47:18 101:17 233:10 250:13 251:22 255:2,16 269:8 respectfully 154:19 260:10 respects 267:2 respond 87:16 207:7 219:19 241:2 283:16 responded 176:18 responding 226:10 responds 136:3 response 57:20 102:11 137:19 173:8 219:22 273:14 responses 137:11 responsibilities 113:18 responsibility 78:13 141:11 responsible 52:12 rest 9:10 272:1 restart 221:16 restore 136:22 restraints 100:17 restricting 87:5</p>
--	---	--	--

<p>restriction 87:8 restrictions 221:5 result 11:4 27:21 57:4 116:2 118:14 134:9 145:20 147:12 166:4 203:4 296:2 resulted 138:6 resulting 257:6 results 17:20 25:7,8,10 27:18 44:10 57:15 145:4 153:22 242:8 retain 20:21 22:16 92:6 95:19 96:1,16 153:10 257:8 retaliation 185:7 retired 269:22 retrospective 215:2 return 18:4,10,16 20:11 20:13 24:16,17 26:2,2,3 27:1,5,22 28:4,5,11,14 28:21 29:1,1,10 33:17 40:11 43:7 44:9 48:20 52:15 53:5 61:18,19,22 62:5,17 63:12,20 65:22 66:9,17,18,21 79:20 81:15 85:4,9,10 86:10 87:21 88:3 91:4,7 96:7 96:15 125:8,18 131:10 142:1,6 143:12,13,14 143:16 144:6,10 145:8 146:8 147:17,17 148:8 149:4 151:9 152:1,4,13 152:21 153:1,14,16 166:20 189:8,19 190:12 192:15,18 203:22 206:20 239:20 272:21 277:22 290:10 returned 48:16 returns 16:13 18:1 19:4 21:3,4,10,16,18 22:16 47:10,11 48:22 49:2 52:18,21 53:2 54:1,10 54:16,18,20,22 55:3 57:5,6 61:20 62:10 63:13,17 82:10 87:14 89:1 91:10 110:8,9 111:9,9 142:5,10,15 146:17 150:7,20 151:21 152:8 153:2,9 164:16 166:6 190:15 217:1 reveal 174:7 revenue 1:3,5 7:4,6,7,9 7:12 8:17,21 9:5,12,16 9:18,22 13:17,22 16:7,9 16:11,18 18:2,12,20 19:4,6,12,16,17,20,20</p>	<p>20:5,7,9 21:7,22 22:13 22:19 41:8 47:5,6,9 52:5 55:4 59:5 62:11 77:11 78:4,17 80:12,19 80:20 81:9 83:4,10 84:6 84:7,15 86:14 92:13,22 93:11,18 101:6,14 102:22 103:7,11,12,16 103:21 111:1 113:13 116:9,11,12,14 117:7 126:22 129:18 130:17 131:13,16,21 132:6,10 132:16,21 133:3,9,11 133:19 134:15 135:15 136:3 138:2,19 139:8 145:1,21 146:1,4,16,22 147:18 154:9,20 155:21 156:17 157:2,13,13,19 158:2 159:21 166:11 168:15 169:6,6,15,16 169:18 170:2 177:19,20 178:6,16 184:8,11,16 184:21 185:11,11,12,17 185:19 186:7,21 187:12 188:2 190:6,7,16 191:2 194:10 195:22 198:21 200:4,7 201:1 202:5 204:18 213:13 214:10 214:22 215:17,20 218:6 225:19 226:2,2,11 228:2,10,20 229:4,10 229:21 230:1,5,7,22 246:14,19 247:7,18 248:1,4,15 249:7 250:15 251:3,6,16 253:18 254:11 255:7,8 257:8 259:14,19,22 265:6,9,19 266:2 273:9 273:10 274:2,7 276:11 277:15 294:3 revenue-adequacy 244:20 246:2,6 247:18 251:12 253:11 255:4 266:1 277:7 revenue-to-variable 10:10,11 11:6 revenues 20:2,10,17,18 35:3,4 77:3 78:9 118:12 135:16 144:20 reverse 216:2 review 129:8 137:16 227:13 239:17 244:18 reviewing 19:12 141:11 revisiting 226:16 reward 153:10 rewind 233:11</p>	<p>rhetoric 119:20 RIC 132:13 133:2,15 134:1,3 197:21 198:5,6 198:9 199:5,6 Rick 208:2 right 7:15,17 39:7 45:19 54:17 63:4 64:22,22 67:6,15 70:15 75:8 82:11 83:12 84:8 106:22 115:13,13 139:18 146:19 147:2,6 147:11 160:15 163:8 164:20 166:16 167:1,10 173:22 174:1,8,14 175:7 178:12 179:18 182:6 186:13 189:6 195:1 196:9,16 197:15 197:19,21 198:6,8,11 198:17 203:1 223:10 235:21 237:10 238:7 245:13 250:10,17 253:14 261:15,20,20 262:20 266:20 272:4 283:19,20 285:8 286:7 287:8 289:5 right-hand 30:11,16 43:13 191:5 198:14 rights 250:4 rigorous 106:2 ringing 287:14,14 ripe 255:12 rising 50:2 risk 29:11 41:17 50:2 70:8 72:17 103:13 127:8 142:1 144:2,3 150:8,17 152:14 153:8 153:11 180:2,22 259:18 263:6,9 264:5,10,10 291:5,7 292:20 risking 261:21 risky 237:17 River 237:19 Rivera 295:10 road 12:19 65:19 134:13 231:8 roadways 154:17 Rob 3:19 209:18 Roberta 295:13 robust 206:4 rod 114:4,6 ROI 18:9,14 81:19,22 107:6 ROIC 17:19 30:6 35:8,20 36:16 39:9,16 42:11,14 role 77:14 141:10 230:6 234:6 246:13,13</p>	<p>roll 16:16 rolling 163:12 room 167:1 208:22 209:1 Rose 268:7 Rosenthal 4:10 243:17 246:12 248:2,18 250:8 252:9 roughly 24:18 34:22 52:8 148:17 272:3 route 140:12 215:15 226:11 230:13,18 231:11 235:15 237:4 250:20,21 252:17,19 257:3 265:17 267:14 288:18,20 292:12 routine 263:18 routinely 235:14 routing 139:20 156:10,10 232:11 256:11 258:16 RPIs 170:15 RSAM 169:20 RTP 76:10,14,21 77:6 78:6,10 79:6 82:13,14 rule 157:20,22 251:4,20 252:13 255:14 289:9 ruled 255:11 rules 32:21 130:8,13 134:22 135:14,18,21 136:8,21 205:14 226:7 229:8,16 247:12 267:7 ruling 172:22 run 206:22 241:13 263:6 263:9 271:22 283:5 running 40:19 runs 11:11</p> <hr/> <p style="text-align: center;">S</p> <hr/> <p>S 5:1 200:3 S&P 17:20 18:1,3,18 19:3 24:4 25:4 33:5 34:5,5 34:13,18,22 35:2,16 36:2 39:6,8,19 40:11 43:8,12 45:11,11 47:8 48:15,19 49:14,17 52:9 53:16,19 54:6 97:3 99:2 109:19 143:1 244:21 S.W 1:15 SAC 73:13,15,16 74:1,15 81:10,14 170:13,18 171:1,12,15,17 172:8 172:16 174:10,10 193:15 202:10 260:21 261:5 275:3 276:22 277:1 safe 78:8 210:6 217:20 232:13 287:5</p>
--	---	--	---

<p>safest 291:17 293:9 safety 98:12 149:21 161:21 164:10 285:16 293:20 safety-wise 98:14 sake 200:15 salient 225:20 Salisbury 128:5 same-source 58:20 sample 35:6 40:12 Samuel 3:16 155:18 Sanborn 4:8 233:16 243:21 245:4 253:20 270:9 271:13 272:5,13 273:15 274:19 283:1 288:22 289:7,8 290:7 290:14 sand 237:21 SANFORD 266:15 Santa 224:7 Sappington 261:2 sat 119:22 satisfied 145:6 satisfy 230:21 save 225:8 saw 42:4 43:6 116:10 118:10 165:18 179:1 212:14 248:5,6 249:6 Sawyer 295:7 saying 14:14 38:8 42:22 77:10,12 83:1,3,4 84:2 84:14 86:20 89:15,17 91:1 93:16 96:8,10,11 99:9 109:15 171:10,18 173:9 180:21 202:2 271:17 272:3 273:8 277:1 285:9 289:18 says 9:7,11 31:11 76:14 76:21,22 85:3,8 86:2 92:4 98:20 197:5 251:21,21 271:8 scale 214:17 scenario 57:8 144:16 147:6 153:13 257:12 259:12 262:6 scenarios 256:15 scheduled 130:3 schedules 145:17 scholarly 112:20 school 2:12,15 15:17,21 181:8 183:6 schooled 126:2 schools 27:11,13 157:21 science 196:22 scope 234:7 Scott 2:19 47:21 48:5</p>	<p>61:15 99:10 101:21 108:17 109:1 115:20 162:19 scratched 161:19 screen 227:4 254:20 255:16 se 289:19 Sean 3:4 141:3 160:3 188:20 seasons 235:9 sec 218:11 second 24:13 45:17 69:21 91:6 104:17 133:1 138:18 152:20 162:1 181:11 197:8 231:20 257:10 secondly 10:1 38:22 62:4 seconds 46:16 secret 77:9 Secretary 158:17 section 37:1 86:12 91:3 139:21 156:1 169:17,17 sections 79:15 sector 34:17,19 210:22 212:16 sectors 48:18 52:6 235:4 secular 127:6 secure 289:1 see 6:3 12:8 23:17 24:1,2 24:9,21 25:2 26:14 36:19 37:7 38:16,18 39:7,7 42:6,11,16 43:13 43:13,22 44:4,19,20 45:18 46:7,15 50:13 51:4 57:15 58:3 60:6 63:21 64:10 69:10 89:13 112:18 126:6,18 138:12,13,15,16 142:4 144:13 165:17,21 168:5 177:11 188:7 193:15 194:20 197:13 198:1 212:6 221:14,18 232:5 246:18 249:10 262:20 265:1,17,22 273:11 274:1 278:2 289:10 294:2 seeds 129:3 seeing 60:12 117:12 127:9 213:2 263:13 seek 142:17 166:12 seeking 155:8 251:20 seeks 241:11 seen 28:22 56:22 65:21 97:14,22 111:7 163:16 172:4 173:21 281:18 segment 134:20 136:4,9</p>	<p>273:11,13 segments 219:8 220:14 selling 95:14 semblance 137:1 senator 281:10 senior 2:20 3:19 48:5 128:3 209:19 211:9 sense 7:10,12 8:2 92:10 94:21 98:19 99:18 111:10 112:10 113:9,16 115:6,7,9 215:22 266:11 268:16,18 283:8 sensible 222:22 sensitive 290:18 291:6 sent 158:9 175:18 sentence 9:7 sentiment 153:21 separate 267:21 separately 230:9 series 28:1 36:22 37:1 serious 136:17 serve 155:11 210:10 228:7 234:18 served 222:2 serves 134:17 service 2:10 15:16 22:18 55:8,14,16,19,21,22 56:2 97:1 98:11,17 111:20 112:1 113:4,7 113:10,18 114:21 115:10,17 118:14 120:2 130:9 138:14 144:14 145:14 152:3 155:3 198:4 219:10,16,18,22 220:9,13 231:14,15 234:16,17,22 236:1,7,9 236:12,18,21 237:3,11 238:11,17,17 241:16 250:12,22 253:13,20,21 253:22 254:4,13,14 256:18,19 258:19 268:11 271:4,6 279:7 284:14,14,17 292:22 services 115:3 serving 142:19 set 11:4 14:4 24:4 29:14 31:15 34:13 38:12 63:16 73:15 75:13 76:3 170:6 171:22 172:2 175:9 183:16 194:2 202:9 227:19 sets 159:16 228:3 setting 67:20 75:12 81:14 98:9,10,20 125:22 156:6 252:11 255:20 265:2</p>	<p>settle 187:19 settled 263:18 severely 148:9 shakes 30:19 shape 99:7 share 53:14 147:15 151:5 152:6,11 174:14 195:5 242:1 shared 266:21,21,22 273:15 274:19 287:12 shareholder 164:4 192:4 shareholders 57:10 97:4 142:16 164:17 167:18 shareholders' 54:14 shares 151:10,13,22 Sharon 3:11 127:21 128:3 139:10 207:15 sharp 115:20 sharply 50:8 shedding 65:5 161:1 sheet 30:12,17 32:2 54:13 sheets 53:10 95:12 Shen 156:9 Sheng 295:9 shift 62:12 257:10 shifts 179:9 257:17 ship 135:4 291:18 shipment 123:1 154:9 194:5 shipment-specific 112:1 shipments 15:7,8 35:5 59:17,19 135:22 218:22 292:7 shipped 210:12 257:21 shipper 14:1 55:22 61:13 74:9,10 75:8,16 81:18 123:10 130:21 134:20 156:20 159:13,15 187:2 187:8 189:13,14,15 190:2,9 192:4,7 193:12 193:21 194:3,9 195:14 195:14 199:13 200:9,10 200:21 207:6 222:20 225:1 227:12,15 230:20 257:2 268:10 269:20 271:21 shipper's 184:12 185:2 186:20 226:10,22 256:22 257:1 277:2 shippers 14:18 55:10,19 56:6 59:14,20 73:5 78:13 131:16 133:4,11 133:14 134:8 135:3,6 137:15 138:10 139:14 147:8 152:15 159:18 174:19 175:2,9 176:6</p>
---	---	---	--

185:6,15 198:5 199:9 210:17 212:14 215:1 219:9 220:15 227:10 237:6 238:10 240:17 241:15 244:17 254:8 255:3 257:21 258:19 268:19 269:9,12 272:10 290:13 291:9 shipping 187:13 291:1 shocking 161:4 shops 179:8 short 135:9 140:9 162:6 172:22 226:11 230:13 230:16 240:18 241:11 250:11 252:21 short- 261:10 short-haul 251:20 short-hauling 265:10 short-term 287:19 shorter 172:20 shortly 19:11 show 16:8 24:12 33:2 37:10 40:20 42:2,7,8 49:13 87:20 203:16 showed 34:12 58:10,15 198:22 showing 19:7 73:7 76:9 81:17 109:6 134:5 138:2 194:7 203:16 showings 230:22 shown 49:6 54:17 55:11 shows 21:15 54:9,21 55:6 56:4,6 115:20 shrink 242:3,4 shrinks 242:4 shrunk 51:11 shut 26:8 46:19 97:8 282:8,9,13 shutting 179:8 SIC 68:12,14 side 30:12,16,17,17 37:22 38:9 43:6,13 51:11 94:2 94:3 161:18,19 190:22 191:5 206:3 207:6 285:16 291:3 sides 206:2 278:7 283:6 290:14 Sidley 2:16 3:9 141:3 sight 179:6 sign 17:21 signal 22:3 80:21 signals 37:3 significance 38:8 significant 89:22 117:17 120:19 131:5 141:21 145:13 153:5,8 162:22	163:11 203:21 293:20 significantly 56:4 144:14 162:10 silence 5:5 silky 280:11 similar 32:19 54:15 65:14 67:10 121:11 123:2 173:19 207:8 239:13 293:18 similarities 278:22 similarity 232:19 simple 12:9 16:22 32:18 91:4 141:22 182:4 simpler 14:22 simplicity 214:8 simplification 170:16 171:16 simplified 54:9,21 156:2 156:3 170:13,19 174:9 202:10 simply 91:1 145:7 147:15 153:12 219:19 225:19 267:11 270:20 289:3 single 79:13 103:8,16 199:14 222:16 236:20 237:11,22 238:10 250:12,19 254:4 256:18 257:6 single-line 253:13 sink 93:6 sit 9:4 93:13 151:6 245:9 256:20 267:5 site 290:20 sitting 224:2 situation 60:10 67:11 75:16 157:1 184:12 192:9 193:16 220:7 254:7 260:14 263:21 265:12 266:2 situations 228:6 279:8 six 205:2 skilled 250:2 sky 104:13 221:1 224:21 slide 29:7 35:11,11,13 39:6 40:20 42:4 48:13 49:3 50:4,16 51:6 52:15 53:12 54:9,18 55:5,7 56:4,6 58:3,10,15 142:5 143:6 144:11 149:4 150:2 153:20 189:2,17 slides 27:8 35:11 37:10 37:10 42:3,3 76:9,17 224:3 254:20 slink 286:6 slower 60:22 small 30:1 52:2 60:11	139:13 144:2 150:12 159:13 244:17 245:21 295:11 smaller 15:8 65:2,2 174:18,19 175:9 smart 155:19 282:3,4 SMART-Transportation 3:13 SMART/TD-NY 3:14 Smith 295:9 Smith-Bernard 295:12 smooth 280:11 smoothly 220:22 snow 235:12,16 so-called 130:3 134:13 social 115:1,15 sold 162:17 solely 6:18 solid 249:5 solution 14:9 274:12 275:16 solve 14:10 157:12 159:13 274:12 somebody 73:14 125:6 199:18 242:17 271:8 290:5 somewhat 25:6 54:21 99:13 101:22 102:6 265:18 soon 174:1 198:21 208:4 sorry 33:9 68:16 181:21 186:10 263:7 273:7 289:14 sort 5:9 11:13 103:3 104:20 109:2 115:22 117:14,21 162:9 165:1 177:11 178:3 189:11 201:11 203:8,21 206:3 208:5 251:4 266:16 275:19 281:2 sound 20:22 90:14 210:20 275:16 soundly 224:22 soundness 132:1 sounds 101:11 132:19 200:13,15 source 68:7,7 218:13 south 159:7,9 Southern 2:7 46:21 220:8 258:2 270:1 southwest 257:21 Space 1:14 span 163:13 Spanish 14:13 speak 5:7 22:11 25:13 141:14 185:2 233:18	255:4 284:5 290:17 speaking 6:18 76:13 201:12 speaks 102:13 266:11 special 157:1 224:6 specific 90:15 95:2 212:1 250:18 265:5 279:20,21 280:15 specifically 68:10 139:5 168:9 specifics 269:2 specifies 122:16 spectrum 45:10 speed 286:19 speeds 55:6,11 spend 99:4,4 166:1,3 238:6 spending 51:17,21,22 52:8 53:13 54:7 56:16 57:11 116:21 117:13,15 120:1 153:15 161:22 163:9 165:18 spent 52:5 117:8 233:22 234:1 282:17 285:1 spider 274:9 spirit 226:7 split 181:11 Spokane 140:16 spoke 156:11 sport 235:7,11 spot 91:14 sprang 227:3 spread 50:14 200:18 spring 283:16 spur 174:18 223:2,5 279:4 spurs 222:16 St 258:5,8 267:18 268:4 268:16 stab 272:16 stable 142:8 stack 56:10 staff 92:2 158:4,10 203:3 203:7,9 205:22 209:14 224:8 233:18 243:19 295:1,15 296:6 staffs 48:2 136:18 stage 71:3,4 stages 69:5,11,21 70:21 70:22 71:3,8,8,9 163:2 stagger 286:11 staggering 131:9 Stagers 77:17 92:11 97:15 98:15 133:8 139:7 227:14 256:5 287:3
--	--	---	---

<p>stakeholders 48:12 204:14 211:3 225:8 233:11 281:6,7 stamps 112:2 stand 240:22 244:6 stand-alone 74:10,17,21 75:6,9 216:5,9 251:16 standard 26:10 30:5 33:11,11,13,14,19 93:11,14,18 113:2 156:6 185:1,1 231:6 248:14 276:11 standards 47:10 90:13 129:8 132:12 136:10 138:14 187:1 189:22 216:3 232:19 251:2,6 standing 208:22 standpoint 113:8,9 157:13 168:21,22 185:3 start 5:12 19:11 27:7 58:2 65:17 67:8 76:8,15 88:11 127:20 160:2 161:11 173:10 179:8 197:7 208:16,17,18 209:9 238:19,20 240:1 245:8 255:20 257:5 263:16 started 5:3,10 27:9,11,15 159:5 163:16 234:13 starting 16:8 143:6 starts 29:21 startup 284:18 starve 217:19 state 3:14 112:20 152:9 155:18 256:20 stated 72:11,12,13 134:2 134:6 140:4 statement 62:20 155:20 269:21 statements 31:15 95:12 137:22 138:1,7 285:5 states 77:13 210:11 220:4 220:19 230:16 278:20 280:17,19 stating 179:16 stations 222:2 statistics 278:9 status 131:14 133:12 280:8,9,13 281:13,18 statute 62:11 77:10 85:3 85:13 86:12 87:1,9 88:6 88:13 91:3 92:10 105:5 106:20 138:20 189:22 206:19 228:21 229:6,20 232:21 246:13,17 247:10 250:10,19</p>	<p>251:17,19,21 259:7 276:10 277:20 278:4,6 statutes 76:10 90:20 99:6 statutory 19:12 21:9 22:7 90:12 91:6 105:16 124:21 139:18 156:4 215:17 226:1 253:15 255:21 277:6 stay 151:14 195:7 268:6 STB 19:22 29:9 30:14 33:11 35:7,19,20 57:17 57:19 68:2,7,8 101:4 103:14 105:20 139:22 156:7 157:3 158:20 226:15 228:4,18 STB's 27:1 29:17 30:13 40:22 42:9,10 228:15 steadily 160:17 steady 165:16 step 68:18,18 194:9 196:11 218:11 221:20 stick 76:18 86:16 124:6,9 sticking 177:1 sticks 124:18 Stigler 2:10 15:16 stock 30:13 48:13,22 57:1 95:6,15,16 96:10 110:12 117:3 163:12 182:5 183:5 stocks 48:14,16 49:14 57:17 101:7 103:9 109:2,7,8,13 216:22 stop 21:21 140:15,17 153:18 286:7 stopped 215:21 stops 285:21 storage 162:16 213:9 store 58:22 129:1 story 290:15 straight 203:21 214:7 254:17 256:21 strategic 143:21 144:9 148:3 150:9,12 152:18 153:4,19 strategy 25:18 151:4 stratified 214:17 stream 115:3 streamline 15:4 215:4 Street 1:15 48:7 116:3,5 117:7 118:4,11 153:7 160:21 strike 182:6 striking 232:18 stringent 216:3 strive 202:20 strong 18:22 49:10 53:4</p>	<p>56:15 57:1 131:14 171:12 179:3 185:22 strongly 22:1 114:3 130:15 132:9 133:1,21 289:10 291:8 struck 285:2 structural 121:13 structure 33:14 96:22 127:10 151:3 structures 148:21 struggle 281:5,12 struggled 194:17 struggling 79:7 192:8 studies 2:5 6:11,11 112:22 122:7 138:2 study 6:15 9:7 17:20 75:1 stuff 17:10 112:9 158:11 177:14 198:10 273:5 style 203:22 su 14:14,15 sub 168:13 225:2 269:19 subject 91:15 140:7 205:20 254:17 274:18 276:6 277:18 296:5 submission 137:21 140:3 submissions 137:17 295:20 submit 22:5 225:5 229:2 submits 224:19 submitted 6:13 8:19 62:20 76:17 128:11 130:21 155:20 224:16 244:3 269:20 subsection 76:10 79:2 subsequently 50:9 133:4 subset 45:11 152:15 265:22 subsidies 9:9,21 75:5 76:4 subsidy 74:4 substance 277:5 substantial 35:5 57:10 219:7 233:5 substantially 132:2 238:1 284:9 substantive 137:14 207:11 succeed 198:2,3 succeeded 200:22 success 97:13 152:7 292:4,5 successful 158:1 171:11 successfully 20:18 21:11 sudden 27:14 suddenly 37:22 suffer 219:15</p>	<p>suffered 219:10 sufficient 22:15 suggest 91:8 97:22 108:9 122:18 145:5 159:12 214:16 suggested 8:7 15:2,6 122:20 136:12 249:17 suggesting 88:4 119:21 166:16 172:20 191:20 266:2 suggestion 177:21 215:8 216:1 suggestions 168:11 suggests 21:20 221:7 suit 224:7 suite 129:11 Sullivan 295:11 sum 280:14 284:3 summary 58:3 super 194:21 supplementing 15:1 128:15 supplements 128:10 supply 206:17 217:12 218:20 support 144:15 165:22 171:18 178:8 180:9 214:4,20 216:8,12,17 supported 139:2 supportive 56:15 202:4 214:1 supports 130:15 133:1,13 134:12 216:1 219:4 221:17 suppose 60:17 supposed 20:9 69:13 80:7 156:2 191:13 206:18 246:17 surcharges 59:7 138:15 sure 5:6 7:16 9:22 23:11 30:4 61:4,5 65:17 70:20 74:19 81:7,18 88:14,15 93:16 100:1 104:14 118:1,17 119:4,9 159:3 176:14 178:22 181:16 203:9 213:10 222:3 255:19 262:16 264:9 271:13 280:16,17 290:12 surface 1:1 142:4 144:21 161:19 209:13 227:5 surplus 195:19 196:2,3 196:10,17 surplusage 80:7 surprised 104:9 surprising 224:13</p>
---	---	--	--

<p>survey 99:11 100:20 164:12 180:8 surveyed 57:12,16 surveys 55:9 survive 290:2 suspect 138:5 282:22 suspenders 92:9 suspending 134:14 135:20 suspension 215:20 sustainably 142:15 swap 209:6 sway 210:16 swayed 287:17 swear 291:16 switch 136:5,14 172:10 220:8 223:4 232:22 249:13 288:19 switches 286:1 switching 136:8,8 216:4 220:5,21,21 224:14,18 230:11 232:20 233:7 252:2 265:3,14,21 269:3 270:6 system 10:13 20:22 77:4 78:8 99:5,7 101:15 137:4 154:14,22 157:2 159:4,6 200:6,20 201:4 201:8 210:6,16,18 211:15 212:5 213:20 216:16 217:21 222:5,8 278:20 286:21 293:22 293:22 system-wide 82:10 134:1 139:15 141:6 202:22 218:17 273:9 systematic 134:9 systemic 129:13</p> <hr/> <p style="text-align: center;">T</p> <p>table 2:1 3:1 4:1 15:10 64:15 108:14 196:5 198:22 take 8:14 16:16 30:3 32:1 46:16 48:11 56:10 59:3 63:14 71:1 86:7 88:19 98:16 131:20 140:16 142:1 155:14 163:4,12 164:19 167:19 177:12 178:17 182:5 196:1,9 198:20 201:6 202:2 204:21 208:15 238:15 238:22 239:5,21 241:14 244:9 256:18 257:18 258:9 267:2 272:16 277:4 288:4,20</p>	<p>takeaway 205:9 229:5 taken 17:1 101:8 159:10 184:17 191:21 takes 50:16 237:17 239:4 256:13 talk 6:9 7:9 29:20 61:2,14 66:22 69:9 75:15 76:14 76:16 87:18 94:14 213:12 216:22 236:7 238:15 240:15 242:5 288:9 talked 44:19 62:6 64:12 66:4 72:1 73:22 111:21 120:6 139:8 162:20 165:15 170:14 180:1 207:19 208:2 242:4 248:20 270:13 278:11 talking 13:3,6 15:11 34:6 37:12,15 61:22 78:11 79:20 84:4 85:14 98:22 119:5 178:6 212:15 213:4 238:22 249:1 253:19 254:16 256:8,8 256:12,14,17 260:20 262:3,10 265:13 266:19 278:14 282:5 285:10 287:8 292:17 talks 77:7 79:3,5,19 160:12 277:21 tank 213:7 291:10 target 222:5 286:2 targeted 283:7 tariffs 239:5 task 87:15 100:16 101:9 101:16 104:5 128:17 129:6,9,13 130:11,15 130:19 131:10 132:13 133:1,13 134:2,12,16 135:5,9 136:21 137:10 169:15 170:5,13,17 176:18 184:5,16 186:18 187:11 193:20 194:18 196:4 200:12 204:4,7 204:20 209:17 218:5 221:7,18 224:11,16 225:12 226:8 230:14 231:3 233:6 243:20 244:11 249:15,19 254:18 264:3 266:7 280:1 tasks 211:1 taught 25:17 tax 29:22 30:5 31:11,12 31:13,14,18,20,20,22 32:2,8,10,13,21,21 41:1 41:18,18 119:19</p>	<p>taxes 31:18 32:4,6 41:22 106:1 taxpayers 120:1 teach 63:22 94:15 183:6 team 195:6 238:21 239:6 teasing 208:18 technology 153:5 166:3 167:6,6 243:2 technology-related 117:15 Ted 295:2,13 tedious 30:21 teed 233:13 teeth 93:6 telecom 112:14 tell 26:5 28:14 39:22 43:4 43:18 45:16 47:19 68:17 86:2 87:3 91:16 94:3 108:2,8 121:3,17 155:20 161:18 180:6 183:3 223:5 248:11 253:21 281:22 294:12 telling 23:13 24:10 46:2 82:3 83:18 89:12 101:1 120:21,21 tells 115:2 temptation 9:13 temptations 263:22 tend 24:15,16,18 38:21 46:10 151:17 181:10 tendency 131:12 tends 45:10 89:21 131:1 term 50:17 59:11 125:13 206:21,21 212:18 214:2 241:11 261:11 terminal 52:13 terminals 237:14 terminated 258:2 terms 14:18 38:20 65:5 69:7 70:15 71:22 73:13 73:17 90:11 95:5 98:6 100:16 106:6 111:19 139:12 161:9,10 169:12 175:1 178:10 183:14 185:5,6 200:6 207:1 236:12 239:1 241:15 242:13 266:8 267:16 277:6 278:10 terribly 267:12,13 terrific 195:6 territory 55:18 test 81:10 124:19 193:13 194:8 254:8 258:17 264:13 tested 70:12 testified 138:8</p>	<p>testify 209:15 testimony 6:3 126:14 128:7,16 130:11,18,21 135:17,19 143:1 160:12 166:9 168:3,8 170:15 170:16 178:9 179:1 201:21 207:21 218:4 224:10,16,19 233:4 234:11,13 244:3,7 245:10,12 247:2 249:16 249:17 251:15 257:15 267:9 269:10,19 270:14 text 19:14,22 21:1,9 textbook 26:12 TFI 217:11,11,21 218:8 219:3,10 221:3,8,12,13 221:17 225:2 226:7 230:11,20 233:2,10 264:11 269:3 294:3 TFI's 218:4,18 220:2 223:20 257:15 TH 290:20 291:5,13,18 292:10 thank 22:9,10 25:12,12 47:16,21,22 57:22 126:7 127:16 129:9 140:19 141:8 155:13 160:1,3 167:22 173:6 189:1 208:14,19 209:3 209:3,8,11,11,14 217:3 217:5 224:4,4,9 233:14 243:19 245:3,5,7,10 255:17 280:20 294:7,8 294:9,15,19,21,22,22 295:1,14,20 296:1,7 thankful 207:4 thanks 39:5 188:19 217:22 233:18 theme 279:22 280:5 281:14 themes 245:16 theoretic 75:21 theoretical 222:6 theoretically 258:10 theory 10:21 72:4 75:4 76:2 211:21 they'd 156:20 199:4,5 thing 8:13 9:6 20:16 31:6 47:5 64:9 82:19 94:1 114:20 116:19 122:15 122:21 125:20 161:15 162:1 163:15 167:18 169:14 173:17 183:3 185:9 196:19 198:12,18 200:8 201:7 205:1 207:15 212:10 259:11</p>
---	--	--	---

<p>260:15 265:18 275:4 280:22 284:19 285:3 things 22:13 41:6 44:22 45:8 61:21 72:5 73:1 74:20 76:13 77:17 82:2 82:7 84:4 86:5 87:17 94:7 104:15 113:2,21 114:21,22 115:4,7,9,14 120:15,17 122:5,8,9,17 125:1 126:16 138:16 164:7,21 168:17 169:9 169:13 173:4 174:15 179:18 180:16 185:3,5 185:7 187:9 191:13 204:22 205:2,3 207:19 212:3 239:5 245:17,20 249:4 260:12 267:16 271:4 272:15 273:19 274:9 275:19 281:4,12 282:2 287:3,9 288:9 292:10 think 7:10 9:6,11 10:3 12:5,6 14:16 15:4,9 18:11 21:1 24:9 29:4,12 30:10 32:12 37:19,20 38:10,11,13 40:1 41:3 43:15,16 44:13 45:3,4 46:1,7,9,13 47:1,2 58:9 59:21 60:19 61:9,15,18 61:19,21 62:13,19 63:4 63:11 64:4,8,13,14,16 64:16,17 65:1,16 67:2 69:21 70:14 73:16,20 74:6 75:17,20 76:11,15 76:19,21 78:10,11 79:10,11,11,17 80:6,9 80:10,10,11,20 82:8 84:3,9,11,14,15,16 85:21 86:22 87:7,9 88:6 89:11,14 90:10 91:6,7 91:10 92:2,18,19 93:1 97:9 98:3 99:11,15,20 100:4,5,6 101:8 102:8 102:14 103:6,7,17 104:12,19 105:1,10,13 105:14,19 106:4,20 107:2,3,19 108:1,2,9 109:18,22 110:3,5,9,11 110:22 111:6,8 114:17 115:6,8 116:12,17 117:10,12,16,18,20 118:1,16 119:13,14,14 119:20 120:12,21 121:19,20 122:4 123:5 123:12,22 124:12,13 126:13 127:2,5,12</p>	<p>138:20 147:16 151:22 154:17 155:21 156:5 157:11 158:19 159:20 161:7,8,10 162:22 163:17 164:4,11,13,19 165:10,16,17 166:4,14 166:16 168:3,20,21 169:6,9,11,21 170:8,9 170:21 171:3,4 175:4,4 175:10,11,17,18,20 176:19 178:5,6,11,12 179:13 180:6,10 181:3 181:5,15,16 182:2,4,12 182:13,19 186:22 191:19 192:12,15,20 193:4,8,9 195:16 196:20,22 198:17 199:20 200:5,10 201:4 201:4,21 202:7,19,20 202:21 203:3,16 204:6 204:14 206:18 210:14 210:15 211:18 212:6,12 212:17 213:15,19 214:19 215:1 217:1 222:18,19 223:18 235:8 235:8 239:13,22 240:3 240:5 241:14,20,21 244:8 245:7 246:12,15 246:16,22 248:2,5,10 248:13 249:5,8 251:4,8 252:1 254:15 255:20,22 256:1,4,20 257:11 259:4,8,22 261:1,2 263:5,8,11,12 264:18 265:4,7 266:8,10,13 271:12,15 272:13,17 274:6 275:5,15 277:8 277:10 278:20 279:3 281:8,14 283:2 284:20 285:8,11 287:7,12,16 288:1,6 290:3,8,9 291:21,21,22 292:8 293:21 294:1,5 296:6 thinking 9:1 12:19 47:4 47:13 64:6 68:22 87:15 92:20 111:1 126:21 164:20 170:8 175:20 177:15 182:14 206:8 223:18 235:9 242:22 249:4 thinks 32:15 199:22 third 134:12 136:1 139:4 139:7 232:4 Thomas 3:12 Thompson 4:6 thorough 137:19</p>	<p>thought 12:18 74:14 79:14 81:14 82:3,17 83:12,13 87:17 100:4 186:2,3 191:22 207:10 209:7 216:17 248:22 249:9 285:3 thoughtful 289:13 thoughtfully 211:2 thoughts 289:15 thousands 279:14 threat 199:17 202:4 286:18 threats 127:4,11 three 7:3 13:2 32:3 35:10 35:10 36:18 37:7,9 40:21 42:2,3,3 52:8 69:21 90:2 107:7 108:21 115:19 148:13 148:18 149:1 152:9 153:22 162:13 163:20 184:10 204:19 213:12 218:16 228:2 229:19 240:4 252:1 280:1 286:4 three-stage 69:3 71:2,6 three-times 148:17 threshold 37:21 63:12,16 73:2 78:19 123:17,21 124:15 133:17 201:19 threw 67:2 throw 23:8 169:4 ticked 115:22 tie 190:21 214:20 tied 202:21 ties 149:14,17 161:12 tight 179:18 tighten 186:16 tightening 145:16 time 6:1,2 7:17,22 31:10 33:8,9,20 36:19,22 37:1 38:16,17 39:12 40:8,19 42:13 44:13 48:21 49:12,15 51:15 67:8 70:7 93:13,15 109:3 112:2 113:2,3 116:21 136:17 137:5,9 140:18 143:14 155:13 156:14 161:14 162:8,17 172:9 172:16,22 175:15 176:4 179:11 182:20 183:21 185:18,20 186:7 195:8 199:7,7 209:5 217:13 219:3 225:8 233:22 234:1,3 236:1 269:15 269:17 270:3,12 276:7 281:11 282:1 283:10</p>	<p>287:2 295:21 timeframe 178:10 214:4 timeline 188:16 times 52:8 146:5 148:18 149:2 157:18 175:6 218:16 222:9 232:5 235:5,17 271:1,12 279:15 timing 41:17 tip 170:11 Title 114:12,12 TL's 50:20 today 6:9,17 15:12 16:2,5 18:12,21 22:11 25:13 25:20 38:22 45:9 48:11 51:10,13 64:18 67:12 67:13,17 89:8 93:14 110:6 141:9 150:20 155:12,17 162:12 165:12 168:8 173:21 194:1 209:15 210:15 212:15 219:13 221:3,22 224:5,10 233:19 234:10 234:16 241:1,19 242:5 243:21 244:7,22 247:3 248:6,12 249:1 today's 48:2 65:1 137:2 226:18 told 21:9 25:6 91:2 94:18 203:15 246:5 tolerate 145:8 153:12 tolerated 152:10 Tom 128:13 137:6 168:11 176:9 184:4 188:13 206:17 207:22 Tom's 135:17 tomorrow 234:17 ton 279:2 tool 202:21 tools 202:9,11,18,19 270:7 top 51:22 55:7,11 69:2 107:15 257:19 topic 27:10 28:3 260:17 274:3 topics 7:2 155:14 207:18 249:13 Torres 295:7 total 59:5 174:14 261:7 262:18,19 284:3 tough 62:14 107:20 tougher 127:15 tour 119:1 touted 254:3 toxic 290:20 TRA 268:5</p>
--	--	---	--

<p>track 52:13 53:9 56:12 77:5 113:13 148:14 149:13 161:12,12 286:2 286:10 tracks 50:4 trade 128:20 209:21 242:20 traded 17:4,6 34:4 49:16 traditionally 143:17 traffic 13:19 51:16 55:9 60:4,8,11 61:10 82:1,6 121:2 133:20 140:1 148:1 157:21 174:13 178:16 196:12 197:6,8 198:8 220:8 232:8,13 236:19,20 237:13,22 238:3 241:5,12 258:1,8 259:1 268:15 269:9,15 273:6,20 275:5,9,10,11 275:14 train 55:6,11 56:10 154:2 282:18 283:4,9,10,17 283:18 285:17 286:11 286:12,16,18 trained 157:20 trains 136:5 162:11 196:8 268:2 282:16 283:5 transformation 147:7 155:5 translating 249:6 transparency 154:8 transport 140:10 291:10 transportation 1:1 3:3,20 6:15 8:6,20 20:22 48:6 48:11 51:19 52:6 56:18 56:22 78:8 122:14 128:4,15 134:19 137:4 142:4 154:13 155:12,19 209:13,19 210:8,20,21 211:6 218:9 227:6 229:13 230:19 231:7,12 231:14 232:3 243:20 251:1 252:6 287:18 trashed 14:12 TRB 71:15 73:15 74:14 111:21 169:12 Treasurer 141:4,10 Treasury 3:4 treated 49:19 248:4 treating 72:4 treats 10:13 11:1 tremendous 218:19 trend 118:11,16 163:6 164:22 165:3,5 trends 37:4,5 49:12 50:17 51:17 55:13 59:5,12</p>	<p>60:13 112:15 131:8 tribute 296:6 tried 64:19 89:8 171:2,4 208:4 212:7 254:9 tries 22:14 trigger 203:14 triggers 190:17 240:8 trip 154:5 truck 50:4,14 51:14 56:8 122:12 126:15 280:4 trucking 48:14 52:14 56:3,5 58:12 112:13 119:15,16,19 280:4 truckload 50:17,18 52:2 52:2 58:5 trucks 48:18 56:11 60:1,1 126:16 127:11 154:12 155:10 243:5,6,6 true 11:19 19:6 40:6 43:19 58:20 96:15 148:9 168:19 250:8 254:7 261:3 276:6 truly 138:11 173:19 190:1 232:17 287:13,15 try 5:7 7:21 28:20 37:2 38:7 53:11 54:10 58:19 58:19 64:9 67:17 87:19 87:20 88:19 102:19 106:12 114:4 143:6 177:12,15 185:20 186:1 203:20 205:22 240:13 267:3 272:16 276:22 281:5 trying 11:4,9 14:10 22:22 58:20 60:7 79:8 81:7 88:2 89:14 108:2 111:11 122:8 165:6 182:21 190:5,6,10,21 191:8 201:3 206:5 210:16 211:15 245:9 273:17 275:17 281:9 289:22 291:19 292:2 Tunnel 153:7 tunnels 53:8 148:22 turn 19:10 22:7 25:8 47:7 47:21 145:18 168:10 170:12 196:2 223:20 256:18 turned 239:6 turning 150:1 153:20 177:18 turns 34:12 121:10 146:1 two 5:4 9:10 10:3 14:2 19:15 26:22 33:12 34:6 34:18 41:4 45:21 61:21 62:8 67:3 68:12,13</p>	<p>69:17 77:16 78:2 84:4 88:3,7,19 135:19 152:10 156:9 168:17 172:17 184:10 190:21 205:2,5 222:8 231:7 232:6 235:18 238:15 245:14 246:4 252:1 254:16 256:15,19 265:8 267:21 268:22 275:22 279:22 285:1 290:14 291:22 294:17 two- 71:2 two-part 72:10 two-thirds 148:13 149:12 222:1 tying 202:21 214:16 type 9:14 174:13 183:11 199:17 212:21 258:18 265:18 275:3 289:1 types 64:11 113:21 161:10 167:16 170:15 185:7 205:13 210:13 236:10 257:16 269:6 270:5 288:9 typical 106:8 typically 15:22 30:10 75:18 102:19 152:13 180:3</p> <hr/> <p style="text-align: center;">U</p> <hr/> <p>U.S 2:7 129:2 139:2 209:22 ultimate 135:8 ultimately 16:22 87:4 115:14 197:20 210:9 216:19,21 273:6 289:20 Um-hmm 102:12 unaccounted 72:16 unaffordable 176:8 unanimity 205:8 unanticipated 144:3 uncertain 279:16 uncertainties 144:5 uncertainty 183:18 238:2 270:16,16,17 279:17 unconstitutional 104:13 undefined 86:6 underlying 11:20 23:6 undermine 238:11 undermining 131:17 understand 16:19 22:22 23:12,15 25:1,2 31:8 37:18 65:6,13 68:22 69:5 91:13 93:7 95:8 101:13 102:14 121:21 160:19 161:3 191:15</p>	<p>194:15 195:17 200:11 200:17 211:1,18 271:16 283:1 284:13 285:7 289:8 understanding 66:3 84:9 97:13 227:10 240:20 understands 135:9 understated 53:7 understood 272:2 274:15 undertook 24:22 undoubtedly 256:20 uneconomic 190:12 uneven 154:11 unfair 130:7 160:7 unfairly 73:6 unfortunately 179:7,12 184:20 218:14 293:10 uniform 10:12 unintended 201:22 203:18 Union 2:6 4:7 17:9,11 46:21 61:1 185:16 227:5,17 233:15 234:3 234:19 238:16 241:1,7 244:15 248:3,7 252:11 252:18,21 253:2 284:5 unique 220:3,7,18 245:15 unit 155:19 196:8 282:14 282:16,18 283:4,5,9 United 77:13 210:11 220:4,19 278:20 280:17 280:18 University 2:3,11,14 6:12 15:19,20 25:16 unlawful 134:1 unnecessarily 250:20 unnecessary 236:19,21 236:22 unprecedented 154:7 unpredictable 282:20 unraveling 167:13 unreasonable 105:12 140:13 147:2 156:8 191:7,8 192:16 266:8 unreasonableness 105:4 unregulated 167:4 unrelated 142:18 166:12 167:12,16 unsigned 158:5 unsustainable 151:17 unusual 18:16 unusually 19:7 UP's 247:17 update 280:7 updated 212:8 updates 280:17</p>
---	---	--	--

<p>upgrading 213:7 uphold 139:20 upper 172:5 uptick 163:16,22 164:1 165:4 upward 169:22 urban 286:18 292:13,15 URC 121:16 URCs 11:7 12:7 71:13,16 71:20 72:8,22 73:4,17 120:7,8,14 122:1 124:11,13 168:4,9,10 169:5,5 urge 136:20 168:9 urgent 129:20 221:4 urges 233:10 usable 177:17 use 22:19 23:12 24:6 26:6 27:1,4 28:3,22 29:16 33:2 34:6 67:17,22 68:4 69:3 70:7 72:22 74:15 75:6,10 87:2 88:5,8 89:5,6,16,17,18 90:3 91:16 95:20 96:14 107:21 108:11 121:8,9 121:11 122:3 148:6 151:1 156:17 168:4 180:16 181:5,10 182:21 183:10 185:20 197:7 202:9 204:3 216:2 232:13 247:1 257:3 267:14,14 268:4,5,11 268:21 272:18 278:12 279:2,5 284:7 293:11 useful 64:20 71:11 100:12 170:20 uses 17:2 68:8 69:2 73:17 125:7 180:3 247:14 usual 185:4 usually 22:20 258:8 utilities 292:15,16 utility 203:22 utilize 10:9 89:16 151:7 151:12 241:22 279:1 utilized 184:19 279:7</p> <hr/> <p style="text-align: center;">V</p> <p>V 2:2 5:12 Val 295:17 valuation 25:17 26:11,12 63:3 valuations 49:13,22 value 41:7,16 44:20 66:12,15 67:9,12 142:9 143:8,9 148:11,13,17 183:6 191:20 217:15</p>	<p>239:19 values 53:7 149:1 variability 172:6,15 236:13,17,21 variable 10:10,11,14,15 11:7,14 12:7 71:16,20 72:5,6,11,16 120:20 156:17 variation 23:16 24:21 38:14,15 39:1 100:14 variations 38:18 89:22 varies 157:17 variety 140:5 234:19 various 64:12 157:18 168:17 204:5,14 214:16 218:1 219:1 245:20 246:20 280:10 293:9 vary 24:19,20 191:18 vast 60:8 98:1 121:19,20 143:1 vastly 19:5 60:13 229:14 vehement 224:13 vehicle 154:22 vehicles 242:19 243:7 vein 95:4 212:13 velocity 154:3 284:6 verbal 249:16 verified 269:21 version 176:20 versions 205:3 versus 33:5 50:17 52:6 227:5 238:10 260:20 VI 3:2 127:19 viability 233:20 viable 9:8,20 137:3 222:17 Vice 3:4 4:8 15:14 48:1 58:1,14,22 59:9 60:6 61:4,7 62:9,22 63:21 64:2,22 65:6,11,20 66:22 67:6,15,21 68:3 68:15,21 69:17,20 70:5 70:14,20 71:12 72:7,18 72:21 73:12 75:2,15 76:5 81:6,13 82:11,16 83:11,17,21 84:8,13 111:18 113:5 115:11 126:8 128:1,4 137:8 140:21 141:3,10 168:1 169:14 170:12 171:6 173:6 174:17 177:18 178:22 179:21 181:1,15 181:21 209:12 217:8 233:16 234:4,5 243:18 255:19 259:3,17 260:8 260:18,22 261:8,15,20</p>	<p>262:2,18,20 263:5,8 264:2,18 265:11,15 266:5,14 271:7,15 272:7 273:7 274:14,22 view 8:15 37:14 38:11 55:18 62:9 64:7 69:13 73:2 81:8 90:12 97:16 98:5 99:15 103:15 135:18 168:7 170:8 175:21 178:2 184:13 186:20 187:8 204:19 205:6 206:13 227:2 240:20 264:3,4 viewed 38:19 151:18 viewpoints 206:6 views 6:21,22 170:5,7 204:20 218:1 VII 3:17 violated 276:10 violates 138:20 virtually 209:22 Visa 66:7 visibility 243:4 vital 56:17 210:8 vitality 136:22 volume 1:7 51:6,9,10,12 51:13 55:13 116:16 117:17 131:6 162:12 179:7 239:1 270:4,6 284:8 voluminous 137:11</p> <hr/> <p style="text-align: center;">W</p> <p>W 3:12 wait 72:9 77:15 199:9 209:2 walking 195:7 Wall 48:7 116:2,4 117:6 118:4,11 160:20 want 6:4,7 8:4,17 9:3 19:11 23:20 26:21 37:11 42:7 44:14 46:12 46:18 63:10 71:13 75:10 81:6 85:16 89:5,5 89:7 93:3 99:10 103:11 103:12 104:17 109:10 111:18 112:14,17 114:22 127:12 137:10 140:1,10,17 141:19 151:11 156:20 160:6 166:9 168:1 173:3 179:13 185:14 193:2 204:1 208:1 209:3 210:15,17 212:6,10,17 220:22 222:10,15 223:13 224:4 236:7</p>	<p>240:15 242:12 244:14 245:10 246:8 253:22 255:18 259:6 268:10 270:18 271:8 273:12 280:22 284:20 285:7 286:9 288:2,14 289:18 289:19 291:16 292:5 293:16,22 294:1,6,14 294:17,21 wanted 22:12 47:14 93:15 111:14 115:19 120:17 173:7 212:3 213:3 272:8,10 275:19 276:9 288:15,17 wants 109:13 221:3 268:15 273:6 Warren 2:16 15:13 46:16 76:12 80:9 82:8,12 83:1 83:16,19 84:2,9,14 87:7 91:5,21 93:7,19 105:10 106:11,13 206:16 223:16 Washington 1:16 2:3 6:12 wasn't 8:13 40:3 179:3 199:2 247:15 252:13 255:12 284:12 watching 110:19 222:7 water 5:6 292:14,16,17 293:4 294:20 waterways 293:4,5 wave 271:2 way 7:15 13:1,7 14:22 16:22 18:21 19:6 21:3 21:12 23:11,18 25:2 28:10 29:12 32:18 36:21 47:9 61:19 62:14 63:5,18,20,22 69:20 72:20 73:3 74:19 86:18 86:19 91:11 106:2 107:6 108:19 112:11 113:10 121:4 156:3,6 157:7,12,18 159:14,14 159:16,20 167:3,4 175:17 179:15,17 183:6 184:8 186:17 188:20 189:10 191:21,22 195:20 196:3 198:12 201:1,19 203:20 206:13 238:7 248:22 249:3,4 249:10 253:5 258:10 267:7 268:3,9 271:3 274:2 286:1,2 291:9 ways 15:1,5 47:3 63:9 64:12 73:17 84:3 92:20 96:13 107:7 147:15</p>
--	---	---	---

155:8 175:14 204:9 221:6 272:19 283:2,3 we'll 5:3,10,16,17 127:21 160:4 163:2 167:20 204:15 207:9 293:3 we're 11:9 15:11 23:6 24:6 25:1 26:8 27:21 29:13,15,16 33:6,6 35:9 37:15 47:13 58:8,20 82:19 84:3 86:14 88:8 89:2 92:19 98:5 99:3 104:12,14 108:1 115:2 127:19 128:2 145:17 153:8 158:4 161:13,15 161:15 162:19 163:1,10 164:20 165:11,12,20,21 167:15,17 172:10 178:6 178:20 179:16 183:22 190:5,6,20,21 191:13 192:7 201:13 206:18 207:4,8 208:16 210:16 213:4,5 235:7 242:15 244:19 247:8 252:10 254:12,16 256:7,8,8,12 257:13,13 259:2 260:20 261:16 262:3,4,10 263:13 264:13 266:16 266:19 270:15,15 275:17 278:5 286:16 287:8 289:10,20 290:7 291:6,14,18 292:2 293:4,10,18,19 294:5 we've 45:13 54:14 62:6 64:12 72:1 77:6 79:20 97:14 100:13 101:18,19 104:4 111:7 116:3 118:8 145:14 146:3,9 147:9 148:1 150:17 161:14,17 162:13,17 163:16 168:11 170:14 172:4 173:21 178:12 179:19 180:8,18 204:10 207:17 212:12 213:7 243:12 244:3 246:5 248:14,20 252:3 284:4 284:5 287:3 292:21 weak 55:13 weather 235:11 236:3 270:13 web 274:9 Webb 1:13 Webster 295:8 week 219:13 weeks 57:13 weigh 86:9 weighed 246:19	weight 69:10 70:15 weighted 33:14 35:18 69:2 welcome 5:16 welcomed 201:19 went 38:9 39:5 43:10 63:7 65:18 66:10 122:14 178:1 193:15 218:15 253:5 276:7 285:4 weren't 40:3 179:9 184:21 283:9 west 234:1,4 who've 100:15 wide 17:3 100:14 155:1 205:6 225:13 widely 219:12 231:13 widened 50:15 widespread 14:8 Wilcox 3:12 128:13 137:7 168:12 170:8,21 172:12 176:14,16 184:15 186:13,22 187:15 188:5 188:10 207:7 wildly 18:20 willing 142:15 294:5 willingness 288:9 win 148:1 154:16 165:20 212:5 216:20 235:2 winds 11:22 winning 276:16 winter 162:6 Wisconsin 237:21 wise 175:12 wish 287:22 wishes 130:10 withstand 179:10 witnessed 155:4 witnesses 138:1 221:21 246:5 269:11 witnesses' 126:14 woke 179:6 Wolfe 2:18 48:6 wonder 276:13 278:9 wondered 119:22 wondering 74:13 126:18 168:4 170:4,18 176:9 187:7 279:14 word 12:5,5 86:1 87:2,8 words 51:13 53:21 104:17 105:3 189:20 200:10 246:9 work 37:17 44:17 68:18 75:22 98:3 122:14 155:6,7 171:1,19 176:5 176:21 177:16 199:3,18	202:9 204:11,12 211:8 213:10,21 239:13 244:11 245:19 248:14 280:18 290:1 294:5 295:15 worked 28:16 66:1 159:12 211:12,17 218:20 220:10 223:16 working 8:11 30:20 47:14 209:8 249:11 286:12 Workman 295:13 works 176:12 195:13 220:22 238:16 world 44:20 46:3 65:1 71:2 95:5 138:9 153:8 166:15,16 187:13 188:12 195:13 249:10 249:11 279:15 287:22 290:21 291:1,13,17 worried 202:12 worry 104:22 185:6 295:3 worse 14:19 worst 220:8 worth 50:22 52:11 149:8 185:8 209:1 249:9 wouldn't 18:17 39:2 46:13 60:14 64:21 74:17 82:5 102:2 105:2 107:18 122:3 163:8 169:2 186:6 189:15 191:3 203:5 216:17 248:3,15 273:12 274:15 276:17 wouldn't' 123:20 wow 38:8 wrap 275:19 write 93:13 writings 102:18 written 93:12,18 101:19 128:10 130:11,18 135:19 137:17,20 224:16 234:11 244:3 257:15 wrong 73:15 74:12 139:1 156:15 157:2 158:13 174:2 240:10 271:16 wrote 68:17 99:12 156:9 175:12 267:10 285:6 Wyoming 237:20 <hr/> X <hr/> <hr/> Y <hr/> yard 268:7 285:15 286:5	yeah 9:15 37:13 58:18 62:22 65:14 70:5 72:3 72:19 73:9,11 75:2 80:17 87:9 93:19 102:5 110:22 114:8,22 115:13 120:12 122:3 124:20,20 124:22 127:1 161:5 165:8 166:14 172:12 179:5 181:4,20 182:12 186:15,22 189:18 195:10 200:1 207:3,7 224:3 259:16 260:16 263:3 265:15 268:22 272:12 year 35:14,14,14 39:12 39:21 40:4 42:17 43:1 45:14 52:4,17 55:17 86:15 94:15 107:15,15 107:17,17 114:9 116:22 116:22 117:1 120:4 145:22 149:16 160:18 163:2,3 172:4,7,17 178:16,18,18 197:22,22 210:12 211:6 226:17 238:7,11,11,20 239:18 239:18 240:5,8,9 year's 239:14 year-end 148:11 years 6:16 8:2,6 16:9 25:16 34:1,4 39:20 45:15 48:15 49:2 50:5,8 50:15,18 51:8,12,18,21 52:20,22 53:1,3,5,14,17 55:3,7 57:2 58:11 87:10 95:10 97:15 102:18 110:5,11 116:16,17 118:8 126:13,20 127:3 138:20 141:14 145:15 149:10 157:16 160:8 161:8 162:13,22 165:4 165:13 172:17 186:12 208:3 219:11 220:9 221:16 233:22 237:18 243:13 247:20 263:15 269:14 281:7 yellow 5:22 108:5 yesterday 5:14 6:7 16:4 26:8 46:18 47:18 61:8 73:14,22 76:16 81:10 82:18 93:20 95:4 118:20 121:1 124:7 138:22 139:3,19 150:8 173:21 193:22 199:15 204:3 207:17 216:13 221:21 224:10 241:19 244:7 247:3 250:5
--	---	---	---

260:17 261:3 269:10 275:21 276:6 277:9 279:11 yield 59:5 70:10 yields 60:21,22 217:15 York 3:13 155:18 157:21 young 276:1	79:17 10705 139:21 140:6,13 253:10 10705(a)(2)(C) 230:15 11102 265:11 12 55:6 79:2,4 166:21 167:1 172:10 127 3:11 12th 137:18 13 1:11 40:9,12 51:13 56:4 82:14 180:9 137 3:12 13th 127:18 207:9 295:19 14 48:16 56:6 141 3:4,5 15 49:2 55:3 56:7 77:7 78:22 79:9 141:14 145:18 160:8 150 243:13 155 3:15 16 116:6,10 165:19 170 57:12 171 99:11 100:20 18 52:5 180 73:11 77:21,21 121:4 121:8,11,12,21,22 122:20 123:13,18 124:2 124:5,10,22 168:18 169:20 177:7 196:13,14 199:5 292:7 19 18:4,6,6,14 35:22,22 36:3 40:9 43:6,14 49:7 105:8,13,19,20 108:19 19.23 104:21 1914 157:6 1925 32:16 1950s 27:12 1960's 27:9 1960's-1970's 27:18 1960s 27:12 1971 157:8 1980 50:7 64:19 1980's 28:2 1983 28:8 1987 139:4 1990 49:16 1990's 28:2 1998 51:9	269:13 285:19 2,000 147:5 189:5,13 190:11 2,500 162:15 2.4 163:1 20 28:17 48:15 51:7,12 51:18 52:4 53:14 106:15 110:5,11 145:22 178:15 283:10,11 20-stage 71:3 200 218:15 2000 48:17 49:5,8 227:1 2003 52:19 2004 50:6,9 2005 160:9 218:14 2006 33:21 34:1 2007 49:16 2008-2009 164:6 2009 40:2,13 160:16 161:4 179:5 201 3:8 2012 140:3 2014 162:6 292:6 2015 115:21 116:10 117:17 149:18 160:18 165:19 2015-2016 162:5 2016 163:17 2017 115:22 218:15 2018 18:12 33:21,22 148:11 2019 1:11 49:9 131:5 153:22 284:10 2020 238:20 240:1 209 3:20 217 4:3 22 2:9 36:9 149:11 224 4:5 23 50:8 145:22 2300 159:5 233 4:8 24/7 289:3 243 4:10 25 2:13 119:3 267 157:7 26th 128:12 27 51:12 28 148:12 29 18:10	3:37 296:10 30 46:16 162:11 233:22 30's 159:6 30-some 25:16 300 1:15 56:11 31 18:14 33 149:14 34 51:9 138:20 39 49:8 3B 169:17 170:3 173:13 175:11,12 176:3,5,10 176:17,19 202:10
<hr/> Z <hr/>			
Z 16:1 17:22 86:7 91:1 104:19 125:8 Z's 88:7 105:21 zero 37:21,22 38:3,7 39:10 45:14 46:14 81:16 102:11 255:20 Ziehm 295:5 Zmijewski 2:13 15:19,22 25:12 39:5 66:6 67:2,7 67:16 68:2,6,16 69:16 69:19,22 70:6,17,22 84:20 85:3,6 106:12,14 106:19 125:15 126:3 zoo 123:16			
<hr/> 0 <hr/>			
<hr/> 1 <hr/>			
1 102:9 114:12 142:5 225:2 269:13,19 1,000 80:14 82:4,5 105:6 105:9,13 106:15,17 107:11 1,100 128:21 1,200 162:16 1.5 146:5 10 18:8 36:17 43:12 44:1 52:7,19,20 56:7 106:14 107:11 110:4,11 118:8 126:20 127:3 149:10 161:8 162:22 166:22 196:16,17,18 197:13,15 10-year 179:20 10,000 234:20 100 93:15 102:2,3,15 106:15 107:11 118:21 119:11 157:5,9,16 190:14 196:10,16 262:7 279:12 283:15 292:11 100,000 144:19 145:16 189:4 192:2 101 76:21 10101(3) 78:6 10101(6) 76:16,22 78:11 1016 139:2 10704 277:20 10704(a)(2) 19:14 78:3	2 <hr/>		
	2 6:1 26:13 43:11 44:3,5 48:13 50:10,19 53:2,4 57:13 58:11 60:2,4 114:12 143:6 150:21 168:13 178:16 208:15 208:16 257:15 266:7		
	<hr/> 3 <hr/>		
	3 19:14 116:17 119:2 120:1 130:11 144:11 176:20 177:16 266:3,6 269:14 3.7 210:12		
		<hr/> 4 <hr/>	
		4 44:5,13 48:20 50:20 52:22 58:12 60:2,5 119:2 130:11 235:12,15 40 50:5,12,15 97:15 121:6 162:11 178:14 286:19,20 290:21 291:2 40,000 144:20 400 34:20 35:17 39:12 197:19 41 99:13 101:22 102:6 46 2:16 46,000 146:4 47 2:19 49 139:2 49-10701(d)(3) 156:1 4R 139:6	
		<hr/> 5 <hr/>	
		5 50:4,18,20 52:7,18 53:17 58:11,12 95:10 116:16,17,22,22 117:1 157:7 165:4 5,000 149:13 50 51:9 72:8 196:8 217:15 50/50 69:2,20 70:15,19 500 17:20 18:1,4,18 19:3 24:4 25:4 33:5 34:5,5 34:13,18,22 35:2,16 36:2 39:6,9,19 40:11 43:8,12 45:11,12 47:8 48:15,20 49:14 52:9 53:16,19 54:6 97:3 109:20 143:1 196:8 197:9,18 500's 49:17 550 149:14	
		<hr/> 6 <hr/>	
		6 2:4 50:16 52:9 53:1 76:10 78:20,20 79:3 82:13 150:2	

60 34:22 36:7 146:4
178:14

600 197:6

664 132:8

665 168:12 176:16

7

7 208:22

7,000 128:22

7.7 217:18

7.9 189:16

70 129:2 144:21 284:11

711 221:9,13 224:14

225:2,7,10 232:19

233:8,13 265:1,17

711 269:19

722 1:4 87:11 132:6

184:18 186:2

73% 40:4

755 218:3

756 218:3

76 121:2,5,10,18

761 1:2

8

8 44:14 48:18 153:20

221:15 284:9

8,000 128:22

80 38:5 148:20 283:15

80s 113:1

85 226:17

88 17:22 19:3 39:8,11

292:9

8th 225:22 228:12,14

251:14 255:1

9

9 36:15,16 43:14 52:15

106:2

9:30 1:12

9:33 5:2

90 121:5

95th 107:10

99 57:15

