

ASSOCIATION
OF AMERICAN
RAILROADS

John T. Gray
Senior Vice President - Policy & Economics

June 5, 2015

The Honorable Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Dear Ms. Brown:

This submission is the AAR forecast of the third quarter 2015 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2015-3) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the third quarter 2015 results on the fourth quarter 2012 base, and shows the percentage changes from the previous quarter.

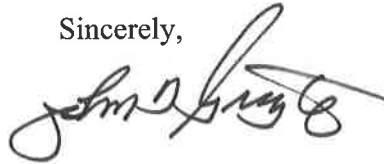
	<u>2015Q2</u>	<u>2015Q3</u>	<u>% Change</u>
All-Inclusive Index	91.1	90.6	-0.5
Preliminary RCAF	0.911	0.906	-0.5
Forecast Error Adjustment	-0.031	-0.077	
RCAF (Unadjusted)	0.880	0.829	-5.8
Productivity Adjustment Factor	2.3382	2.3422	
RCAF (Adjusted)	0.376	0.354	-5.9
PAF-5	2.4766	2.4828	
RCAF-5	0.355	0.334	-5.9

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In its October 3, 1996 decision in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*, the STB noted its intent to publish, in addition to the RCAF (Unadjusted) and RCAF (Adjusted), an RCAF-5 (i.e., a calculation of the productivity adjusted RCAF values as if the agency had always used a 5-year rolling average to calculate the productivity adjustment). In response to a request by STB staff, the AAR is including a calculation of the RCAF-5 in its quarterly RCAF filing. The AAR and its members, however, do not believe the publication of a third RCAF index is required or permitted by the applicable statute (49 U.S.C. § 10708) and do not endorse its publication.

Our quarterly non-proprietary work papers underlying this submission are e-filed herewith, in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, served February 8, 1990. We have notified Pedro Ramirez, in the STB office handling this proceeding, of our plan to e-file the submission and non-proprietary work papers. A second copy of the submission and non-proprietary work papers, plus selected highly confidential work papers, will be hand-delivered to a member of Mr. Ramirez's Data Collection and Auditing Team. All work papers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,

A handwritten signature in cursive script, appearing to read "John T. Gray".

John T. Gray

Attachments

**Third Quarter 2015
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2015-3)

**Quarterly Rail Cost Adjustment Factor
Surface Transportation Board**

**Policy and Economics Department
Association of American Railroads**

June 5, 2015

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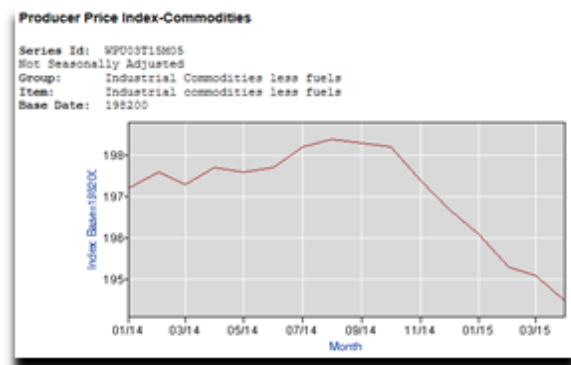
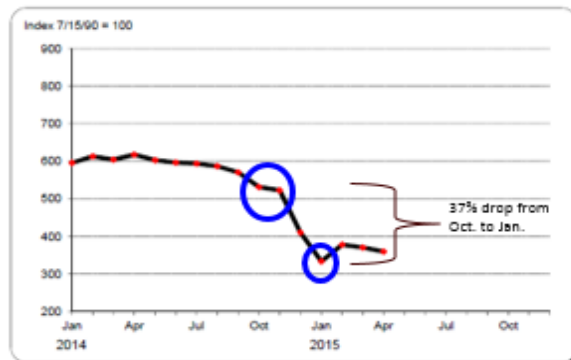
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Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) adopted the All-Inclusive Index as the basis for the Rail Cost Adjustment Factor (RCAF). The quarterly projection of railroad costs, as documented herein, employs the All-Inclusive Index as required by the regulations. Also presented in this submission is the RCAF, both Adjusted and Unadjusted, as required by the ICC in its decision in Ex Parte No. 290 (Sub-No. 4), Rail Cost Recovery Procedures - Productivity Adjustment, served March 24, 1989. In addition, the AAR has included the RCAF-5, which was instituted by a Surface Transportation Board decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*. The AAR and its members do not believe the additional productivity-adjusted index is required or permitted by the applicable statute, and do not endorse its publication.

This quarter's projection of railroad costs is for the third quarter 2015. The forecast error adjustment, which is based on comparisons for the first quarter 2015, is the largest forecast error adjustment since the second quarter of 2009. Fuel was the major contributor to the large decrease, as actual fuel prices fell at a much faster rate (see chart below) than in the months (October and November) before the forecast was made. The PPI-Less Fuel, used as a proxy for All Other and part of Equipment Rents, has also been continuously falling since September.

Locomotive Diesel Fuel Prices Through April 2015



Index Weights

In the Ex Parte No. 290 (Sub-No. 2) final rules, issued in April 1981, the Interstate Commerce Commission mandated that the weights of each major cost component be updated annually. These "external" weights are calculated using data from Schedules 410 and 210 of the R-1 annual report filed with the Surface Transportation Board by the Class I railroads. The weights are typically updated with the fourth quarter projection.

The 2013 (current) and 2012 (previous) weights are shown below. Weights calculated from 2012 data were used for the fourth quarter of 2013 through the third quarter of 2014. (Revisions to annual reports caused revisions to the 2012 weights.) Beginning with the fourth quarter of 2014, weights calculated using 2013 data are used. Labor had the biggest increase in weight, as it increased from 31.2 to 31.6 percent of expenses. Weights for Fuel and Equipment Rents decreased by 0.2 percentage points, although the weight for Fuel remains high compared to other years. Weights for Depreciation increased by 0.1 percentage point, Interest decreased by 0.1 percentage point, and the remaining components experienced no change at all. During October 2014, the STB ordered one railroad to make a small revision to Schedule 410 of its 2013 annual report. However, the change had no impact on the weights calculated earlier in August.

Weights for RCAF's All-Inclusive Index		
	2012	2013
Labor	31.2 %	31.6 %
Fuel	22.3	22.1
Materials & Supplies	4.9	4.9
Equipment Rents	5.6	5.4
Depreciation	11.9	12.0
Interest	2.0	1.9
Other	<u>22.1</u>	<u>22.1</u>
Total	100.0	100.0

Reweightings of the index is accomplished by calculating both the current quarter (normally the fourth) and prior (normally the third) quarter indexes with the new weights. The relative change between the two quarters is then multiplied times the prior quarter (usually the third) *linked* index. Use of this method ensures that the weight change, by itself, does not cause a change in the level of the All-Inclusive Index.

Internal weights in the labor and equipment rents components are updated at the same time as the external weights. When these weights are changed, they are also linked using the procedure described above in order to eliminate the effect of the change in weighting.

All-Inclusive Index Third Quarter 2015

The components and values of the current and previous All-Inclusive Indexes are shown below. Details of the construction of each component of the index are contained in the Appendices.

	2013 Weights	Forecast		Percent Change
		Previous 2015Q2	Current 2015Q3	
1. Labor	31.6%	402.8	404.3	0.4 %
2. Fuel	22.1%	251.6	246.1	-2.2
3. M&S	4.9%	265.3	258.9	-2.4
4. Equipment Rents	5.4%	212.1	212.2	0.0
5. Depreciation	12.0%	222.1	221.8	-0.1
6. Interest	1.9%	70.6	70.6	0.0
7. Other	22.1%	217.2	215.6	-0.7
8. Weighted Average				
a. 1980 = 100		283.3	281.9	
b. 1980 = 100 (linked)		271.0	269.7 ¹	
c. 4Q12 = 100		91.1	90.6 ²	-0.5

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index
= (281.9 / 283.3) x 271.0
= 269.7

² To calculate the 4Q12 = 100 index:
Index4Q12 = (Current Linked Index / 4Q12 Basing Factor) * 100
= 269.7 divided by 297.6 times 100
= 90.6

Indexes based on other periods:
4Q07 based index = 269.7 / 245.9 x 100 = 109.7
4Q02 based index = 269.7 / 192.1 x 100 = 140.4
4Q97 based index = 269.7 / 173.2 x 100 = 155.7
4Q92 based index = 269.7 / 156.9 x 100 = 171.9
4Q87 based index = 269.7 / 132.2 x 100 = 204.0

Forecast vs. Actual All-Inclusive Index First Quarter 2015

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the first quarter actual index of 87.8 is 7.7 index points below the forecast value of 95.5. Therefore, the forecast error adjustment for third quarter 2015 is -7.7 index points.

	2013 Weights	First Quarter 2015		Amt Difference
		Forecast	Actual	
1. Labor	31.6%	401.6	401.6	
2. Fuel	22.1%	309.1	205.9	
3. M&S	4.9%	274.9	274.9	
4. Equipment Rents ¹	5.4%	213.1	212.6	
5. Depreciation	12.0%	218.6	221.1	
6. Interest	1.9%	70.6	70.6	
7. Other	22.1%	223.1	219.2	
8. Weighted Average				
a. 1980 = 100		297.1	273.7	
b. 1980 = 100 (linked)		284.2	261.3 ²	
c. 4Q12 = 100 ³		95.5	87.8	-7.7

Forecast error \longrightarrow **-7.7 index points**

1	2013 Weights	First Quarter 2015	
		Forecast	Actual
Car-Hire	52.8%	186.6	188.7
Lease Rentals	47.2%	223.1	219.2
Weighted Average		203.8	203.1
Weighted Average (linked)		213.1	212.6

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
 $261.3 = 273.7 / 297.4 \times 283.9$

³ The 4Q12 based indexes are 1980 based indexes divided by the 4Q12 basing factor (297.6/100).
 Other basing factors are: 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; 4Q92 = 156.9; and 4Q87 = 132.2.

Productivity

On February 13, 2015, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2013 to the Productivity Adjustment Factor (PAF) and removed the year 2008. This creates a geometric average annual productivity change, for the five-year period 2009 through 2013, of 0.7 percent per year. The components of this average annual value are shown on the following table in ratio format – therefore, 1.007 is the same as an increase of 0.7 percent.

Productivity changes are calculated by multiplying each of the five productivity changes together and taking the result to the one-fifth power. The productivity adjustment factors (PAF) for each quarter are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate, which are the fourth root of the geometric average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the five-year productivity trend.

Comparison of Output, Input, & Productivity			
2009 - 2013			
Year	Output Index (1)	Input Index (2)	Productivity ¹ Changes (3)
2009	0.847	0.861	0.984
2010	1.109	1.070	1.037
2011	1.041	1.039	1.001
2012	1.007	0.999	1.008
2013	1.022	1.018	1.004
Average			1.007
Previous Average (2008-2012)			1.010

¹ The values shown in Column 3 are based on full float calculations and may not exactly match numbers calculated using the rounded numbers displayed in Columns 1 and 2.

Calculation of PAF and PAF-5			
For 2009-2013, use fourth root of avg. productivity change = 1.0017			
For 2008-2012, use fourth root of avg. productivity change = 1.0025			
Quarter	Year	PAF	PAF-5
Q1	2015	2.3342	2.4704
Q2	2015	2.3382	2.4766
Q3	2015	2.3422	2.4828
Q4	2015	2.3462	2.4890
Q1	2016	2.3502	2.4932

Rail Cost Adjustment Factor Third Quarter 2015

Four RCAF values are presented in this filing. Two are not modified for productivity (Preliminary RCAF and RCAF Unadjusted), and two incorporate a productivity calculation (RCAF Adjusted and RCAF-5). The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below. Note that, beginning with 2013Q1, the All-Inclusive Index is on a 2012Q4=100 basis.

	Previous 2015Q2	Current 2015Q3	Percent Change
All-Inclusive Index ¹	91.1	90.6	-0.5
Preliminary RCAF ²	0.911	0.906	-0.5
Forecast Error Adjustment ³	<u>-0.031</u>	<u>-0.077</u>	
RCAF (Unadjusted) ⁴	0.880	0.829	-5.8
Productivity Adjustment Factor ⁵	<u>2.3382</u>	<u>2.3422</u>	
RCAF (Adjusted) ⁶	0.376	0.354	-5.9
PAF-5 ⁷	2.4766	2.4828	
RCAF-5 ⁸	0.355	0.334	-5.9

¹ See All-Inclusive Index on page 3.

² All-Inclusive Index divided by the All-Inclusive Index in the base period (100.0).

³ The current figure is from Forecast vs. Actual All-Inclusive Index in this filing (page 4). The previous quarter figure is shown in a similar section of the previous quarter's filing.

⁴ Preliminary RCAF plus the forecast error adjustment.

⁵ See Productivity on page 5.

⁶ RCAF (Unadjusted) divided by the Productivity Adjustment Factor (PAF).

⁷ See Productivity on page 5.

⁸ RCAF (Unadjusted) divided by the PAF-5.

Appendixes

Labor

Third Quarter 2015

The third quarter 2015 Labor Index is forecast to increase 0.4 percent from the previous quarter. Employer contributions to 401(k) plans and employee stock plans caused the small increase.

Wage Rate Index

The Wage Rate Index portion of the Labor Index decreased 0.1 index points, which rounds to a 0.0 percent change. A few general wage increases and a higher profit sharing payment were offset by a lower rate for back pay.

Wage Increases: No wage increases are scheduled for the third quarter in the national labor agreements. Two new independent labor agreements were added to the index, and a small number of independent labor agreements have general wage increases scheduled for July or August.

Lump Sums: The third quarter lump sum rate decreased 0.2 cents from the previous quarter. One small lump sum was fully amortized and removed from the index. No new lump sums were added.

Back Pay: The third quarter back pay rate decreased 5.6 cents as the net result of the complete amortization and removal of a large amount from last year involving a total of seven new (at the time) labor agreements. Although two new back pay amounts were added to the rate, they were much smaller than the one removed.

Other: In wages, "Other" contains the amortization of incentive payments that a railroad makes each year to its dispatchers, yardmasters, and engineers. The current incentive payment amount is for a payment made in early 2015 for performance in 2014. This is the first quarter of amortization for the payment made in 2015, and the resulting rate is 18.4 percent (or 2.5 cents) higher than the previous quarter. This new incentive payment amount is 18 percent higher than the payment made in 2014, although it is lower than the payment made in early 2013.

Supplements Index

The Supplements Index increased 0.9 percent because of higher employer contributions to 401(k) and stock plans.

Health & Welfare: The Health & Welfare rate rounded to the same number for the current quarter. Small changes to employee health & welfare cost sharing were made for a new labor agreement for one railroad.

Railroad Retirement: The Railroad Retirement rate decreased 0.2 cents, which rounds to a change of 0.0 percent. Taxable earnings were lower by 1.4 cents.

Unemployment Insurance: The Unemployment Insurance rate was unchanged from the previous quarter.

Labor

Third Quarter 2015

Other: The "Other" category is a reflection of all other fringe benefits, and currently contains known employer contributions to employee 401(k) accounts and employer contributions to employee stock plans that are recorded as fringe benefits. For the third quarter, the rate increased 15.1 cents because of one railroad's annual bonus match 401(k) contribution, and another railroad's annual employee stock contribution.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.0 percent change in the Wage Rate Index and a 0.9 percent increase in the Supplements Index combined to cause a 0.4 percent increase in the Labor Index. The linked third quarter 2015 index is 404.3.

Labor Third Quarter 2015

Table A-1 Labor Index

	2015Q2	2015Q3	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$40.102	\$40.121	0.0%	\$0.019
Adjustments:				
Lump Sum	0.407	0.405	-0.5%	-\$0.002
Back Pay	0.150	0.094	-37.3%	-\$0.056
Other	0.136	0.161	18.4%	\$0.025
Total Wages	<u>40.795</u>	<u>40.781</u>	0.0%	-\$0.014
Health & Welfare Benefits	7.612	7.612	0.0%	\$0.000
RR Retirement & Medicare	8.244	8.242	0.0%	-\$0.002
Unemployment Insurance	0.204	0.204	0.0%	\$0.000
Other	0.145	0.296	104.1%	\$0.151
Total Supplements	<u>\$16.205</u>	<u>\$16.354</u>	0.9%	\$0.149
Total Labor (as info only)	\$57.000	\$57.135		
Wage Index¹	349.1	349.0	0.0%	
Supplements Index²	598.9	604.4	0.9%	
Total labor Index, 2012 Weights ³	423.8	425.4		
Labor Index (linked)⁴	402.8	404.3	0.4%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

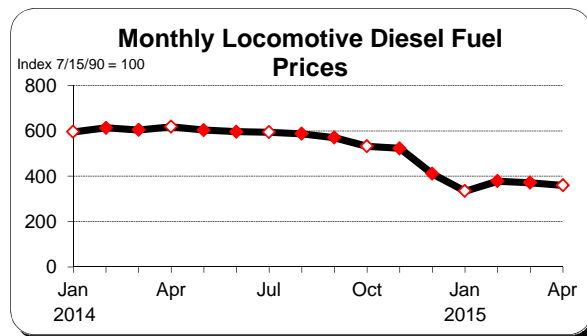
³ 2013 weights: wages, supplements 70.1% 29.9%

⁴ 2015Q3 linked Index = 2015Q2 linked x (2015Q3 / 2015Q2)
= 402.8 x 425.4 / 423.8

Fuel Third Quarter 2015

The forecast for fuel is based on: (1) a survey of railroad fuel purchasing officers concerning current price and volume levels, (2) expectations of railroad purchasing officers based on their own forecast models and discussions with their major suppliers, and (3) a consensus of petroleum industry experts and general business publications. Fuel purchases are assumed to remain in inventory for 30 days before the fuel is consumed (and therefore expensed). Therefore, prices paid in the first month of each quarter are for fuel expensed in the second (or middle) month of the quarter, and the middle month is used to represent each quarter.

Locomotive diesel fuel prices had some huge decreases near the end of 2014, but the April 2015 average price is higher than that for January. The chart below shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2014 through April 2015.



While the latest average prices for locomotive diesel fuel are available only through April 2015, data through most of May are available for related fuel types. Weekly spot prices for crude oil,* heating oil,** and Ultra-Low-Sulfur Diesel Fuel** have all increased from 4/17/2015 to 5/29/2015, according to the Energy Information Administration. Increases ranged from 2.4 to 6.5 percent. Futures prices are up too.

Thus, the railroads expect Q3 (July) locomotive diesel fuel prices to be down only 2.2 percent from the previous quarter forecast, as prices are expected to continue to trend upward for the next month or two. This equates to July prices 10.9 percent higher than the average price railroads actually paid in April.

Forecast Fuel Index (1980 = 100)	246.1
Change from previous quarter forecast	-2.2%
Change from previous quarter actual	10.9%

* Diesel fuel used by locomotives is made from refined crude oil, and therefore usually has some price correlation.

** Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

Third Quarter 2015

The third quarter 2015 Materials & Supplies Index decreased 2.4 percent from the previous quarter. The decrease was caused by lower prices for items in both the Metals Products and Miscellaneous Products categories.

Items in the Metals Products category include rail, wheel sets, tie plates, bearings, turbocharger screens, and various other parts for locomotives and freight cars. Among the 13 items included in the Miscellaneous Products category are ballast, locomotive lube oil, creosote, two types of batteries, air brake hoses, containerized drinking water, and filters.

2015Q3 Materials & Supplies Index = 258.9

2015Q2 Materials & Supplies Index = 265.3

Difference	-6.4 basis points
	or
	-2.4 %

Equipment Rents Third Quarter 2015

The Equipment Rents Index consists of two components – car hire and lease rentals. The methodology used to create these two components and the final Equipment Rents Index are explained below.

Car Hire

The car hire component is indexed using data from the Car Hire Accounting Rate Master (CHARM) file. Car hire rates for the forecast quarter are estimated based on data for active freight cars using the most recent month available. For the first quarter, December 1 of the previous year is used. For the second, third and fourth quarters; March 1, June 1, and September 1 are used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter to determine the Car Hire Index.

Lease Rentals

The lease rentals portion of the Equipment Rents Index uses the Producer Price Index for Industrial Commodities less Fuel and Related Products and Power (PPI-LF). The Commission adopted this surrogate in its decision served March 13, 1987. The AAR uses six years of historical data to derive its forecast for the PPI-LF. The forecast is used not only for lease rentals, but also for the "Other" component of the All-Inclusive Index. Appendix G discusses the forecast in more detail.

Equipment Rents Index Calculation

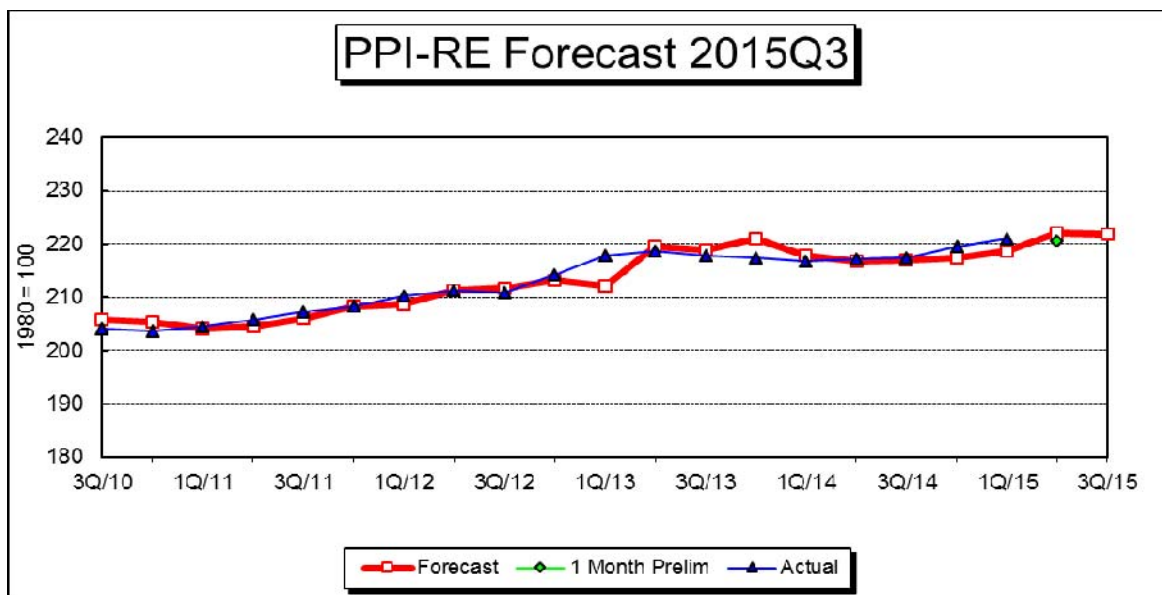
The table below calculates the Equipment Rents Index. The third quarter Car Hire portion of the Index increased 0.8 percent as the latest rates for privately owned cars were higher compared to three months ago. A 0.7 percent decrease in the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 0.8 percent increase for Car Hire, caused the Equipment Rents Index to increase slightly less than 0.05 percent – rounded to 0.0 percent in the table below.

	2013 Weight	2015Q2	2015Q3	Percent Change
Car Hire	52.8%	190.0	191.6	0.8 %
Lease Rentals	47.2%	217.2	215.6	-0.7
Weighted Average		202.8	202.9	0.0
Weighted Average (Linked)		212.1	212.2	0.0

Depreciation Third Quarter 2015

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE is forecast using an ARIMA (Auto-Regressive Integrated Moving Average) process where a statistical package picks the model that best fits the historical data set (see next page), and that model is then used for the forecast. The historical data set contains 6 years of monthly data (a sample size of 72), where the most recent available data point is the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent period available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix on a 1982=100 basis. The figure forecast by the model reflects monthly PPI-RE figures where March and April are down to the same value as October.

Forecast of Depreciation Index (1982=100)	200.5
Forecast of Depreciation Index (1980=100)	221.8
Change from previous quarter forecast	-0.1%
Change from actual first month of previous quarter	0.6%
Change from same quarter of prior year (actual)	2.0%



Depreciation Third Quarter 2015

PPI RAILROAD EQUIPMENT

Exponential smoothing outperforms Box-Jenkins by 0.808 to 1.628 out-of-sample Mean Absolute Deviation. I tried 78 forecasts up to a maximum horizon 12. For Box-Jenkins, I used a log transform.

Series is trended and nonseasonal.

Recommended model: Exponential Smoothing

Forecast Model for PPIRE

Holt exponential smoothing: Linear trend, No seasonality

Component	Smoothing Weight	Final Value
Level	0.67061	199.54
Trend	0.01808	0.24367

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 190.8	Standard deviation 6.041
R-square 0.9737	Adjusted R-square 0.9734
Durbin-Watson 1.941	Ljung-Box(18)=10.35 P=0.08016
Forecast error 0.986	BIC 1.032
MAPE 0.003326	RMSE 0.9722
MAD 0.6386	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2014-11	199.9
2014-12	199.5
2015-01	199.7
2015-02	200.7
2015-03	199.3
2015-04	199.3

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2015-05	197.762	199.784	201.806
2015-06	197.580	200.028	202.476
2015-07	197.461	200.272	203.082
2015-08	197.384	200.515	203.647
2015-09	197.337	200.759	204.181
QTR AVG	197.394	200.515	203.6367

Interest Third Quarter 2015

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt. The interest rate is calculated for the most recent year and used until the next year's figures are available. Typically in the fourth quarter filing, the interest rate is updated to the new level. The source for interest expense is Schedule 210, column b, from the R-1 annual report. The lines used from current R-1 annual reports are listed below. The source for average total debt is Schedule 200 from the R-1 annual report. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers are listed below.

The current Interest Index is based on data from the 2013 Annual Report Form R-1 submitted by each Class I railroad to the Surface Transportation Board at the end of March 2014. This index will be updated using data from the Class I railroads' 2014 Annual Report Form R-1 in the Q4 filing to be submitted on September 5, 2015.

Interest Expense (Schedule 210)

Line	
42	Total Fixed Charges
44	Contingent Interest
less	
22	Release of Premium on Funded Debt

Average Total Debt (Schedule 200)

Line	
30	Current Loans and Notes Payable
39	Equipment Obligations and Other Long Term Debt Due Within One Year
41	Funded Debt Unmatured - Non-Current
42	Equipment Obligations - Non-Current
43	Capitalized Lease Obligations - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

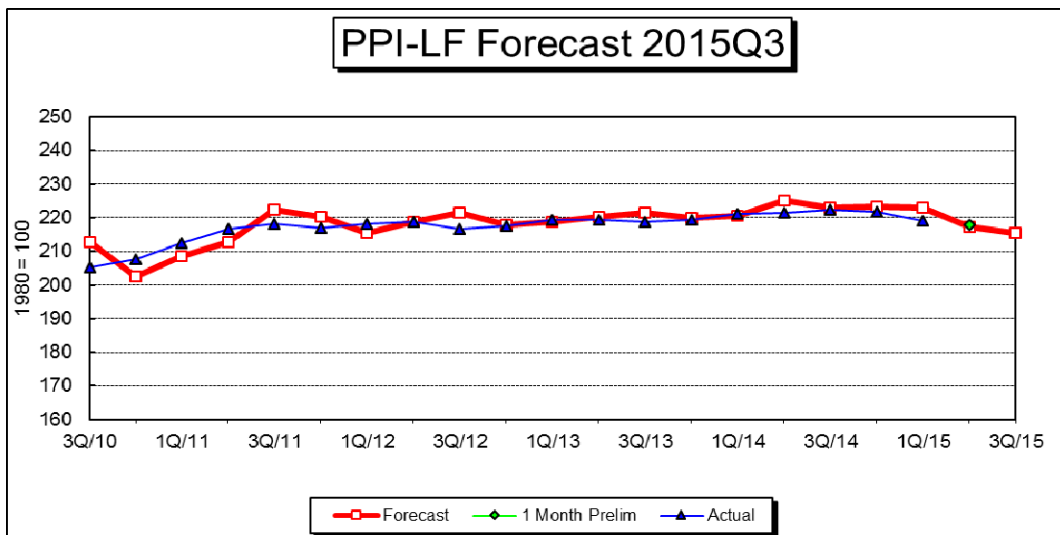
2013	Interest Rate	5.54%
1980	Interest Rate	7.85%
2015Q3	Interest Index	70.6
2015Q2	Interest Index	70.6
	Percent Change	0.0%

Other Expenses Third Quarter 2015

The Producer Price Index for Industrial Commodities less Fuels and Related Products and Power (PPI-LF) is used to index purchased services, casualties and insurance, loss and damage, taxes (other than income and payroll), general and administrative expenses, and lease rentals. These expenses, when grouped together, are usually called "Other" expenses.

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent month available. April and July would be the most recent months available for third and fourth quarter forecasts respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The forecast reflects monthly PPI-LF figures that have decreased every month since September 2014.

Forecast of Other Expense Index (1982=100)	192.3
Forecast of Other Expense Index (1980=100)	215.6
Change from previous quarter forecast	-0.7%
Change from actual first month of previous quarter	-1.1%
Change from same quarter of prior year (actual)	-3.0%



Other Expenses Third Quarter 2015

**PPI INDUSTRIAL COMMODITIES LESS FUELS
AND RELATED PRODUCTS AND POWER**

Exponential smoothing outperforms Box-Jenkins by 1.903 to 2.042 out-of-sample Mean Absolute Deviation. I tried 78 forecasts up to a maximum horizon 12.

Series is trended and nonseasonal.

Recommended model: Exponential Smoothing
Forecast Model for PPILF
Holt exponential smoothing: Linear trend, No seasonality

Component	Smoothing Weight	Final Value
Level	0.99999	194.50
Trend	0.80279	-0.54305

Sample size 72	Number of parameters 2
Mean 191.1	Standard deviation 6.972
R-square 0.9926	Adjusted R-square 0.9925
Durbin-Watson 1.933	Ljung-Box(18)=36.11 P=0.9932
Forecast error 0.6054	BIC 0.6334
MAPE 0.002422	RMSE 0.5969
MAD 0.4629	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2014-11	197.4
2014-12	196.7
2015-01	196.1
2015-02	195.3
2015-03	195.1
2015-04	194.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2015-05	192.715	193.957	195.198
2015-06	190.854	193.414	195.973
2015-07	189.471	192.871	196.271
2015-08	188.257	192.328	196.398
2015-09	187.139	191.785	196.430
QTR AVG	188.289	192.328	196.366

Railroad and Union Abbreviations

Third Quarter 2015

Railroads

BLE	Bessemer & Lake Erie Railroad (Part of CN's Grand Trunk Corp.)
BNSF	BNSF Railway Company
CC	Chicago, Central & Pacific (Part of CN's Grand Trunk Corp. Sometimes noted as CC&P.)
CN	Canadian National Railway (Commonly known as CN, owns Grand Trunk Corporation.)
CNGT	AAR's abbreviation for Grand Trunk Corporation (Almost all of CN's U.S. operations.)
CP	Canadian Pacific (Also noted as CPR. Owns the U.S. Class I railroad Soo Line.)
CPSL	AAR's abbreviation for Soo Line Corporation (CP's U.S. operations including SOO, D&H, and DME.)
CSX	CSX Transportation
D&H	Delaware & Hudson (Part of Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DME	Dakota, Minnesota & Eastern (Part of Canadian Pacific's U.S. operations, included beginning 2011Q4.)
GTW	Grand Trunk Western Railroad (Part of CN's Grand Trunk Corp.)
IC	Illinois Central Railroad (Part of CN's Grand Trunk Corp.)
KCS	Kansas City Southern Railway
NS	Norfolk Southern Combined Railroad Subsidiaries (a.k.a. Norfolk Southern Railway or NS Rail)
SOO	Soo Line Railroad (The largest part of Canadian Pacific's U.S. operations.)
UP	Union Pacific Railroad
WC	Wisconsin Central and subsidiaries (Part of CN's Grand Trunk Corp.)

Note: A portion of the DM&E was sold during 2014.

Note: A proposal was made in November 2014 to sell a portion of the D&H pending regulatory approval.

Major Unions Involved with Railroads

ATDA	American Train Dispatchers Association
BLET	Brotherhood of Locomotive Engineers and Trainmen Div. of the International Brotherhood of Teamsters
BMWED	Brotherhood of Maintenance of Way Employees Division of the International Brotherhood of Teamsters
BRS	Brotherhood of Railroad Signalmen
IAM	International Association of Machinists and Aerospace Workers
IBBM	International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers
IBEW	International Brotherhood of Electrical Workers
NCFO	National Conference of Firemen and Oilers
SMART-TD	Sheet Metal Air Rail Transportation - Transportation Division*
SMW	Sheet Metal Workers' International Association
TCU	Transportation Communication International Union
TCU-Carmen	Brotherhood of Railway Carmen Division of the Transportation Communications International Union
UTU-Yard	United Transportation Union Yardmaster Department (also noted as UTU-YMD)

Predecessor Unions (Some AAR databases use these old abbreviations.)

BLE	Brotherhood of Locomotive Engineers (predecessor to BLET)
BMWE	Brotherhood of Maintenance of Way Employees (predecessor to BMWED)
BRC	Brotherhood of Railway Carmen (predecessor to TCU-Carmen)
IBFO	International Brotherhood of Firemen and Oilers (predecessor to NCFO)
UTU	United Transportation Union (merged into SMART)

* Typically represents employees formerly represented by the UTU (conductors and brakemen).