ASSOCIATION
OF AMERICAN
RAILROADS

John T. Gray
Senior Vice President - Policy & Economics

September 5, 2013

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 fourth quarter 2013 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2013-4) *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 fourth quarter 2013 results on the fourth quarter 2012 base, and shows the percentage changes from the previous quarter.

	2013Q3	2013Q4	% Change
All-Inclusive Index	98.9	100.0	1.1
Preliminary RCAF	0.989	1.000	1.1
Forecast Error Adjustment	-0.012	-0.025	
RCAF (Unadjusted)	0.977	0.975	-0.2
Productivity Adjustment Factor	2.3008	2.3059	
RCAF (Adjusted)	0.425	0.423	-0.5
PAF-5	2.4377	2.4426	
RCAF-5	0.401	0.399	-0.5

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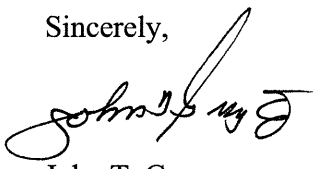
In its October 3, 1996 decision in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation,* the STB noted its intent to publish, in addition to the RCAF (Unadjusted) and RCAF (Adjusted), an RCAF-5 (i.e., a calculation of the productivity adjusted RCAF values as if the agency had always 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.

We have notified Paul Aguiar, in the STB office handling this proceeding, of our plan to e-file the submission and the non-proprietary work papers in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, (served February 8, 1990). 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. Aguiar's Data Collection and Auditing Team. All workpapers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,



John T. Gray

Attachments

Fourth Quarter 2013
All-Inclusive Index

Ex Parte No. 290 (Sub-No. 5) (2013-4)

Quarterly Rail Cost Adjustment Factor
Surface Transportation Board

Policy and Economics Department
Association of American Railroads

September 5, 2013

Table of Contents

Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) [now the Surface Transportation Board (STB)] adopted the All-Inclusive Index of Railroad Costs 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 (but does not endorse) the RCAF-5, which was instituted by an STB decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation.* This quarter's projection of railroad costs is for the fourth quarter 2013. New weights and labor benchmarks have been calculated using 2012 data, and a new Interest Index has been calculated.

In a decision (Docket No. FD 35506) served July 25, 2013, the STB ordered BNSF to "refile its R-1 report for 2010, 2011, and 2012...." The refiling deadline is 60 days after August 24, 2013. At this time (September 5, 2013), the AAR does not have revised BNSF data – and cannot know the impact of the change to weights constructed from 2010, 2011, and 2012 data. If weights based on data for 2012 need to be revised, the AAR plans to use the forecast error adjustment in the 2014Q2 submission (which uses 2013Q4) to remedy differences for 2013Q4 caused by the STB-ordered change to BNSF R-1 data for 2012.

During July 2013, Union Pacific Railroad sent interest expense revisions to the STB. The revisions involved Schedules 210 and 510 in Annual Report Form R-1 for the years 2010, 2011, and 2012. The revised 2012 data were used to calculate the new weights (and Interest Index) used herein, but the impact on weights and the Interest Index, or the appropriateness of using previous calculations, for earlier years has not yet been assessed. We plan to examine the changes to all indexes caused by the STB-ordered revisions and the interest expense revisions after we have processed all revisions from both railroads.

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 2012 (current) and 2011 weights are shown below. The 2011 weights were used for the fourth quarter of 2012 through third quarter of 2013. Beginning with the fourth quarter of 2013, 2012 weights are used. In 2012, expenses used for calculating weights increased in every category except Interest and Materials & Supplies. Weights for 2012 are not much different from 2011. The largest increase was 0.5 percentage points for the Depreciation and Other components. Interest had the largest decrease, which was 0.6 percentage points. Weights for both 2011 and 2012 are listed below.

RCAF Weights

	Previous 2011	Current 2012
Labor	31.3 %	31.2 %
Fuel	22.5	22.4
Materials & Supplies	5.1	4.9
Equipment Rents	5.6	5.6
Depreciation	11.6	12.1
Interest	2.5	1.9
Other	21.4	21.9

Reweighting 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.

In a decision (Docket No. FD 35506) served July 25, 2013, the Surface Transportation Board ordered BNSF to "refile its R-1 report for 2010, 2011, and 2012...." The revised data may impact RCAF weights, but the AAR does not yet have data to assess the changes. If the 2012 weights need to be revised, they will be revised in the 2014Q1 submission, and the AAR plans to use the forecast error adjustment in the 2014Q2 submission (which uses 2013Q4) to remedy differences for 2013Q4 caused by the STB-ordered change.

All-Inclusive Index
Fourth Quarter 2013

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.

	2012 Weights	Forecast Previous 2013Q3	Forecast Current 2013Q4	Percent Change
1. Labor	31.2%	390.4	385.8	-1.2 %
2. Fuel	22.4%	375.6	399.6	6.4
3. M&S	4.9%	264.2	261.4	-1.1
4. Equipment Rents	5.6%	208.0	207.7	-0.1
5. Depreciation	12.1%	218.9	221.0	1.0
6. Interest	1.9%	92.9	73.5	-20.9
7. Other	21.9%	221.4	220.0	-0.6
8. Weighted Average				
a. 1980 = 100		307.3	310.6	
b. 1980 = 100 (linked)		294.3	297.5 [1]	
c. 4Q12 = 100		98.9	100.0 [2]	1.1

Note: The 307.3 weighted average for 2013Q3 is recalculated with 2012 weights to eliminate any changes in the fourth quarter index that would be caused by changing weights. The Q3 weighted average with 2011 weights is 306.9.

[1] To calculate the 1980 = 100 Linked Index:

Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index

= (310.6 / 307.3) x 294.3

= 297.5

[2] To calculate the 4Q12 = 100 index:

Index4Q12 = (Current Linked Index / 4Q12 Basing Factor) * 100

= 297.5 divided by 297.5 times 100

= 100.0

Indexes based on other periods:
4Q07 based index = 297.5 / 245.9 x 100 = 121.0
4Q02 based index = 297.5 / 192.1 x 100 = 154.9
4Q97 based index = 297.5 / 173.2 x 100 = 171.8
4Q92 based index = 297.5 / 156.9 x 100 = 189.6
4Q87 based index = 297.5 / 132.2 x 100 = 225.0

Forecast vs. Actual All-Inclusive Index

Second Quarter 2013

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the second quarter actual index of 97.8 is 2.5 index points below the forecast value of 100.3. Therefore, the forecast error adjustment for fourth quarter 2013 is -2.5 index points.

	2011 Weights	Second Quarter 2013 Forecast	Second Quarter 2013 Actual	Amt Difference
1. Labor	31.3%	384.9	384.9	
2. Fuel	22.5%	404.3	373.1	
3. M&S	5.1%	261.0	261.0	
4. Equipment Rents[1]	5.6%	206.9	207.0	
5. Depreciation	11.6%	219.6	218.8	
6. Interest	2.5%	92.9	92.9	
7. Other	21.4%	220.2	219.4	
8. Weighted Average				
a. 1980 = 100		311.3	304.0	
b. 1980 = 100 (linked)		298.5	290.9 [2]	
c. 4Q12 = 100[3]		100.3	97.8	-2.5

Forecast error → -2.5 index points

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[1]

	2011 Weights	Second Quarter 2013 Forecast	Second Quarter 2013 Actual
Car-Hire	48.6%	177.4	178.0
Lease Rentals	51.4%	220.2	219.4
Weighted Average		199.4	199.3
Weighted Average (linked)		206.9	207.0

[2] Linked actual index = (actual index / previous actual index) x previous linked actual index.

290.9 = 304.0 / 306.8 x 293.6

[3] The 4Q12 based indexes are 1980 based indexes divided by the 4Q12 basing factor (297.5/100). Other basing factors are: 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; 4Q92 = 156.9; and 4Q87 = 132.2.

Productivity

On February 11, 2013, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2011 to the Productivity Adjustment Factor (PAF) and removed the year 2006. This creates a geometric average annual productivity change, for the five-year period 2007 through 2011, of 0.9 percent per year. The components of this average annual value are shown on the following table in ratio format – therefore, 1.009 is the same as an increase of 0.9 percent. Productivity changes are calculated by multiplying each of the five productivity changes together and taking the result to the one-fifth power. The quarter productivity adjustment factors (PAF) 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

2007 - 2011

Year	Output Index (1)	Input Index (2)	Productivity[1] Changes (3)
2007	1.000	0.996	1.004
2008	0.990	0.970	1.021
2009	0.847	0.861	0.984
2010	1.109	1.070	1.036
2011	1.041	1.041	1.000
Average			**1.009**
Previous Average (2006-2010)			1.008

[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 2007-2011, use fourth root of avg. productivity change = 1.0022
For 2006-2010, use fourth root of avg. productivity change = 1.0020

Quarter	Year	PAF	PAF-5
Q1	2013	2.2907	2.4279
Q2	2013	2.2957	2.4328
Q3	2013	2.3008	2.4377
Q4	2013	2.3059	2.4426
Q1	2014	2.3110	2.4480

2006-2010

2007-2011

Rail Cost Adjustment Factor
Fourth Quarter 2013

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 2013Q3	Current 2013Q4	Percent Change
All-Inclusive Index[1]	98.9	100.0	1.1
Preliminary RCAF[2]	0.989	1.000	1.1
Forecast Error Adjustment[3]	-0.012	-0.025	
RCAF (Unadjusted)[4]	0.977	0.975	-0.2
Productivity Adjustment Factor[5]	2.3008	2.3059	
RCAF (Adjusted)[6]	0.425	0.423	-0.5
PAF-5[7]	2.4377	2.4426	
RCAF-5[8]	0.401	0.399	-0.5

[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
Fourth Quarter 2013

The fourth quarter 2013 Labor Index is forecast to decrease 1.2 percent from the previous quarter. The decrease was caused by rebenchmarking to 2012 wage statistics and annual report data plus lower employer contributions to employee 401(k) and stock plans.

Rebenchmarking and Reweighting: Rebenchmarking, as well as updating the internal weights (i.e., the proportion of labor costs represented by wages and supplements, respectively), is reflected each year in the fourth quarter filing. The Labor rate is basically a group of benchmarks from annual data that are updated each quarter using additional information such as labor agreements, payroll tax rates, health & welfare rates, and other data. By rebenchmarking to newer annual data, the number of quarterly updates from the benchmark year to the current quarter becomes fewer – increasing the probability that the updated values match reality. Therefore, the impact of rebenchmarking is captured in the Labor Index, and by itself can cause a change in the index.

The new benchmark year is 2012, and it replaces data for 2011. The 2012 data underlying the fourth quarter rebenchmarking are obtained from a summary of the railroads' 112-Class Wage Statistics and a summary of the railroads' Annual Report Form R-1 submitted to the Surface Transportation Board. Railroad revisions received by the AAR through August 13 are included in the benchmark data.

The source for the wage and supplements internal weights, like the external weights, is also the Annual Report Form R-1 Summary. Unlike rebenchmarking, reweighting by itself is prevented from causing a change in the index. A linking process, where the previous quarter unlinked index is recalculated using the new weights, eliminates changes that would be caused solely by changing weights.

Wage Rate Index

The Wage Rate Index portion of the Labor Index changed only slightly: a decrease of 0.1 percent. Rebenchmarking had very little impact. A few lump sum and back pay amounts were fully amortized, causing the small decrease.

Wage Increases: No wage increases are scheduled for the fourth quarter. One independent agreement had an August general wage increase, so the full impact of its wage increase is not captured until the fourth quarter in the index. Two new independent labor agreements were also added to the index.

Lump Sums: The fourth quarter lump sum rate decreased 2.7 cents from the previous quarter. Three lump sums were fully amortized and removed from the index, while one small amount related to a new independent labor agreement was added.

Back Pay: The fourth quarter back pay rate decreased 1.9 cents, mostly because of the complete amortization and removal of 3 back pay amounts relating to new labor agreements from one year ago. The current rate continues to be negative because of the second quarter change where one railroad's conductors were rebenchmarked from national-agreement to independent. Two small amounts were added because of new independent labor agreements with retroactive wage increases.

Labor
Fourth Quarter 2013

Other: In wages, "Other" contains the amortization of incentive payments that a railroad makes each year to its dispatchers, yardmasters, and engineers. The current amount is for a payment made in early 2013. Rebenchmarking caused the decrease of one half of one cent.

Supplements Index

The Supplements Index decreased 2.6 percent. The change was caused by lower employer contributions to 401(k) plans, plus rebenchmarking to newer annual report data and wage statitics.

Health & Welfare: The Health & Welfare rate decreased by 2.7 cents. The small decrease was caused by rebenchmarking to 2012 annual report data and wage statitics.

Railroad Retirement: Rebenchmarking caused the Railroad Retirement rate to decrease 4.3 percent. Taxable income changed little from third to fourth quarters.

Unemployment Insurance: The Unemployment Insurance rate decreased 0.2 cents because of rebenchmarking.

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 fourth quarter, the rate decreased 5.2 cents mostly because the previous quarter contained annual bonus matches,while the current quarter does not.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.1 percent decrease in the Wage Rate Index and the 2.6 percent decrease in the Supplements Index combined to cause a 1.2 percent decrease in the Labor Index. The linked fourth quarter 2013 index of 385.8 is determined by multiplying the third quarter linked index of 390.4 times the change between the fourth quarter labor index (407.5) and the original third quarter labor index recalculated (412.4) using the original third quarter Wage Rate and Supplements indexes weighted with the new 2012 weights. This method eliminates changes caused by the new weights, but captures changes caused by rebenchmarking. Therefore, the purpose of the center "Updated to Reflect..." column in table A-1 is only to enable the reader to discern the impact of rebenchmarking.

Labor

Fourth Quarter 2013

Table A-1 Labor Index

	2013Q3		2013Q4	
	Used in Previous Index Filing	**Updated to Reflect 2012 Actual Data**	**Based on 2012 Data**	**Pct Chg From Prev. Filing**
Base Wage – Straight Time & Pay For Time Not Worked	$38.306	$38.343	$38.344	0.1%
Adjustments:				
Lump Sum	0.244	0.239	0.217	-11.1%
Back Pay	-0.044	-0.043	-0.063	43.2%
Other	0.213	0.208	0.208	-2.3%
Total Wages	38.719	$38.747	38.706	0.0%
Health & Welfare Benefits	7.965	7.938	7.938	-0.3%
RR Retirement & Medicare	7.952	7.619	7.613	-4.3%
Unemployment Insurance	0.059	0.057	0.057	-3.4%
Other	0.155	0.152	0.103	-33.5%
Total Supplements	$16.131	$15.766	$15.711	-2.6%
Total Labor (a check sum only)	$54.850	$54.513	$54.417	
Wage Index[1]	331.4	331.6	331.2	-0.1%
Supplements Index[2]	596.1	582.6	580.6	-2.6%
Total labor Index, 2011 Weights[3]	414.8			
Total labor Index, 2012 Weights[4]	412.4	408.4	407.5	
Labor Index (linked)[5]	390.4		**385.8**	-1.2%

[1] 1980 wage rate $11.685

[2] 1980 supplements rate $2.706

[3] 2011 weights: wages, supplements 68.5% 31.5%

[4] 2012 weights: wages, supplements 69.4% 30.6%

[5] 2013Q4 linked Index = $2013Q3_{linked}$ x ($2013Q4_{WT2012}$ / $2013Q3_{WT2012}$)

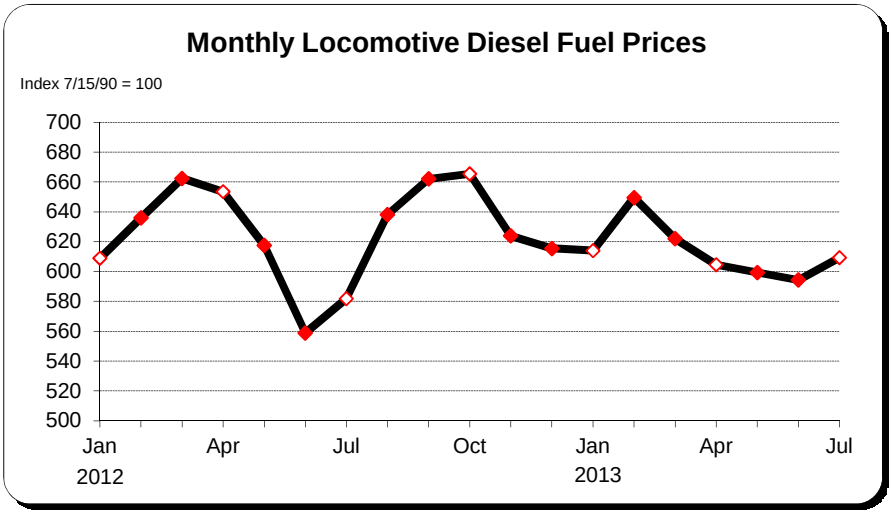
= 390.4 x 407.5 / 412.4

Fuel
Fourth Quarter 2013

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.

While the latest average prices for locomotive diesel fuel are available only through July, data through most of August are available for related fuel types. Crude oil* and heating oil** prices rose in August, possibly caused by the political situation in Syria.

Locomotive diesel fuel prices increased in July. The chart below shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2012 through July 2013. Railroads believe prices for October 2013 (Q4) will be 6.4 percent higher than the third quarter forecast (represented by July 2013).



Forecast Fuel Index (1980 = 100)	399.6
Change from previous quarter forecast	6.4%
Change from previous quarter actual	6.3%

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

** Heating oil 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
Fourth Quarter 2013

The fourth quarter 2013 Materials & Supplies Index decreased 1.1 percent from the previous quarter. The change was caused by decreases in prices in the Miscellaneous Products category. Prices in the Forest and Metal Products categories had little change.

2013Q4	Materials & Supplies Index =	261.4
2013Q3	Materials & Supplies Index =	264.2
	Difference	-2.8 basis points
		or
		-1.1 %

Equipment Rents
Fourth Quarter 2013

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

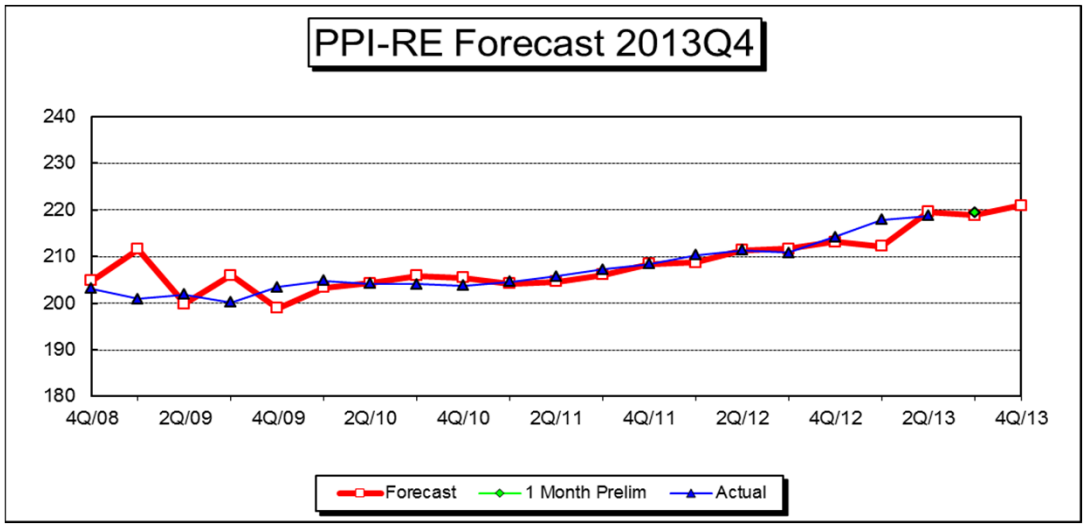
The table below calculates the Equipment Rent Index, and features new weights based on 2012. To eliminate any changes caused by the new weights, the third quarter weighted average (but not the linked value) has been recalculated using the new weights. The original third quarter weighted average using 2011 weights is 200.5. The fourth quarter Car Hire portion of the Index increased 0.4 percent because of higher rates in all categories except those for railroad-owned cars using mileage rates. A 0.6 percent decrease for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 0.4 percent increase for Car Hire, caused the Equipment Rent Index to decrease by 0.1 percent.

	2012 Weight	2013Q3	2013Q4	Percent Change
Car Hire	48.2%	178.3	179.1	0.4 %
Lease Rentals	51.8%	221.4	220.0	-0.6
Weighted Average		200.6	200.3	-0.1
Weighted Average (Linked)		208.0	207.7	-0.1

Depreciation
Fourth Quarter 2013

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 that jumped for March, April, and May.

Forecast of Depreciation Index (1982=100)	199.8
Forecast of Depreciation Index (1980=100)	221.0
Change from previous quarter forecast	1.0%
Change from actual first month of previous quarter	0.7%
Change from same quarter of prior year (actual)	3.2%



Depreciation
Fourth Quarter 2013

PPI RAILROAD EQUIPMENT

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

Component	Smoothing Weight	Final Value
Level	0.70470	198.48
Trend	0.02138	0.31741

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 185.7	Standard deviation 5.788
R-square 0.9682	Adjusted R-square 0.9678
Durbin-Watson 1.975	Ljung-Box(18)=18.18 P=0.5564
Forecast error 1.039	BIC 1.088
MAPE 0.003515	RMSE 1.025
MAD 0.653	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2013-02	195.200
2013-03	195.800
2013-04	196.700
2013-05	198.400
2013-06	198.400
2013-07	198.400

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2013-08	196.667	198.799	200.931
2013-09	196.490	199.116	201.743
2013-10	196.392	199.434	202.476
2013-11	196.344	199.751	203.158
2013-12	196.332	200.069	203.805
QTR AVG	**196.356**	**199.751**	**203.146**

Interest
Fourth Quarter 2013

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. Beginning with fourth quarter 2013, the Interest Index is based on data for 2012.

The interest index is the latest year's interest rate divided by 7.85 percent, which was the interest rate in the 1980 base period.

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 Obligatons - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

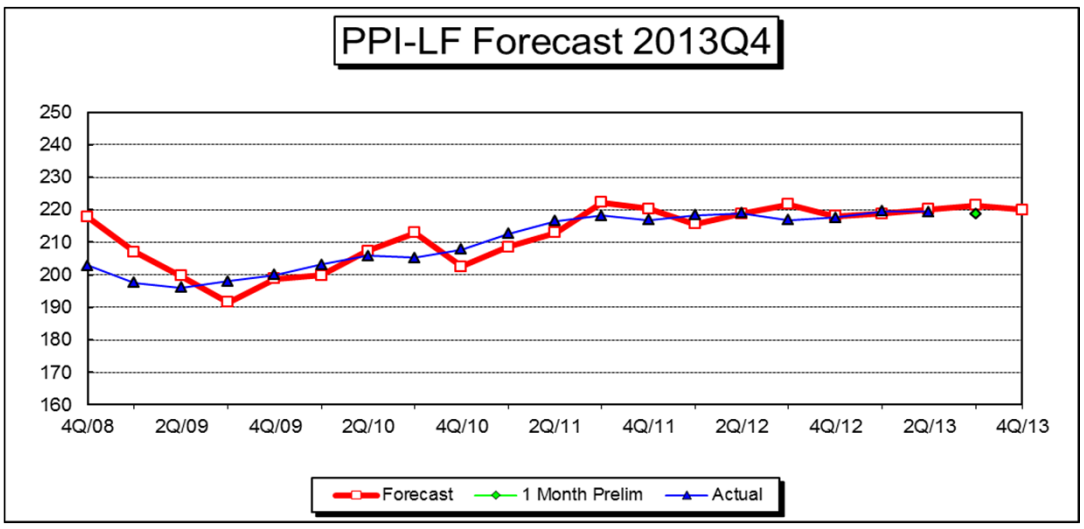
2012	Interest Rate	5.77%
1980	Interest Rate	7.85%
2013Q4	**Interest Index**	**73.5**
2013Q3	Interest Index	92.9
	Percent Change	-20.9%

Other Expenses
Fourth Quarter 2013

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 figure forecast by the model for the fourth quarter reflects monthly PPI-LF figures, which have decreased twice in the last three months.

Forecast of Other Expense Index (1982=100)	196.2
Forecast of Other Expense Index (1980=100)	220.0
Change from previous quarter forecast	-0.6%
Change from actual first month of previous quarter	0.6%
Change from same quarter of prior year (actual)	1.1%



Other Expenses
Fourth Quarter 2013

PPI INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER

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

Component	Smoothing Weight	Final Value
Level	1.00000	195.10
Trend	0.02251	0.28267

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 185.6	Standard deviation 8.184
R-square 0.982	Adjusted R-square 0.9817
Durbin-Watson 0.5658	**Ljung-Box(18)=86.74 P=1
Forecast error 1.107	BIC 1.158
MAPE 0.00435	RMSE 1.091
MAD 0.8025	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2013-02	196.100
2013-03	196.100
2013-04	196.200
2013-05	195.500
2013-06	195.500
2013-07	195.100

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2013-08	193.113	195.383	197.653
2013-09	192.419	195.665	198.912
2013-10	191.957	195.948	199.939
2013-11	191.614	196.231	200.847
2013-12	191.346	196.513	201.681
QTR AVG	**191.639**	**196.231**	**200.822**

Railroad and Union Abbreviations

Fourth Quarter 2013

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.)
CSX	CSX Transportation
D&H	Delaware & Hudson (Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DME	Dakota, Minnesota & Eastern (Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DMIR	Duluth, Missabe & Iron Range Company (Part of CN's Grand Trunk Corp.)
DWP	Duluth, Winnipeg & Pacific Railway (Part of CN's Grand Trunk Corp.)
EJE	Elgin, Joliet & Eastern Railway (Part of CN's Grand Trunk Corp.)
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 of Canadian Pacific's U.S. operations.)
UP	Union Pacific Railroad
WC	Wisconsin Central and subsidiaries (Part of CN's Grand Trunk Corp.)

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
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	United Transportation 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)