



John T. Gray
Senior Vice President - Policy & Economics

December 5, 2016

242187

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

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Dear Ms. Brown:

EP 290 (Sub No. 5)

This submission is the AAR forecast of the first quarter 2017 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2017-1) *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 first quarter 2017 results on the fourth quarter 2012 base, and shows the percentage changes from the previous quarter.

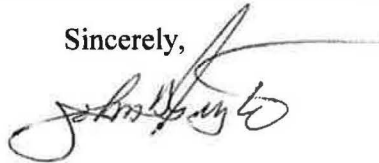
	<u>2016Q4</u>	<u>2017Q1</u>	<u>% Change</u>
All-Inclusive Index	87.6	89.9	2.6
Preliminary RCAF	0.876	0.899	2.6
Forecast Error Adjustment	0.005	-0.011	
RCAF (Unadjusted)	0.881	0.888	0.8
Productivity Adjustment Factor	2.3750	2.3833	
RCAF (Adjusted)	0.371	0.373	0.5
PAF-5	2.5059	2.5147	
RCAF-5	0.352	0.353	0.3

December 5, 2016

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 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 black ink, appearing to read "John T. Gray", with a stylized flourish extending from the end.

John T. Gray

Attachments

**First Quarter 2017
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2017-1)

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

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

December 5, 2016

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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 first quarter 2017. Each year's first quarter calculation utilizes new health & welfare rates, which are listed in Appendix A on page 5. New payroll tax rates and maximum taxable earnings (Tier I, Tier II, and Unemployment Insurance) also become effective January 1, and are listed in Appendix A on page 4.

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 2015 (current) and 2014 (previous) weights are shown below. Weights calculated from 2014 data were used for the fourth quarter of 2015 through the third quarter of 2016. Beginning with the fourth quarter of 2016, weights calculated using 2015 data are used. Traffic and fuel prices were down in 2015, causing fuel expenses to decline substantially in both amount and as a percentage. Because of the huge drop in fuel expenses, the weight for the Fuel Index decreased considerably, while the weights for all of the other categories increased. Labor, Other, and Depreciation had the largest weight increases, as expenses in those categories were lower by small percentages compared to the other categories. The Other category consists of Purchased Services, Taxes (other than income and payroll), Casualties & Insurance, Loss & Damage, and General & Administrative expenses. The weight for Labor, 35.0 percent, is the highest it has been since it was 35.3 percent in 2005.

Weights for RCAF's All-Inclusive Index		
	2015	2014
Labor	35.0 %	31.7 %
Fuel	13.4	20.9
Materials & Supplies	5.4	5.2
Equipment Rents	5.8	5.4
Depreciation	13.9	12.6
Interest	1.9	1.5
Other	24.6	22.7
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

First Quarter 2017

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.

	2015 Weights	Forecast		Percent Change
		Previous 2016Q4	Current 2017Q1	
1. Labor	35.0%	405.1	421.2	4.0 %
2. Fuel	13.4%	200.1	197.2	-1.4
3. M&S	5.4%	245.8	274.3	11.6
4. Equipment Rents	5.8%	223.4	224.3	0.4
5. Depreciation	13.9%	225.1	225.3	0.1
6. Interest	1.9%	60.6	60.6	0.0
7. Other	24.6%	216.9	218.4	0.7
8. Weighted Average				
a. 1980 = 100		280.6	287.9	
b. 1980 = 100 (linked)		260.6	267.4 ¹	
c. 4Q12 = 100		87.6	89.9 ²	2.6

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index
 = (287.9 / 280.6) x 260.6
 = 267.4

² To calculate the 4Q12 = 100 index:
 Index4Q12 = (Current Linked Index / 4Q12 Basing Factor) * 100
 = 267.4 divided by 297.6 times 100
 = 89.9

Indexes based on other periods:

4Q07 based index = 267.4 / 245.9 x 100 = 108.7
4Q02 based index = 267.4 / 192.1 x 100 = 139.2
4Q97 based index = 267.4 / 173.2 x 100 = 154.4
4Q92 based index = 267.4 / 156.9 x 100 = 170.4
4Q87 based index = 267.4 / 132.2 x 100 = 202.3

Forecast vs. Actual All-Inclusive Index Third Quarter 2016

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the third quarter actual index of 87.3 is 1.1 index points below the forecast value of 88.4. Therefore, the forecast error adjustment for first quarter 2017 is -1.1 index points.

	2014 Weights	Third Quarter 2016		Amt Difference
		Forecast	Actual	
1. Labor	31.7%	415.2	415.2	
2. Fuel	20.9%	195.6	183.1	
3. M&S	5.2%	240.6	240.6	
4. Equipment Rents ¹	5.4%	216.8	217.6	
5. Depreciation	12.6%	226.5	225.6	
6. Interest	1.5%	57.5	57.5	
7. Other	22.7%	217.4	217.3	
8. Weighted Average				
a. 1980 = 100		275.5	272.8	
b. 1980 = 100 (linked)		263.0	259.7 ²	
c. 4Q12 = 100 ³		88.4	87.3	-1.1

Forecast error —————→ **-1.1 index points**

¹	2014 Weights	Third Quarter 2016	
		Forecast	Actual
Car-Hire	56.5%	198.0	199.0
Lease Rentals	43.5%	217.4	217.3
Weighted Average		206.4	207.0
Weighted Average (linked)		216.8	217.6

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

$$259.7 = 272.8 / 267.9 \times 255.0$$

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 12, 2016, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2014 to the Productivity Adjustment Factor (PAF) and removed the year 2009. This creates a geometric average annual productivity change, for the five-year period 2010 through 2014, of 1.4 percent per year. The components of this average annual value are shown on the following table in ratio format – therefore, 1.014 is the same as an increase of 1.4 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			
2010 - 2014			
Year	Output Index (1)	Input Index (2)	Productivity ¹ Changes (3)
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
2014	1.055	1.036	1.018
Average			1.014
Previous Average (2009-2013)			1.007

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 2010-2014, use fourth root of avg. productivity change = 1.0035			
For 2009-2013, use fourth root of avg. productivity change = 1.0017			
Quarter	Year	PAF	PAF-5
Q1	2016	2.3502	2.4932
Q2	2016	2.3584	2.4974
Q3	2016	2.3667	2.5016
Q4	2016	2.3750	2.5059
Q1	2017	2.3833	2.5147

Rail Cost Adjustment Factor

First Quarter 2017

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 2016Q4	Current 2017Q1	Percent Change
All-Inclusive Index ¹	87.6	89.9	2.6
Preliminary RCAF ²	0.876	0.899	2.6
Forecast Error Adjustment ³	<u>0.005</u>	<u>-0.011</u>	
RCAF (Unadjusted) ⁴	0.881	0.888	0.8
Productivity Adjustment Factor ⁵	<u>2.3750</u>	<u>2.3833</u>	
RCAF (Adjusted) ⁶	0.371	0.373	0.5
PAF-5 ⁷	2.5059	2.5147	
RCAF-5 ⁸	0.352	0.353	0.3

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

First Quarter 2017

The first quarter 2017 Labor Index rose 4.0 percent from the previous quarter. New health & welfare premiums were the biggest contributor to the change.

Wage Rate Index

Tiny increases in base wages, lump sums, and back pay caused the Wage Rate Index to increase by only 0.1 percent.

Wage Increases: No wage increases are currently scheduled for the first quarter in the national labor agreements. One independent labor agreement has a general increase effective January 1, and some additional independent labor agreements have cost-of-living-allowances (COLAs) effective at the start of the year. Two new independent labor agreements were received in November, and have been added to the index. The total impact of all independent adjustments was an increase of one cent.

Following past index procedure, non-union employees are normally assigned a general wage increase similar to the increase received by most labor unions. However, most labor unions have not received a general wage increase since January 1, 2015. We believe it is highly unlikely that non-union employees will not receive a wage increase at the start of 2017, and an increase of 2 to 3 percent would be an appropriate amount based on the few independent wage increases that occurred in July. However, no non-union wage increase has been applied.

Lump Sums: The first quarter lump sum rate is 1.3 cents higher from the prior quarter. Since no amounts became fully amortized and removed, the addition of one new bonus caused the entire change. The new bonus amount is one railroad's quarterly incentive bonus given to locomotive engineers that achieve certain goals. This quarterly bonus began in 2016, and was first captured in the 2016Q3 RCAF with the bonus paid in the second quarter for performance in the first quarter. The amount added in this 2017Q1 filing is for the bonus paid in the fourth quarter for performance in the third quarter.

Back Pay: Two new independent labor agreements that featured retroactive wage increases back to 2010 were added to the index. They added one cent to the rate. No back pay amounts became fully-amortized and removed.

Other: In wages, "Other" contains the amortization of incentive payments that a railroad makes each year to its dispatchers, yardmasters, and engineers. This amount is unchanged from the previous quarter.

Supplements Index

The Supplements Index climbed 9.7 percent, mostly because of higher health & welfare premiums.

Health & Welfare: The Health & Welfare rate jumped 17.2 percent. Higher payment rates will go into effect January 1, reflecting higher contract rates and less assistance available from the trust. (See pages 4 and 5 of this appendix.) National agreement employee health & welfare cost sharing is unchanged since the July 2016 increase.

Labor

First Quarter 2017

Railroad Retirement: The Railroad Retirement rate rose 2.2 percent. This change was caused by the small increase in taxable earnings and higher maximum taxable earnings effective January 1. As shown on page 4 of this appendix, the maximum taxable earnings for Railroad Retirement's Tier I and Tier II both increased for 2017. Employer tax rates did not change.

Unemployment Insurance: The Unemployment Insurance rate jumped 30.5 percent (7.5 cents) from the previous quarter. Maximum taxable earnings and the tax rate both increased for 2017. Basic tax rates range from a minimum of 0.65 percent to a maximum of 12 percent. However, if the Railroad Unemployment Insurance Account balance falls below a certain threshold, a surcharge can be imposed. For 2017 (like 2016 and 2015), a surcharge of 1.5 percent will be used – meaning that no railroad will have a tax rate less than 2.15 percent. The tax rate is experience-rated, and monthly Class I railroad employee counts from January through October have been 13 to 21 thousand less than they were in 2015 – meaning higher unemployment. The weighted average Class I railroad rate for 2017 will be 3.37 percent compared to 2.73 percent for 2016. Page 4 of this appendix lists tax rates and maximum taxable earnings for 2015 through 2017. The last year with no surcharge was 2014.

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. The first quarter rate climbed 2.9 cents. The higher rate was caused mostly by 401(k) bonus matches.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.1 percent increase in the Wage Rate Index and the 9.7 percent growth in the Supplements Index combined to cause the Labor Index to rise 4.0 percent from the previous quarter. The linked first quarter 2017 index is 421.2, and it is only 0.8 percent higher than it was one year ago.

Labor

First Quarter 2017

Table A-1 Labor Index

	2016Q4	2017Q1	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$40.680	\$40.690	0.0%	\$0.010
Adjustments:				
Lump Sum	0.171	0.184	7.6%	\$0.013
Back Pay	0.068	0.078	14.7%	\$0.010
Other	0.148	0.148	0.0%	\$0.000
Total Wages	<u>41.067</u>	<u>41.100</u>	0.1%	\$0.033
Health & Welfare Benefits	7.551	8.851	17.2%	\$1.300
RR Retirement & Medicare	8.366	8.548	2.2%	\$0.182
Unemployment Insurance	0.246	0.321	30.5%	\$0.075
Other	0.114	0.143	25.4%	\$0.029
Total Supplements	<u>\$16.277</u>	<u>\$17.863</u>	9.7%	\$1.586
Total Labor (as info only)	\$57.344	\$58.963		
Wage Index¹	351.5	351.7	0.1%	
Supplements Index²	601.5	660.1	9.7%	
Total labor Index, 2015 Weights ³	422.8	439.6		
Labor Index (linked)⁴	405.1	421.2	4.0%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2015 weights: wages, supplements 71.5% 28.5%

⁴ 2017Q1 linked Index = 2016Q4 linked x (2017Q1 / 2016Q4)
= 405.1 x 439.6 / 422.8

Labor

First Quarter 2017

Supplement Comparisons

Health and Welfare Rates

Plan	Railroad Payment Per Employee Per Month				
	2015	2016	2017	Change	
				'15-'16	'16-'17
Group Health & Welfare	\$1,298.28	\$1,481.05	\$1,693.72	14.1%	14.4%
Early Retirement Major Medical	109.90	134.70	166.75	22.6%	23.8%
Group Dental	50.83	56.97	65.12	12.1%	14.3%
Group Vision	8.41	8.41	8.44	0.0%	0.4%
Supplemental Sickness					
Maintenance of Way	32.87	32.87	40.00	0.0%	21.7%
Shop Crafts	53.18	49.11	60.00	-7.7%	22.2%
Signalmen	30.74	29.48	37.00	-4.1%	25.5%
Yardmasters	34.78	34.22	34.22	-1.6%	0.0%

Railroad Retirement and Medicare

	Earnings Base			Employer Rate		
	2015	2016	2017	2015	2016	2017
Tier I	\$118,500	\$118,500	\$127,200	6.20%	6.20%	6.20%
Tier II	88,200	88,200	94,500	13.10%	13.10%	13.10%
Medicare	no limit	no limit	no limit	1.45%	1.45%	1.45%

Unemployment Insurance

Monthly Taxable Earnings Base			Weighted Avg. Class I Rate		
2015	2016	2017	2015	2016	2017
\$1,455	\$1,455	\$1,545	2.31%	2.73%	3.37%

Labor

First Quarter 2017

NATIONAL RAILWAY LABOR CONFERENCE EMPLOYEE BENEFITS DEPARTMENT

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November 22, 2016

Mr. Clyde Crimmel
Director Statistical Information
Policy & Communications Department
AAR-5th Floor
50 F Street N.W.
Washington, D.C. 20009

Dear Mr. Crimmel:

The revised employer Payment Rates which are effective January 1, 2017 are as follows:

Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan Non-Hospital Road	\$1,693.72
Railroad Employees National Early Retirement Major Medical Benefit Plan Non-Hospital Road	\$ 166.75
Aetna - National Dental Plan	\$ 65.12
Aetna - Supplemental Sickness Plans	
Shop Crafts	\$ 60.00
Signalmen	\$ 37.00
Maintenance of Way	\$ 40.00
Trustmark - Supplemental Sickness Plans Yardmasters	\$ 34.22
EyeMed - National Vision Plan	\$ 8.44

If you have any questions or need clarification, please contact me.

Very truly yours,



Susan E. Parks

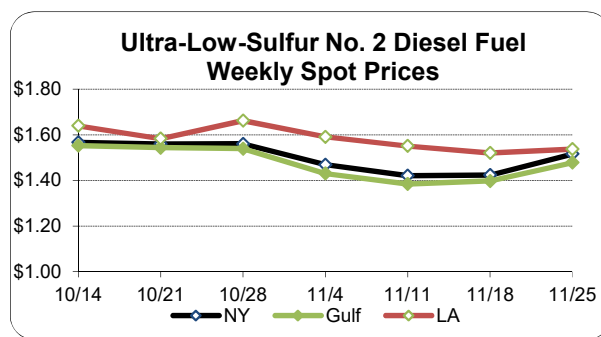
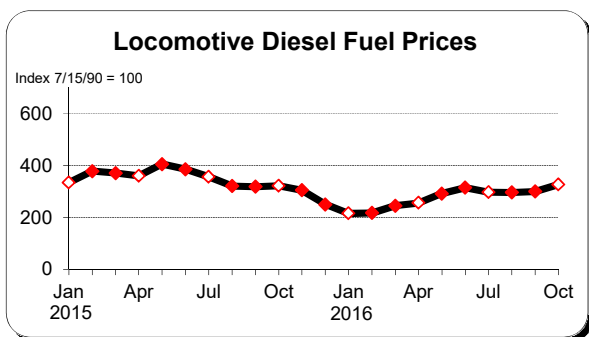
cc: Glen Williams

Fuel

First Quarter 2017

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 expensed is used to represent each quarter.

The average locomotive diesel fuel price for January 2016 was the lowest in over 10 years. Since that time, prices have trended upward. While average prices for locomotive diesel fuel are available only through October 2016, data through four weeks of November are available for related fuel types. According to the Energy Information Administration, weekly spot prices for Ultra-Low-Sulfur Diesel Fuel* were lower for the week ended November 25 than they were at mid-October. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2015 through October 2016. The second chart (on right) shows recent spot prices for Ultra-Low-Sulfur No. 2 Diesel Fuel as reported by the Energy Information Administration.



A November 30 OPEC deal to limit oil production has complicated forecasting, as this deal initially sent oil prices higher. In the following days, some skeptics stated that the increased oil prices will be short-lived because 1) the production cuts are not enough; 2) Russia will be making its cut from its November output, which was its largest ever; and 3) non-OPEC producers may increase their output in response to temporarily higher prices. At this time, recent weekly Ultra-Low-Sulfur spot prices are 3 to 6 percent lower than they were in mid-October, and distillate inventories are above their five-year average. Railroads expect Q1 (January 2017) locomotive diesel fuel prices to be 1.4 percent lower than the forecast for Q4 (October), and 2.3 percent lower than the average price railroads actually paid in October.

Forecast Fuel Index (1980 = 100)	197.2
Change from previous quarter forecast	-1.4%
Change from previous quarter actual	-2.3%

* 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

First Quarter 2017

The first quarter 2017 Materials & Supplies Index is up 11.6 percent. Indexes for Forest Products and Miscellaneous Products increased – especially Miscellaneous Products. A huge increase for the Miscellaneous Products category was related to Hurricane Matthew. Despite the double-digit percentage increase, which may be temporary, the Materials & Supplies Index remains below its values for 2014Q4 and 2015Q1.

2017Q1 Materials & Supplies Index = 274.3

2016Q4 Materials & Supplies Index = 245.8

Difference	28.5 basis points
	or
	11.6 %

Equipment Rents

First Quarter 2017

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 data available. For the first quarter, December 1 of the previous year is typically used. For the second, third and fourth quarters; March 1, June 1, and September 1 are usually used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into four car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter, and weighted, to determine the Car Hire Index. In each fourth quarter filing, new weights for the four categories are used based on annual report data. The standard linking procedure is used to eliminate any changes to the Car Hire Index that would be caused solely by changing weights.

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 first quarter Car Hire portion of the Index increased 0.2 percent because of small increases in rates for privately owned cars. A 0.7 percent increase in the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 0.2 percent increase for Car Hire, caused the Equipment Rents Index to increase 0.4 percent.

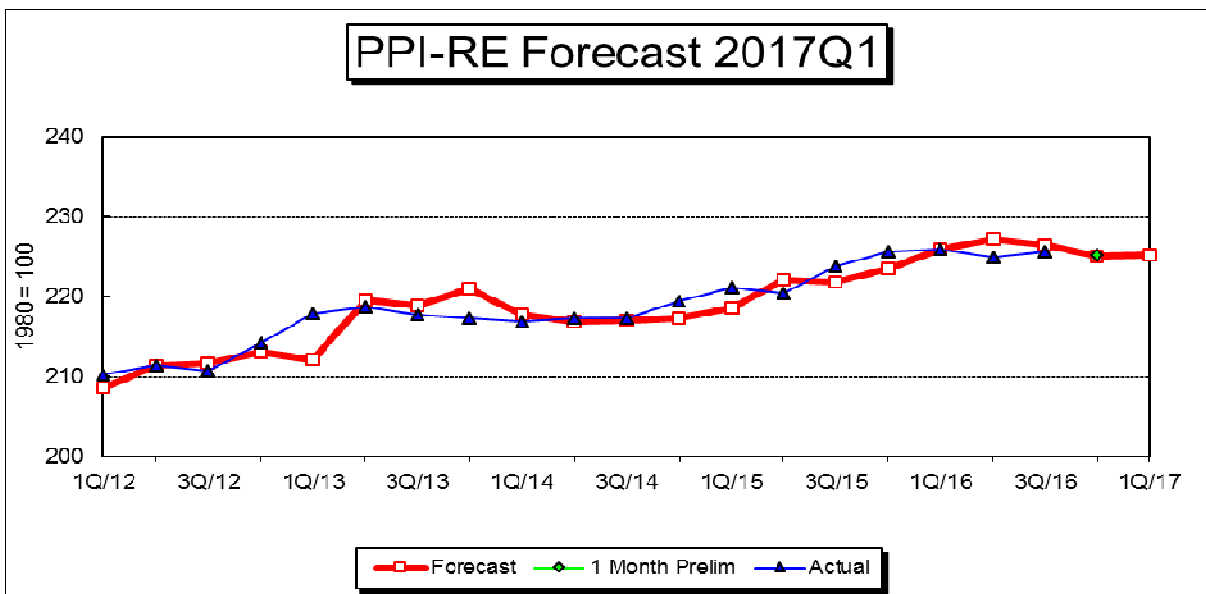
	2015 Weight	2016Q4	2017Q1	Percent Change
Car Hire	58.2%	209.1	209.6	0.2 %
Lease Rentals	41.8%	216.9	218.4	0.7
Weighted Average		212.4	213.3	0.4
Weighted Average (Linked)		223.4	224.3	0.4

Depreciation

First Quarter 2017

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, a 0.1 percent increase from the previous quarter's forecast, reflects a monthly PPI-RE figure that has changed very little over the last eight months.

Forecast of Depreciation Index (1982=100)	203.7
Forecast of Depreciation Index (1980=100)	225.3
Change from previous quarter forecast	0.1%
Change from actual first month of previous quarter	0.0%
Change from same quarter of prior year (actual)	-0.3%



Depreciation

First Quarter 2017

PPI RAILROAD EQUIPMENT

Using rule-based logic, the program narrowed down the choice to exponential smoothing or Box-Jenkins. The program performed an out-of-sample test to select between these two approaches. The cumulative MAD for Exponential smoothing was 1.72 and for Box-Jenkins was 0.61. The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Recommended model: Box-Jenkins
Forecast Model for PPIRE
ARIMA(0, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	195.77	Std. deviation	6.06
R-square	0.97	Adj. R-square	0.97
Durbin-Watson	2.44	Ljung-Box(18)	24.50 P=0.86
Forecast error	1.01	BIC	1.01
MAPE	0.36	SMAPE	0.36
RMSE	1.01	MAD	0.71
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Date	Actual
2016-May	203.5
2016-Jun	203.5
2016-Jul	203.5
2016-Aug	203.5
2016-Sep	204.8
2016-Oct	203.7

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2016-Nov	201.697	203.700	205.703
2016-Dec	200.867	203.700	206.533
2017-Jan	200.230	203.700	207.170
2017-Feb	199.694	203.700	207.706
2017-Mar	199.221	203.700	208.179
QTR AVG	199.715	203.700	207.685

Interest

First Quarter 2017

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 finalized. The source data are from a summary of the annual reports (Form R-1) submitted by each of the Class I railroads. Although the data set is received at the end of March, it is not used until the September filing. This enables data to be entered into a database and reviewed – and any revisions made, if necessary, before the data are used in the Index. The current Interest Index is based on 2015 data, and was updated in this Q4 filing submitted on September 2, 2016. The Interest Index based on 2015 is higher than the version based on 2014 data, but lower than the figure based on 2013.

The R-1 source for interest expense is Schedule 210, column b. The lines currently used are listed below. The source for average total debt is Schedule 200. 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.

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

2015	Interest Rate	4.76%
1980	Interest Rate	7.85%
2017Q1	Interest Index	60.6
2016Q4	Interest Index	60.6
	Percent Change	0.0%

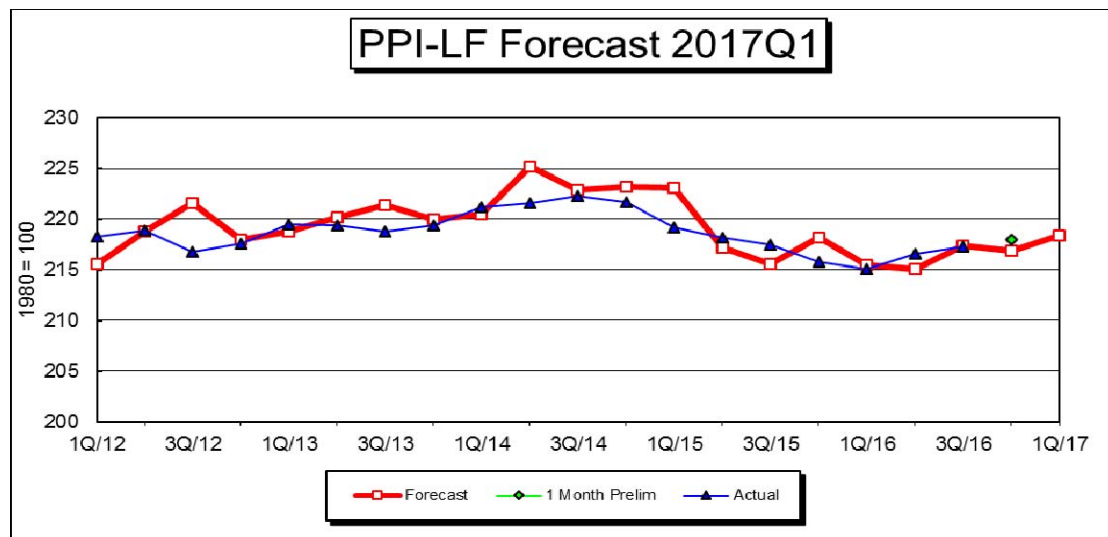
Other Expenses

First Quarter 2017

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. Monthly PPI-LF figures increased by small amounts over the last three months. The forecast for 2017Q1 is 0.7 percent above the previous quarter forecast, and the previous forecast may have been too low.

Forecast of Other Expense Index (1982=100)	194.8
Forecast of Other Expense Index (1980=100)	218.4
Change from previous quarter forecast	0.7%
Change from actual first month of previous quarter	0.2%
Change from same quarter of prior year (actual)	1.5%



Other Expenses

First Quarter 2017

PPI INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER

Using rule-based logic, program narrowed down the choice to exponential smoothing or Box-Jenkins.

Program performed an out-of-sample test to select between these two approaches.

The cumulative MAD for Exponential smoothing was 2.06 and for Box-Jenkins was 1.03.

The rolling out-of-sample test used a maximum horizon of 12 & generated 78 forecasts for each method.

Recommended model: Box-Jenkins

Forecast Model for PPILF

ARIMA(1, 0, 1)

Model Details

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.9918	0.01036	95.76	1.000
b[1]	-0.5329	0.1	-5.328	1.000
_CONST	1.601			

Within-Sample Statistics

Sample size	72	No. parameters	2
Mean	194.42	Std. deviation	2.43
R-square	0.95	Adj. R-square	0.95
Durbin-Watson	1.61	Ljung-Box(18)	25.40 P=0.88
Forecast error	0.55	BIC	0.58
MAPE	0.21	SMAPE	0.21
RMSE	0.54	MAD	0.4
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Date	Actual
2016-May	193.4
2016-Jun	193.7
2016-Jul	193.5
2016-Aug	193.8
2016-Sep	194.0
2016-Oct	194.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2016-Nov	193.707	194.775	195.842
2016-Dec	192.825	194.772	196.718
2017-Jan	192.240	194.769	197.297
2017-Feb	191.773	194.766	197.759
2017-Mar	191.375	194.763	198.151
QTR AVG	191.796	194.766	197.736

Railroad and Union Abbreviations

First Quarter 2017

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: The sale of the southern portion of the D&H received regulatory approval on May 15, 2015.

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).

AAR Workpapers Sent to STB for 2017 Q1 RCAF

December 5, 2016

1. Index Calculation Spreadsheet (index_calc.xlsx, 2 pages)
2. Summary of ST and PFTNW Hourly Rates (Summary.xlsx)
3. RCAF Taxable Wages adjustment calculation (TaxableRate.xlsx)
4. National Contracts spreadsheet, 2 sections (2 and 5 pages)
5. Wall Street Journal - 13 week Treasury Bill Rate from recent auction (a.k.a. 3-Mo. T-Bill)
6. 2017/Q1 RCAF Lump Sum Amortization summary, public version (1 page)
7. 2017/Q1 RCAF Back Pay Amortization summary, public version (1 page)
8. Health & Welfare worksheet (1 page)
9. Railroad Retirement spreadsheet (5 pages)
10. 2017 Tax Rates and Maximum Taxable Earnings from Railroad Retirement Board
11. Unemployment Insurance Tax worksheet (1 page)
12. 2-page SAS run for 2017 Q1 Unemployment Insurance Tax
13. Unemployment Insurance Tax Rate for 2017 memo and RRB Maximum Taxable Earnings
14. EIA distillate inventory
15. Summary of Materials & Supplies - "U.S. Summary by Composition Category" (1 page)
16. Car Hire Spreadsheet (2 pages) plus source data page
17. 5 pages of PPI-RE for Depreciation including graph page, input/output, and BLS source data
18. 5 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
19. Forecast Error calc. and workpapers (10 pages: calc, index actual, fuel, 4 car hire, 2 deprec, 2 other)

RCAF All-Inclusive Index's Labor Index Based on 2015 Benchmarks

	15 Wts.	3Q/16	3Q/16 Rebench As Info Only	% Chg	4Q/16	% Chg	1Q/17	% Chg	2Q/17	% Chg	3Q/17	% Chg
Straight Time		\$34.328	\$33.700	-1.8%	\$33.700	-1.8%	\$33.708	0.0%		--		--
PFTNW		\$7.158	\$6.980	-2.5%	\$6.980	-2.5%	\$6.982	0.0%		--		--
Total		\$41.486	\$40.680	-1.9%	\$40.680	-1.9%	\$40.690	0.0%	\$0.000	--	\$0.000	--
Adjustments												
Lump Sum		\$0.159	\$0.159		\$0.171		\$0.184					
Back Pay		\$0.109	\$0.108		\$0.068		\$0.078					
Other		\$0.149	\$0.148		\$0.148		\$0.148					
Total Wages		\$41.903	\$41.095	-1.9%	\$41.067	-2.0%	\$41.100	0.1%	\$0.000	--	\$0.000	--
Pre-Tax Reduction		(\$1.358)	(\$1.364)		(\$1.364)		(\$1.364)					
Taxable Wages		\$40.545	\$39.731		\$39.703		\$39.736		\$0.000		\$0.000	
H & W		\$7.906	\$7.551	-4.5%	\$7.551	-4.5%	\$8.851	17.2%		--		--
RR Ret & Medicare		\$8.448	\$8.370	-0.9%	\$8.366	-1.0%	\$8.548	2.2%		--		--
Unemp. Insurance		\$0.240	\$0.246	2.5%	\$0.246	2.5%	\$0.321	30.5%		--		--
Other		\$0.206	\$0.205	-0.5%	\$0.114	-44.7%	\$0.143	25.4%		--		--
Total		\$16.800	\$16.372	-2.5%	\$16.277	-3.1%	\$17.863	9.7%	\$0.000	--	\$0.000	--
Adjustments												
Total Supplements		\$16.800	\$16.372	-2.5%	\$16.277	-3.1%	\$17.863	9.7%	\$0.000	--	\$0.000	--
Total Labor		\$58.703	\$57.467	-2.1%	\$57.344	-2.3%	\$58.963	2.8%	\$0.000	--	\$0.000	--
Wage Rate Index	0.7150	358.6	351.7	-1.9%	351.5	-2.0%	351.7	0.1%	0.0	--	0.0	--
Supplements Index	0.2850	620.8	605.0	-2.5%	601.5	-3.1%	660.1	9.7%	0.0	--	0.0	--
Total Labor Index '14 Wts.		431.8										
Total Labor Index '15 Wts.		433.3	423.9	-2.2%	422.8	-2.4%	439.6	4.0%	0.0	--	0.0	--
Labor Index (Linked)		415.2			405.1	-2.4%	421.2	4.0%	0.0	#####	#DIV/0!	--

All Inclusive Index and RCAF using 2015 Benchmarks and Weights

	15 Wts.	3Q/16	15 Wts. 3Q/16	% Chg	4Q/16	% Chg	1Q/17	% Chg	2Q/17	% Chg	3Q/17	% Chg
Labor	0.350	415.20	415.2	0.0%	405.1	-2.4%	421.2	4.0%	0.0	#####	#DIV/0!	--
Fuel	0.134	195.60	195.6	0.0%	200.1	2.3%	197.2	-1.4%		--		--
M&S	0.054	240.60	240.6	0.0%	245.8	2.2%	274.3	11.6%		--		--
Equip. Rents	0.058	216.80	216.8	0.0%	223.4	3.0%	224.3	0.4%	0.0	#####	#DIV/0!	--
Depreciation	0.139	226.50	226.5	0.0%	225.1	-0.6%	225.3	0.1%		--		--
Interest	0.019	57.50	57.5	0.0%	60.6	5.4%	60.6	0.0%	60.6	0.0%	60.6	0.0%
Other	0.246	217.40	217.4	0.0%	216.9	-0.2%	218.4	0.7%		--		--
Weighted Avg.	1.000	275.50	283.2	2.8%	280.6	-0.9%	287.9	2.6%	1.2	-99.6%	#DIV/0!	--
Linked		263.00			260.6	-0.9%	267.4	2.6%	1.1	-99.6%	#DIV/0!	--
	Basing Factor											
10/1/80 basis	102.7	256.1			253.7	-0.9%	260.4	2.6%	1.1	-99.6%	#DIV/0!	--
10/1/82	120.9	217.5			215.6	-0.9%	221.2	2.6%	0.9	-99.6%	#DIV/0!	--
4Q/87	132.2	198.9			197.1	-0.9%	202.3	2.6%	0.8	-99.6%	#DIV/0!	--
4Q/92	156.9	167.6			166.1	-0.9%	170.4	2.6%	0.7	-99.6%	#DIV/0!	--
4Q/97	173.2	151.8			150.5	-0.9%	154.4	2.6%	0.6	-99.6%	#DIV/0!	--
4Q/02	192.1	136.9			135.7	-0.9%	139.2	2.6%	0.6	-99.6%	#DIV/0!	--
4Q/07	245.9	107.0			106.0	-0.9%	108.7	2.5%	0.4	-99.6%	#DIV/0!	--
4Q/12 basis	297.6	88.4			87.6	-0.9%	89.9	2.6%	0.4	-99.6%	#DIV/0!	--
Car Hire	0.582	198.00	198.0	0.0%	209.1	5.6%	209.6	0.2%		--		--
Lease Rents	0.418	217.40	217.4	0.0%	216.9	-0.2%	218.4	0.7%	0.0	--	0.0	--
Weighted Avg Eq Rents		206.40	206.1	-0.1%	212.4	3.1%	213.3	0.4%	0.0	--	0.0	--
Linked Equipment Rents		216.80			223.4	3.0%	224.3	0.4%	0.0	#####	#DIV/0!	--
Preliminary RCAF		0.884			0.876	-0.90%	0.899	2.6%	0.004	-99.6%	#DIV/0!	--
Forecast Error Adj.		(0.042)			0.005		(0.011)					
RCAF Unadjusted		0.842			0.881	4.63%	0.888	0.8%	0.004	-99.5%	#DIV/0!	--
PAF		2.3667			2.3750	0.35%	2.3833	0.35%		--		--
RCAF Adjusted		0.356			0.371	4.21%	0.373	0.5%	#DIV/0!	--	#DIV/0!	--
PAF-5		2.5016			2.5059	0.17%	2.5147	0.35%		--		--
RCAF-5		0.337			0.352	4.45%	0.353	0.3%	#DIV/0!	--	#DIV/0!	--

Hourly Rate for 2017 Q1

Straight Time and Time Paid For But Not Worked

2017Q1 Straight Time Hourly Rate (from national spreadsheet) \$33.674

No change

Adjustments to 2015 base:

Adjustments added 2016 Q1

CN Railroads	A few COLAs and GWIs	0.005
Misc. Indep BLET, dispatchers, yardmasters	Non-union GWI	0.004
Soo Corp.	Non-union GWI rounds to 0.000	0.000

Adjustments added 2016 Q2

CN Railroads	No change	0.000
Misc. Indep BLET, dispatchers, yardmasters	No change	0.000
Soo Corp.	No change	0.000

Adjustments added 2016 Q3

CN Railroads	No change (2 small increases rounded to 0)	0.000
Misc. Indep BLET, dispatchers, yardmasters	2% GWI for 1 RR's BLET	0.017
Soo Corp.	No change	0.000

Adjustments added 2016 Q4

CN Railroads	No change	0.000
Misc. Indep BLET, dispatchers, yardmasters	No change	0.000
Soo Corp.	No change	0.000

Adjustments added 2017 Q1

CN Railroads	A few COLAs, 1 GWI and 2 new contracts	0.008 ✓
Misc. Indep BLET, dispatchers, yardmasters	No change	0.000
Soo Corp.	No change	0.000

Adjusted STHR Total **\$33.708**

Pay For Time Not Worked

PFTNW (from national spreadsheet)		\$6.975
Ratio Adj STHR to Nat STHR	33.708 / 33.674 =	1.00101

Adjusted Pay For Time Not Worked **\$6.982**

Notes:

1. CN Railroads includes B&LE, CC&P, GTW, IC, and WC.
2. The Miscellaneous group consists of independent (for wages) BLET, and one railroad's dispatchers and yardmasters.
3. Soo Corp. includes SOO, D&H and DM&E although Soo Line participates in national agreements.

RCAF Taxable Wages

(To Use for Railroad Retirement and Unemployment Insurance Payroll Tax Calculations)

In the RCAF calculation, Total Wages are the wages paid, while Taxable Wages are the wages on which to base payroll tax calculations. The difference is caused by pre-tax employee contributions to help pay Health & Welfare costs. This page calculates that wage rate difference.

The national agreements feature employee Health & Welfare cost sharing. Some of the independent agreements adopt the dollar amount contributed under the national agreement, and some have their own employee contribution rate. This Cost Sharing is a pre-tax employee contribution to Health & Welfare insurance premiums paid by the employer. The employee contribution reduces employer Health & Welfare costs, while the Health & Welfare insurance premiums paid to the provider are unchanged. In the RCAF calculation, the reduction to the employer's Health & Welfare costs affect the Supplements portion of the Labor component of the index. The Taxable Wage Rate is used for Railroad Retirement and Unemployment Insurance calculations.

Reduction Calculation for 1Q/2017

U.S. ST Hours =

323,519,708

Wage Statistics are for 2015

Union Group	Employees	Mo. Rate	Annual \$
National BLET (BNSF, CSX, KCS, NS, SOO, UP)	26,829	(\$228.89)	(\$73,690,677.72)
National BMWE (BNSF, CSX, KCS, NS, SOO, UP)	24,423	(\$228.89)	(\$67,082,165.64)
National BRS (BNSF, CSX, KCS, NS, SOO, UP)	7,638	(\$228.89)	(\$20,979,141.84)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	7,133	(\$228.89)	(\$19,592,068.44)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP)	1,295	(\$228.89)	(\$3,556,950.60)
National IBEW (BNSF, CSX, KCS, NS, SOO, UP)	5,826	(\$228.89)	(\$16,002,157.68)
National NCFO (BNSF, CSX, KCS, NS, SOO, UP)	2,602	(\$228.89)	(\$7,146,861.36)
National SMW (BNSF, CSX, KCS, NS, SOO, UP)	1,054	(\$228.89)	(\$2,895,000.72)
National TCU (BNSF, CSX, KCS, NS, SOO, UP)	5,333	(\$228.89)	(\$14,648,044.44)
National TCU-CAR (BNSF, CSX, KCS, NS, SOO, UP)	9,425	(\$228.89)	(\$25,887,459.00)
National UTU (BNSF, CSX, KCS, NS, SOO, UP)	41,770	(\$228.89)	(\$114,728,823.60)
Yardmasters (BNSF, CSX, KCS, NS, SOO, UP)	1,885	(\$228.89)	(\$5,177,491.80)
National ATDA (wt. avg. BNSF, CSX, KCS, NS, SOO)	1,875	(\$228.89)	(\$5,150,025.00)
Independent CNGT (wt. avg. all union categories)	6,883	(\$226.48)	(\$18,706,342.08)
Independent SLC (wt. avg. all DH & DME union categories)	802	(\$228.46)	(\$2,198,699.04)
Total Union	144,773		(\$397,441,908.96)
All Other @ \$3,646,717.21 total per month			(\$43,760,606.52)
Total			(\$441,202,515.48)

Reduction in Wage Rate Per ST Hour	-\$1.36375777
Deduct this amount from the Wage Rate	-\$1.364

National Contracts U.S.

Straight Time Hourly Rate															Check
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Sum
	0.23358	0.03411	0.16728	0.00596	0.04859	0.14313	0.0567	0.01498	0.04162	0.00746	0.03425	0.01418	0.01102	0.18714	1.00000
2015 Avg.	28.066	29.160	32.434	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	48.821	451.812
12/31/15	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	48.821	451.843
1/1/16	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
4/1/16	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
7/1/16	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
10/1/16	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
1/1/17	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
4/1/17	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	
7/1/17	28.080	29.160	32.452	30.256	31.044	27.763	30.040	24.796	30.537	28.181	30.805	40.439	39.469	50.286	

Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Total
2015 Avg.	6.556	0.995	5.426	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.136	33.394
12/31/15	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.136	33.400
1/1/16	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
4/1/16	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
7/1/16	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
10/1/16	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
1/1/17	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
4/1/17	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674
7/1/17	6.559	0.995	5.428	0.180	1.508	3.974	1.703	0.371	1.271	0.210	1.055	0.573	0.435	9.411	33.674

Note: The 2015 Average and 12/31/15 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/16 through 7/1/17 are based on the industry year-end rates updated by NATIONAL UNION wage increases using contract information. These national increases are diluted using "percent national" ratios to account for non-national union contracts. The impacts of non-national (or independent contract) increases after 2015 are not shown on this page and are handled separately.

National Contracts U.S.

Pay For Time Not Worked Hourly Rate

	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Check Sum
Weight	0.23358	0.03411	0.16728	0.00596	0.04859	0.14313	0.0567	0.01498	0.04162	0.00746	0.03425	0.01418	0.01102	0.18714	1.00000
2015 Avg.	10.874	5.225	12.324	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.316	80.934
12/31/15	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.316	
1/1/16	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
4/1/16	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
7/1/16	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
10/1/16	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
1/1/17	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
4/1/17	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	
7/1/17	10.879	5.225	12.331	4.400	6.846	5.023	4.323	3.133	4.688	3.558	4.969	6.473	7.781	1.356	

Pay For Time Not Worked Hourly Rate

	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Total
2015 Avg.	2.540	0.178	2.062	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.246	6.965
12/31/15	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.246	6.968
1/1/16	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
4/1/16	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
7/1/16	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
10/1/16	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
1/1/17	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
4/1/17	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975
7/1/17	2.541	0.178	2.063	0.026	0.333	0.719	0.245	0.047	0.195	0.027	0.170	0.092	0.086	0.254	6.975

U.S. National Contract

Page 1 of 5

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				28.06626	10.87372
12/31/15 Industry Rate				28.08018	10.87911
1/1/16			94.635%	28.08018	10.87911
4/1/16			94.635%	28.08018	10.87911
7/1/16			94.635%	28.08018	10.87911
10/1/16			94.635%	28.08018	10.87911
1/1/17			94.635%	28.08018	10.87911
4/1/17			94.635%	28.08018	10.87911
7/1/17			94.635%	28.08018	10.87911

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				29.15962	5.22524
12/31/15 Industry Rate				29.15962	5.22524
1/1/16			84.601%	29.15962	5.22524
4/1/16			84.601%	29.15962	5.22524
7/1/16			84.601%	29.15962	5.22524
10/1/16			84.601%	29.15962	5.22524
1/1/17			84.601%	29.15962	5.22524
4/1/17			84.601%	29.15962	5.22524
7/1/17			84.601%	29.15962	5.22524

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				32.43432	12.32435
12/31/15 Industry Rate				32.45155	12.33090
1/1/16			2.128%	32.45155	12.33090
4/1/16			2.128%	32.45155	12.33090
7/1/16			2.128%	32.45155	12.33090
10/1/16			2.128%	32.45155	12.33090
1/1/17			2.128%	32.45155	12.33090
4/1/17			2.128%	32.45155	12.33090
7/1/17			2.128%	32.45155	12.33090

U.S. National Contract

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				30.25551	4.39984
12/31/15 Industry Rate				30.25551	4.39984
1/1/16			98.342%	30.25551	4.39984
4/1/16			98.342%	30.25551	4.39984
7/1/16			98.342%	30.25551	4.39984
10/1/16			98.342%	30.25551	4.39984
1/1/17			98.342%	30.25551	4.39984
4/1/17			98.342%	30.25551	4.39984
7/1/17			98.342%	30.25551	4.39984

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				31.04406	6.84638
12/31/15 Industry Rate				31.04406	6.84638
1/1/16			93.129%	31.04406	6.84638
4/1/16			93.129%	31.04406	6.84638
7/1/16			93.129%	31.04406	6.84638
10/1/16			93.129%	31.04406	6.84638
1/1/17			93.129%	31.04406	6.84638
4/1/17			93.129%	31.04406	6.84638
7/1/17			93.129%	31.04406	6.84638

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				27.76305	5.02302
12/31/15 Industry Rate				27.76305	5.02302
1/1/16			91.815%	27.76305	5.02302
4/1/16			91.815%	27.76305	5.02302
7/1/16			91.815%	27.76305	5.02302
10/1/16			91.815%	27.76305	5.02302
1/1/17			91.815%	27.76305	5.02302
4/1/17			91.815%	27.76305	5.02302
7/1/17			91.815%	27.76305	5.02302

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				30.03993	4.32324
12/31/15 Industry Rate				30.03993	4.32324
1/1/16			93.067%	30.03993	4.32324
4/1/16			93.067%	30.03993	4.32324
7/1/16			93.067%	30.03993	4.32324
10/1/16			93.067%	30.03993	4.32324
1/1/17			93.067%	30.03993	4.32324
4/1/17			93.067%	30.03993	4.32324
7/1/17			93.067%	30.03993	4.32324

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				24.79646	3.13282
12/31/15 Industry Rate				24.79646	3.13282
1/1/16			97.203%	24.79646	3.13282
4/1/16			97.203%	24.79646	3.13282
7/1/16			97.203%	24.79646	3.13282
10/1/16			97.203%	24.79646	3.13282
1/1/17			97.203%	24.79646	3.13282
4/1/17			97.203%	24.79646	3.13282
7/1/17			97.203%	24.79646	3.13282

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				30.53682	4.68799
12/31/15 Industry Rate				30.53682	4.68799
1/1/16			95.785%	30.53682	4.68799
4/1/16			95.785%	30.53682	4.68799
7/1/16			95.785%	30.53682	4.68799
10/1/16			95.785%	30.53682	4.68799
1/1/17			95.785%	30.53682	4.68799
4/1/17			95.785%	30.53682	4.68799
7/1/17			95.785%	30.53682	4.68799

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				28.18114	3.55838
12/31/15 Industry Rate				28.18114	3.55838
1/1/16			92.585%	28.18114	3.55838
4/1/16			92.585%	28.18114	3.55838
7/1/16			92.585%	28.18114	3.55838
10/1/16			92.585%	28.18114	3.55838
1/1/17			92.585%	28.18114	3.55838
4/1/17			92.585%	28.18114	3.55838
7/1/17			92.585%	28.18114	3.55838

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				30.80540	4.96886
12/31/15 Industry Rate				30.80540	4.96886
1/1/16			95.079%	30.80540	4.96886
4/1/16			95.079%	30.80540	4.96886
7/1/16			95.079%	30.80540	4.96886
10/1/16			95.079%	30.80540	4.96886
1/1/17			95.079%	30.80540	4.96886
4/1/17			95.079%	30.80540	4.96886
7/1/17			95.079%	30.80540	4.96886

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				40.43923	6.47259
12/31/15 Industry Rate				40.43923	6.47259
1/1/16			65.787%	40.43923	6.47259
4/1/16			65.787%	40.43923	6.47259
7/1/16			65.787%	40.43923	6.47259
10/1/16			65.787%	40.43923	6.47259
1/1/17			65.787%	40.43923	6.47259
4/1/17			65.787%	40.43923	6.47259
7/1/17			65.787%	40.43923	6.47259

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				39.46882	7.78105
12/31/15 Industry Rate				39.46882	7.78105
1/1/16			67.137%	39.46882	7.78105
4/1/16			67.137%	39.46882	7.78105
7/1/16			67.137%	39.46882	7.78105
10/1/16			67.137%	39.46882	7.78105
1/1/17			67.137%	39.46882	7.78105
4/1/17			67.137%	39.46882	7.78105
7/1/17			67.137%	39.46882	7.78105

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2015 Industry Avg.				48.82125	1.31623
12/31/15 Industry Rate				48.82125	1.31623
1/1/16	3.00%		100.000%	50.28589	1.35572
4/1/16			100.000%	50.28589	1.35572
7/1/16			100.000%	50.28589	1.35572
10/1/16			100.000%	50.28589	1.35572
1/1/17			100.000%	50.28589	1.35572
4/1/17			100.000%	50.28589	1.35572
7/1/17			100.000%	50.28589	1.35572

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2015 AVG			451.81185	80.93371
12/31/15			451.84300	
		1171.294%		
		ok matches	ok matches	ok matches
			ok matches	

Should match check sum on National
Increase Applicability for U.S. Total page.

1171.294%

All three should match
check sums on U.S.
Benchmark page.

COMM

WSJ.com/commodities

Futures Contracts

KEY TO CODES: A=ask; B=bid; BP=country elevator bids to producers; C=corrected; E=Manfra, Tordella & Brooks; G=ICE; I=Natural Gas Intelligence; L=livestock index; M=midday; N=nominal; n.a.=not quoted or not available; R=SNL Energy; S=The Steel Index; T=Cotlook Limited; U=USDA; W=weekly; Z=not quoted.
*Data as of 11/18

Source: WSJ Market Data Group

Borrowing Benchmarks | WSJ.com/bonds

Money Rates

November 21, 2016

Key annual interest rates paid to borrow or lend money in U.S. and international markets. Rates below are a guide to general levels but don't always represent actual transactions.

Inflation		
Oct. index level	Chg From (%)	Sept. '16 Oct. '15

U.S. consumer price index

All items	241.729	0.12	1.6
Core	249.218	0.20	2.1

International rates

	Latest	Week ago	-52-Week-High	-52-Week-Low
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Prime rates

U.S.	3.50	3.50	3.50	3.25
Canada	2.70	2.70	2.70	2.70
Japan	1.475	1.475	1.475	1.475

Policy Rates

Euro zone	0.00	0.00	0.05	0.00
Switzerland	0.50	0.50	0.50	0.50

	Latest	Week ago	-52-Week-High	-52-Week-Low
Britain	0.25	0.25	0.50	0.25
Australia	1.50	1.50	2.00	1.50

Overnight repurchase

U.S.	0.25	0.44	1.30	0.09
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U.S. government rates

Discount	Latest	Week ago	-52-Week-High	-52-Week-Low
	1.00	1.00	1.00	0.75

Federal funds

Effective rate	0.4000	0.4300	0.4500	0.1000
High	0.5625	0.5625	0.7500	0.3100
Low	0.3000	0.3000	0.4000	0.0200
Bid	0.4100	0.4000	0.5500	0.0600
Offer	0.4300	0.4300	0.5600	0.1200

Treasury bill auction

4 weeks	0.305	0.270	0.305	0.075
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	Latest	Week ago	-52-Week-High	-52-Week-Low
13 weeks	0.480	0.515	0.515	0.140
26 weeks	0.605	0.625	0.625	0.240

Secondary market

Fannie Mae

30-year mortgage yields				
30 days	3.545	3.433	3.610	2.806
60 days	3.583	3.470	3.646	2.832

Other short-term rates

	Latest	Week ago	-52-Week-High	-52-Week-Low
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Call money

	2.25	2.25	2.25	2.00
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Commercial paper

30 to 270 days	n.q.	...	...	...
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Commercial paper (AA financial)

90 days	0.67	0.62	0.90	0.30
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Euro commercial paper

30 day	n.q.	n.q.	-0.07	-0.14
Two month	n.q.	n.q.	-0.07	-0.08
Three month	n.q.	n.q.	-0.07	-0.08
Four month	n.q.	n.q.	n.q.	n.q.
Five month	n.q.	n.q.	n.q.	n.q.
Six month	n.q.	n.q.	n.q.	n.q.

Libor

One month	0.56778	0.53817	0.56778	0.22100
Three month	0.91983	0.90567	0.91983	0.39320
Six month	1.27433	1.26211	1.27933	0.63315
One year	1.62289	1.58789	1.62289	0.96135

Euro Libor

One month	-0.381	-0.382	-0.155	-0.382
Three month	-0.327	-0.331	-0.108	-0.332
Six month	-0.218	-0.214	-0.026	-0.218
One year	-0.082	-0.075	0.076	-0.083

Euro interbank offered rate (Euribor)

One month	-0.371	-0.373	-0.155	-0.374
Three month	-0.312	-0.312	-0.099	-0.313
Six month	-0.219	-0.211	-0.030	-0.219
One year	-0.078	-0.070	0.068	-0.078

	Value	-52-Week-High	-52-Week-Low
Latest	Traded	High	Low

DTCC GCF Repo Index

Treasury	0.252	82.070	1.266	0.075
MBS	0.276	63.160	1.328	0.087

	Open	Implied	Settle	Change	Interest	Rate
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DTCC GCF Repo Index Futures

Treasury Nov	99.570	0.010	3812	0.430
Treasury Dec	99.320	0.005	3081	0.680
Treasury Jan	99.220	unch.	2365	0.780

Notes on data:

U.S. prime rate is effective December 17, 2015.
Discount rate is effective December 17, 2015.
U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks. Other prime rates aren't directly comparable; lending practices vary widely by location. DTCC GCF Repo Index is Depository

Two-year and 10-year government bonds in p(▲) or fell (▼) in the latest session

Year ago	Spread Under/Over U.S. Treasuries, in basis points	Latest	Prev	Year ago
0.921				
2.264				
2.056	65.3		67.5	113.5
2.912	35.7		36.8	64.8
-0.297	-170.1		-167.3	-121.9
0.818	-197.0		-159.8	-144.6
-0.385	-176.1		-173.4	-130.6
0.483	-206.1		-208.1	-178.1
0.062	-102		-102.1	-85.9
1.394	-26.5		-27.1	-87.0
-0.026	-125.5		-124.2	-94.7
0.315	-230.8		-231.9	-194.9
0.038	-123.7		-120.9	-88.3
1.632	-73.0		-78.5	-63.2
0.619	-89.9		-87.0	-30.2
1.878	-10.8		-101.9	-38.6

Source: Tullatt Prebon

es mirror and sometimes anticipate moves in companies in the news.

ost...

Spread, in basis points	One-day change	Last week	Stock Performance	Close (\$)	% chg
-54		n.a.	...	...	...
-35		171	...	...	...
-27		n.a.	...	...	...
-23		n.a.	36.52	-7.24	
-13		134	25.85	0.66	
-13		59	...	...	...

101	1862	...	...
58	n.a.	...	...
31	234	211.08	0.35
24	120	30.87	0.65
23	255	55.54	0.14
21	241	20.33	1.65
19	n.a.	40.56	0.32
19	227	52.12	-1.33

Price as % of face value	One-day change	Last week	Stock Performance	Close (\$)	% chg
3.00		47.000	0.53	7.00	
2.38		68.500	15.83	7.18	
2.25		93.000	17.92	3.64	
2.25		86.000	...	...	
2.00		90.750	10.23	8.60	
1.90		n.a.	16.08	2.29	
1.50		104.500	...	...	
1.50		96.916	11.19	6.17	

-2.75	58,500	...	...
-2.50	76,125	...	...
-2.25	98,000	93.86	3.20
-1.75	76,750	...	...
1.42	24,125	...	...

Key Interest Rates

Data are annualized on a 360-day basis. Treasury yields are per annum, on actively traded noninflation and inflation-indexed issues that are adjusted to constant maturities. Data are from weekly Federal Reserve release H.15.

Week Ended	Nov 18	Nov 11	-52-Week-High	-52-Week-Low
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Federal funds (effective)	0.41	0.41	0.41	0.12
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Commercial paper

Nonfinancial				
1-month	0.43	0.42	0.46	0.10
2-month	0.55	0.52	0.55	0.15
3-month	0.64	0.58	0.64	0.23

Financial				
1-month	0.50	0.48	0.50	0.14
2-month	0.62	0.57	0.62	0.21
3-month	0.74	0.66	0.78	0.31

Discount window primary credit

	1.00	1.00	1.00	0.75
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Conventional mortgages

	n.a.	n.a.	n.a.	n.a.
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Treasury yields at constant maturities

1-month	0.30	0.29	0.30	0.06
3-month	0.48	0.44	0.48	0.13
6-month	0.62	0.56	0.62	0.32
1-year	0.77	0.70	0.77	0.45
2-year	1.03	0.88	1.07	0.58
3-year	1.30	1.08	1.35	0.69
5-year	1.71	1.42	1.78	0.95
7-yr	2.06	1.75	2.10	1.20
10-	2.26	1.98	2.29	1.38
20-	2.66	2.41	2.69	1.71

Treasury yields (secondary market)				
1-month	0.29	0.28	0.29	0.06
3-month	0.47	0.44	0.47	0.13
6-month	0.61	0.55	0.61	0.32

TIPS

5-year	0.02	-0.21	0.50	-0.45
7-year	0.21	-0.03	0.63	-0.27
10-year	0.41	0.20	0.78	-0.04
20-year	0.78	0.61	1.12	0.36
Long-term avg	0.80	0.62	1.12	0.38

Interest rate swaps

1-year	n.a.	n.a.	n.a.	n.a.
2-year	n.a.	n.a.	n.a.	n.a.
3-year	n.a.	n.a.	n.a.	n.a.
4-year	n.a.	n.a.	n.a.	n.a.
5-year	n.a.	n.a.	n.a.	n.a.
7-year	n.a.	n.a.	n.a.	n.a.
10-year	n.a.	n.a.	n.a.	n.a.
30-year	n.a.	n.a.	n.a.	n.a.

Corporate bonds, Moody's seasoned

Aaa	n.a.	n.a.	n.a.	n.a.
Baa	n.a.	n.a.	n.a.	n.a.

State and local bonds

	n.a.	n.a.	n.a.	n.a.
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Eurodollars

1 month	n.a.	n.a.	n.a.	n.a.
3 month	n.a.	n.a.	n.a.	n.a.
6 month	n.a.	n.a.	n.a.	n.a.

Notes on data:

Federal funds rate is an average for the seven days ended Wednesday, weighted according to rates on broker trades. Commercial paper rates are discounted offer rates interpolated from sales by discounted averages of dealer bid rates on nationally traded certificates of deposit. Discount window primary credit rate is charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program. Rate is average for seven days ended Wednesday. Inflation-indexed long-term TIPS average is indexed and is based on the unweighted average bid yields for all TIPS with remaining terms to maturity of 10 years or more. Swap rates are International

**RCAF Lump Sum Amortization
2017/Q1**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours	
CSX - BLET 2016	2016Q1	2016Q2				323,519,708	2015
NS - BLET second bonus	2016Q1	2016Q2				323,519,708	2015
NS - BLET 2016Q1 PPI	2016Q2	2016Q3				323,519,708	2015
NS - BLET 2016Q2 PPI	2016Q3	2016Q4				323,519,708	2015
NS - BLET 2016Q3 PPI	2016Q4	2017Q1				323,519,708	2015
Total			\$59,425,151	0.18368			

Should be slightly less
than amortized amount.

Fell out None.

Interest Rate

2015/Q1	0.020
2015/Q2	0.020
2015/Q3	0.015
2015/Q4	0.050
2016/Q1	0.140
2016/Q2	0.320
2016/Q3	0.350
2016/Q4	0.310
2017/Q1	0.480
2017/Q2	
2017/Q3	
2017/Q4	

Lump Sum Adjustment for 2017/Q1	→ 0.184143 or 0.184
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¹ B&LE BMW, B&LE BRS, GTW BMW, WC BMW, IC&CCP BMW

**RCAF Back Pay Amortization
2017/Q1**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
CSX - UTU CSRA	2015Q1	2016Q2				323,519,708	2015
DME - all unions 2016	2016Q1	2016Q2				323,519,708	2015
CSX - UTU National	2016Q2	2016Q3				323,519,708	2015
CN - 2 YMD	2016Q1	2017Q1				323,519,708	2015
Total			\$25,246,298	0.07803635			

Should be slightly less
than amortized amount.

Fell out

None

Interest Rate

2015/Q1	0.020
2015/Q2	0.020
2015/Q3	0.015
2015/Q4	0.050
2016/Q1	0.140
2016/Q2	0.320
2016/Q3	0.350
2016/Q4	0.310
2017/Q1	0.480
2017/Q2	
2017/Q3	
2017/Q4	

Back Pay Adjustment for 2017/Q1

→ 0.07823
or
0.078

2017Q1
Health and Welfare

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	Employees Receiving				
	Pay 2015	Monthly Contribution 2015 Avg. 2017		Total 2015 Avg.	Total 2017
1. All Employees					
a. Group health	173,496	\$1,298.28	\$1,693.72	\$225,246,386.88	\$293,853,645.12
b. Group dental	173,496	50.83	65.12	8,818,801.68	11,298,059.52
c. Early retirement major medical	173,496	109.90	166.75	19,067,210.40	28,930,458.00
d. Group vision	173,496	8.41	8.44	1,459,101.36	1,464,306.24
2. Supplemental Sickness					
a. Signalmen	8,093	30.74	37.00	248,778.82	299,441.00
b. Shopcrafts	25,865	53.18	60.00	1,375,500.70	1,551,900.00
c. MOW	25,948	32.87	40.00	852,910.76	1,037,920.00
d. Yardmasters	2,026	34.78	34.22	70,464.28	69,329.72
3. Short-Term Disability					
a. Engineers (CSX, KCS, SOO, UP)	13,753	40.00	40.00	550,120.00	550,120.00
4. Monthly Total Premiums				257,689,274.88	339,055,179.60
5. Monthly Employee Contributions To H&W					
a. National BLET (BNSF, CSX, KCS, NS, SOO, UP)	26,829	(\$198.00)	(\$228.89)	(\$5,312,142.00)	(6,140,889.81)
b. National BMWE (BNSF, CSX, KCS, NS, SOO, UP)	24,423	(\$198.00)	(\$228.89)	(\$4,835,754.00)	(5,590,180.47)
c. National BRS (BNSF, CSX, KCS, NS, SOO, UP)	7,638	(\$198.00)	(\$228.89)	(\$1,512,324.00)	(1,748,261.82)
d. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	7,133	(\$198.00)	(\$228.89)	(\$1,412,334.00)	(1,632,672.37)
e. National IBBM (BNSF, CSX, KCS, NS, SOO, UP)	1,295	(\$198.00)	(\$228.89)	(\$256,410.00)	(296,412.55)
f. National IBEW (BNSF, CSX, KCS, NS, SOO, UP)	5,826	(\$198.00)	(\$228.89)	(\$1,153,548.00)	(1,333,513.14)
g. National NCFO (BNSF, CSX, KCS, NS, SOO, UP)	2,602	(\$198.00)	(\$228.89)	(\$515,196.00)	(595,571.78)
h. National SMW (BNSF, CSX, KCS, NS, SOO, UP)	1,054	(\$198.00)	(\$228.89)	(\$208,692.00)	(241,250.06)
i. National TCU (BNSF, CSX, KCS, NS, SOO, UP)	5,333	(\$198.00)	(\$228.89)	(\$1,055,934.00)	(1,220,670.37)
j. National TCU-CAR (BNSF, CSX, KCS, NS, SOO, UP)	9,425	(\$198.00)	(\$228.89)	(\$1,866,150.00)	(2,157,288.25)
k. National UTU (BNSF, CSX, KCS, NS, SOO, UP)	41,770	(\$198.00)	(\$228.89)	(\$8,270,460.00)	(9,560,735.30)
l. Yardmasters (BNSF, CSX, KCS, NS, SOO, UP)	1,885	(\$198.00)	(\$228.89)	(\$373,230.00)	(431,457.65)
m. National ATDA (wt. avg. BNSF, CSX, KCS, NS, SOO)	1,875	(\$198.00)	(\$228.89)	(\$371,250.00)	(\$429,168.75)
n. Independent CNGT (wt. avg. all union categories)	6,883	(\$196.05)	(\$226.48)	(\$1,349,412.15)	(1,558,861.84)
o. Independent SLC (wt. avg. all DH & DME union categories)	802	(\$181.36)	(\$228.46)	(\$145,450.72)	(183,224.92)
p.					
Total Major Union	144,773			(\$28,638,286.87)	(\$33,120,159.08)
All Other Employee Contributions*				(\$3,646,717.21)	(\$3,646,717.21)
6. Net Employer Monthly Payments				\$225,404,270.80	\$302,288,303.31
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments					1.34109
8. H&W hourly rate for base year 2015				\$6.600	
9. H&W hourly rate for projected quarter					\$8.851

* Non-union employee contributions net of opt-outs. The \$28,638,286.87 in major union contributions, plus \$3,646,717.21 in all other employee contributions, totals to the 12-month average of the total employee contributions reported to the AAR in its WF survey.

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year	2014	Tier I Maximum Taxable Earnings for 2017	127,200
Wage Statistics Year	2015	Tier II Maximum Taxable Earnings for 2017	94,500
Current Year	2017	Medicare Maximum Taxable Earnings for 2017	no limit
Employees Receiving Pay*	173,496	Tier I Employer Tax Rate for 2017	6.20%
* from 2015 wage statistics		Tier II Employer Tax Rate for 2017	13.10%
		Medicare Employer Tax Rate for 2017	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2014	\$38.866			
2015	\$39.887	1.02627	\$704,695,495	\$8.392
1Q/2017	\$39.736	1.02238	\$717,783,577	\$8.548
2Q/2017		0.00000	--	\$0.000
3Q/2017		0.00000	--	\$0.000
4Q/2017		0.00000	--	\$0.000

hourly rate from SUPPL2015.xlsx

Rate = Taxable Rate

Railroad Retirement & Medicare, U.S.

From 2014 Earnings Distribution			1Q/2017 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info								
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$32,319	2.349 %	4,075	\$33,042	\$8,261	\$8,261	\$8,261	\$8,261	\$33,665,472	\$33,665,472	\$33,665,472
41,700 - 43,699	\$42,942	1.007	1,747	43,903	10,976	10,976	10,976	10,976	19,175,889	19,175,889	19,175,889
43,700 - 45,699	\$44,610	0.863	1,497	45,609	11,402	11,402	11,402	11,402	17,072,094	17,072,094	17,072,094
45,700 - 47,699	\$46,638	0.959	1,664	47,682	11,920	11,920	11,920	11,920	19,833,634	19,833,634	19,833,634
47,700 - 49,699	\$48,787	1.198	2,078	49,879	12,470	12,470	12,470	12,470	25,918,192	25,918,192	25,918,192
49,700 - 51,699	\$50,610	1.438	2,495	51,743	12,936	12,936	12,936	12,936	32,272,975	32,272,975	32,272,975
51,700 - 53,699	\$52,789	2.061	3,576	53,971	13,493	13,493	13,493	13,493	48,246,432	48,246,432	48,246,432
53,700 - 55,699	\$54,867	2.061	3,576	56,095	14,024	14,024	14,024	14,024	50,145,617	50,145,617	50,145,617
55,700 - 57,699	\$56,742	2.349	4,075	58,012	14,503	14,503	14,503	14,503	59,105,981	59,105,981	59,105,981
57,700 - 59,699	\$58,648	4.936	8,564	59,961	14,990	14,990	14,990	14,990	128,372,540	128,372,540	128,372,540
59,700 - 61,699	\$60,771	4.267	7,403	62,131	15,533	15,533	15,533	15,533	114,990,722	114,990,722	114,990,722
61,700 - 63,699	\$62,628	3.595	6,237	64,030	16,007	16,007	16,007	16,007	99,841,527	99,841,527	99,841,527
63,700 - 65,699	\$64,769	3.356	5,823	66,219	16,555	16,555	16,555	16,555	96,390,209	96,390,209	96,390,209
65,700 - 67,699	\$66,691	3.835	6,654	68,184	17,046	17,046	17,046	17,046	113,416,535	113,416,535	113,416,535
67,700 - 69,699	\$68,686	2.733	4,742	70,224	17,556	17,556	17,556	17,556	83,243,749	83,243,749	83,243,749
69,700 - 71,699	\$70,601	3.068	5,323	72,181	18,045	18,045	18,045	18,045	96,052,790	96,052,790	96,052,790
71,700 - 73,699	\$72,635	2.637	4,575	74,261	18,565	18,565	18,565	18,565	84,937,573	84,937,573	84,937,573
73,700 - 75,699	\$74,686	3.500	6,072	76,358	19,089	19,089	19,089	19,089	115,918,038	115,918,038	115,918,038
75,700 - 77,699	\$76,699	3.356	5,823	78,416	19,604	19,604	19,604	19,604	114,144,616	114,144,616	114,144,616
77,700 - 79,699	\$78,731	2.828	4,906	80,493	20,123	20,123	20,123	20,123	98,734,504	98,734,504	98,734,504
79,700 - 81,699	\$80,665	2.828	4,906	82,471	20,618	20,618	20,618	20,618	101,159,883	101,159,883	101,159,883
81,700 - 83,699	\$82,752	2.828	4,906	84,604	21,151	21,151	21,151	21,151	103,777,136	103,777,136	103,777,136
83,700 - 85,699	\$84,649	2.733	4,742	86,544	21,636	21,636	21,636	21,636	102,590,050	102,590,050	102,590,050
85,700 - 87,699	\$86,782	3.068	5,323	88,725	22,181	22,181	22,181	22,181	118,067,070	118,067,070	118,067,070
87,700 - 89,699	\$88,820	2.589	4,492	90,808	22,702	22,702	22,702	22,702	101,973,328	101,973,328	101,973,328
89,700 - 91,699	\$90,764	2.493	4,325	92,796	23,199	23,199	23,199	23,199	100,341,290	100,341,290	100,341,290
91,700 - 93,699	\$92,605	2.061	3,576	94,678	23,669	23,669	23,625	23,669	84,636,209	84,477,154	84,636,209
93,700 - 95,699	\$94,558	1.918	3,328	96,675	24,169	24,169	23,625	24,169	80,424,923	78,615,809	80,424,923
95,700 - 97,699	\$96,658	2.349	4,075	98,822	24,705	24,705	23,625	24,705	100,684,959	96,281,822	100,684,959
97,700 - 99,699	\$98,713	2.397	4,159	100,923	25,231	25,231	23,625	25,231	104,926,735	98,249,267	104,926,735
99,700 - 101,699	\$100,922	1.534	2,661	103,181	25,795	25,795	23,625	25,795	68,652,283	62,876,252	68,652,283
101,700 - 103,699	\$102,756	1.965	3,409	105,056	26,264	26,264	23,625	26,264	89,539,264	80,542,265	89,539,264
103,700 - 105,699	\$104,668	1.103	1,914	107,011	26,753	26,753	23,625	26,753	51,195,668	45,210,238	51,195,668
105,700 - 107,699	\$106,491	1.726	2,995	108,875	27,219	27,219	23,625	27,219	81,507,481	70,746,030	81,507,481
107,700 - 109,699	\$108,562	1.294	2,245	110,992	27,748	27,748	23,625	27,748	62,295,387	53,039,028	62,295,387
109,700 - 111,699	\$110,722	1.726	2,995	113,200	28,300	28,300	23,625	28,300	84,745,860	70,746,030	84,745,860
111,700 - 113,699	\$112,675	0.959	1,664	115,197	28,799	28,799	23,625	28,799	47,917,036	39,307,904	47,917,036
113,700 - 115,699	\$114,552	0.815	1,414	117,116	29,279	29,279	23,625	29,279	41,400,355	33,405,570	41,400,355
\$115,700 - over	\$172,509	11.218	19,463	176,371	44,093	31,800	23,625	44,093	618,916,445	459,808,208	858,165,338
TOTAL	\$86,492	100.000	173,496				Total Taxable Earnings		3,596,230,451	3,352,693,424	3,835,479,344
							Employer Tax Rate		6.20%	13.10%	1.45%
							Quarterly Payment		\$222,966,288	\$439,202,838	\$55,614,450

Total Tier I, Tier II, and Medicare Paid this Quarter

\$717,783,577

Railroad Retirement & Medicare, U.S.

From 2014 Earnings Distribution			2Q/2017 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$32,319	2.349 %	4,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,942	1.007	1,747	0	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,610	0.863	1,497	0	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,638	0.959	1,664	0	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,787	1.198	2,078	0	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,610	1.438	2,495	0	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,789	2.061	3,576	0	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,867	2.061	3,576	0	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,742	2.349	4,075	0	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,648	4.936	8,564	0	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,771	4.267	7,403	0	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,628	3.595	6,237	0	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,769	3.356	5,823	0	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,691	3.835	6,654	0	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	2.733	4,742	0	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,601	3.068	5,323	0	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,635	2.637	4,575	0	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,686	3.500	6,072	0	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,699	3.356	5,823	0	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,731	2.828	4,906	0	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,665	2.828	4,906	0	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,752	2.828	4,906	0	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,649	2.733	4,742	0	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,782	3.068	5,323	0	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,820	2.589	4,492	0	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,764	2.493	4,325	0	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,605	2.061	3,576	0	0	0	44	0	0	159,055	0	0
93,700 - 95,699	\$94,558	1.918	3,328	0	0	0	544	0	0	1,809,115	0	0
95,700 - 97,699	\$96,658	2.349	4,075	0	0	0	1,080	0	0	4,403,137	0	0
97,700 - 99,699	\$98,713	2.397	4,159	0	0	0	1,606	0	0	6,677,469	0	0
99,700 - 101,699	\$100,922	1.534	2,661	0	0	0	2,170	0	0	5,776,031	0	0
101,700 - 103,699	\$102,756	1.965	3,409	0	0	0	2,639	0	0	8,996,999	0	0
103,700 - 105,699	\$104,668	1.103	1,914	0	0	0	3,128	0	0	5,985,430	0	0
105,700 - 107,699	\$106,491	1.726	2,995	0	0	0	3,594	0	0	10,761,451	0	0
107,700 - 109,699	\$108,562	1.294	2,245	0	0	0	4,123	0	0	9,256,359	0	0
109,700 - 111,699	\$110,722	1.726	2,995	0	0	0	4,675	0	0	13,999,829	0	0
111,700 - 113,699	\$112,675	0.959	1,664	0	0	0	5,174	0	0	8,609,132	0	0
113,700 - 115,699	\$114,552	0.815	1,414	0	0	0	5,654	0	0	7,994,784	0	0
\$115,700 - over	\$172,509	11.218	19,463	0	0	12,293	20,468	0	239,248,893	398,357,130	0	0
TOTAL			173,496						239,248,893	482,785,921	0	0
									6.20%	13.10%	1.45%	
									\$14,833,431	\$63,244,956	\$0	

Total Tier I, Tier II, and Medicare Paid this Quarter

\$78,078,387

Railroad Retirement & Medicare, U.S.

From 2014 Earnings Distribution			3Q/2017 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$32,319	2.349 %	4,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,942	1.007	1,747	0	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,610	0.863	1,497	0	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,638	0.959	1,664	0	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,787	1.198	2,078	0	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,610	1.438	2,495	0	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,789	2.061	3,576	0	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,867	2.061	3,576	0	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,742	2.349	4,075	0	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,648	4.936	8,564	0	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,771	4.267	7,403	0	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,628	3.595	6,237	0	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,769	3.356	5,823	0	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,691	3.835	6,654	0	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	2.733	4,742	0	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,601	3.068	5,323	0	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,635	2.637	4,575	0	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,686	3.500	6,072	0	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,699	3.356	5,823	0	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,731	2.828	4,906	0	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,665	2.828	4,906	0	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,752	2.828	4,906	0	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,649	2.733	4,742	0	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,782	3.068	5,323	0	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,820	2.589	4,492	0	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,764	2.493	4,325	0	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,605	2.061	3,576	0	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,558	1.918	3,328	0	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,658	2.349	4,075	0	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,713	2.397	4,159	0	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,922	1.534	2,661	0	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,756	1.965	3,409	0	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,668	1.103	1,914	0	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,491	1.726	2,995	0	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,562	1.294	2,245	0	0	0	0	0	0	0	0	0
109,700 - 111,699	\$110,722	1.726	2,995	0	0	0	0	0	0	0	0	0
111,700 - 113,699	\$112,675	0.959	1,664	0	0	0	0	0	0	0	0	0
113,700 - 115,699	\$114,552	0.815	1,414	0	0	0	0	0	0	0	0	0
\$115,700 - over	\$172,509	11.218	19,463	0	0	0	0	0	0	0	0	0
TOTAL		100.000	173,496						0	0	0	0
Total Taxable Earnings									0	0	0	0
Employer Tax Rate									6.20%	13.10%	1.45%	
Quarterly Payment									\$0	\$0	\$0	
Total Tier I, Tier II, and Medicare Paid this Quarter												\$0

Railroad Retirement & Medicare, U.S.

From 2014 Earnings Distribution			4Q/2017 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$32,319	2.349 %	4,075	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,942	1.007	1,747	0	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,610	0.863	1,497	0	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,638	0.959	1,664	0	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,787	1.198	2,078	0	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,610	1.438	2,495	0	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,789	2.061	3,576	0	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,867	2.061	3,576	0	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,742	2.349	4,075	0	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,648	4.936	8,564	0	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,771	4.267	7,403	0	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,628	3.595	6,237	0	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,769	3.356	5,823	0	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,691	3.835	6,654	0	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	2.733	4,742	0	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,601	3.068	5,323	0	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,635	2.637	4,575	0	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,686	3.500	6,072	0	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,699	3.356	5,823	0	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,731	2.828	4,906	0	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,665	2.828	4,906	0	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,752	2.828	4,906	0	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,649	2.733	4,742	0	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,782	3.068	5,323	0	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,820	2.589	4,492	0	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,764	2.493	4,325	0	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,605	2.061	3,576	0	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,558	1.918	3,328	0	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,658	2.349	4,075	0	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,713	2.397	4,159	0	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,922	1.534	2,661	0	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,756	1.965	3,409	0	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,668	1.103	1,914	0	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,491	1.726	2,995	0	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,562	1.294	2,245	0	0	0	0	0	0	0	0	0
109,700 - 111,699	\$110,722	1.726	2,995	0	0	0	0	0	0	0	0	0
111,700 - 113,699	\$112,675	0.959	1,664	0	0	0	0	0	0	0	0	0
113,700 - 115,699	\$114,552	0.815	1,414	0	0	0	0	0	0	0	0	0
\$115,700 - over	\$172,509	11.218	19,463	0	0	0	0	0	0	0	0	0
TOTAL		100.000	173,496						0	0	0	0
Total Taxable Earnings									0	0	0	0
Employer Tax Rate									6.20%	13.10%	1.45%	
Quarterly Payment									\$0	\$0	\$0	
Total Tier I, Tier II, and Medicare Paid this Quarter												\$0

**Tax Rates and Maximum Taxable Earnings Under Social Security,
Railroad Retirement and Railroad Unemployment Insurance Programs, Continued**

Period	Railroad Retirement					Railroad Unemployment Insurance				Unemployment Repayment	
	Maximum earnings base [5]		Tax rate (percent) [5]			Maximum monthly taxable earnings	Employer tax rate [7] (percent)	Surcharge or (pooled credit)	New employer tax rate (percent)	Tax [6]	
			Tier I	Tier II						Maximum taxable earnings	Employer tax rate (percent)
	Tier I [9]	Tier II	Employer & employee each	Employer	Employee						
1991	53,400	39,600	7.65	16.1	4.9	765	5.55 - 12.0	...	8.00	765	4.0
1992	55,500	41,400	7.65	16.1	4.9	785	3.10 - 12.0	(3.12)	8.00	785	4.0
1993	57,600	42,900	7.65	16.1	4.9	810	0.65 - 12.0	(5.31)	7.30	810	4.0
1994	60,600	45,000	7.65	16.1	4.9	840	0.65 - 12.0	(0.22)	6.06		
1995	61,200	45,300	7.65	16.1	4.9	850	0.65 - 12.0	...	4.15		
1996	62,700	46,500	7.65	16.1	4.9	865	0.65 - 12.0	...	2.31		
1997	65,400	48,600	7.65	16.1	4.9	890	0.65 - 12.0	...	1.16		
1998	68,400	50,700	7.65	16.1	4.9	925	2.15 - 12.0	1.5	0.85		
1999	72,600	53,700	7.65	16.1	4.9	970	2.15 - 12.0	1.5	0.92		
2000	76,200	56,700	7.65	16.1	4.9	1,005	0.65 - 12.0	...	1.67		
2001	80,400	59,700	7.65	16.1	4.9	1,050	2.15 - 12.0	1.5	2.59		
2002	84,900	63,000	7.65	15.6	4.9	1,100	3.15 - 12.0	2.5	2.71		
2003	87,000	64,500	7.65	14.2	4.9	1,120	3.15 - 12.0	2.5	2.36		
2004	87,900	65,100	7.65	13.1	4.9	1,130	2.15 - 12.0	1.5	2.38		
2005	90,000	66,900	7.65	12.6	4.4	1,150	2.15 - 12.0	1.5	3.43		
2006	94,200	69,900	7.65	12.6	4.4	1,195	2.15 - 12.0	1.5	4.03		
2007	97,500	72,600	7.65	12.1	3.9	1,230	2.15 - 12.0	1.5	3.75		
2008	102,000	75,900	7.65	12.1	3.9	1,280	2.15 - 12.0	1.5	3.02		
2009	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.61		
2010	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.51		
2011	106,800	79,200	[2] 7.65	12.1	3.9	1,330	3.15 - 12.0	2.5	2.50		
2012	110,100	81,900	[2] 7.65	12.1	3.9	1,365	2.15 - 12.0	1.5	2.65		
2013	113,700	84,300	[3] 7.65	12.6	4.4	1,405	0.65 - 12.0	...	3.69		
2014	117,000	87,000	[3] 7.65	12.6	4.4	1,440	0.65 - 12.0	...	4.53		
2015	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	4.09		
2016	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	2.52		
2017	127,200	94,500	[3] 7.65	13.1	4.9	1,545	2.15 - 12.0	1.5	1.62		
2018 and later	[4]	[4]	[3] 7.65	[10]	[10]	[4]	[7]	[7]	[7]		

See footnotes at end of table.

- 1 Before tax credit. Employees received a credit of 0.3 percent in 1984. The self-employed received a credit of 2.7 percent in 1984, 2.3 percent in 1985 and 2.0 percent in 1986-89. The trust funds received general revenue equivalent to the credits.
- 2 Before payroll tax holiday. In calendar years 2011 and 2012, the tax rate for employees and the self-employed was reduced 2 percentage points. The trust funds received general revenue equivalent to the reduction in revenue.
- 3 Beginning in 2013, employees pay an additional 0.9 percent on earnings above \$200,000 (for those who file an individual return) or \$250,000 (for those who file a joint return). This additional HI tax rate is not reflected in the tax rates shown in the table.
- 4 Based on automatic adjustments in proportion to increases in average earnings levels.
- 5 Earnings bases are monthly through 1984 and annual for 1985 and later. October 1, 1973 was the effective date for the allocation of railroad retirement taxes by tiers, subject to a moratorium for certain railroad labor organizations. The tier I tax rate was set equal to the current social security tax rate.
- 6 This temporary tax applied to employers until all pre-October 1985 loans from the Railroad Retirement Account were fully repaid with interest on June 29, 1993. Earnings bases are annual through 1988 and monthly for 1989-1993.
- 7 Taxes are paid only by employer. From 1948 through 1988, the rate for a calendar year was based on a graduated schedule depending on the preceding September 30 account balance (including administration fund). Except for certain commuter railroads, the rate for 1989-1990 was fixed at 8.0 percent. Beginning in 1991, each employer's rate is experienced-based, with a minimum of 0.65 percent and a maximum of 12 percent, or 12.5 percent if a 3.5 percent surcharge applies due to a low account balance.
- 8 Taxes are paid only by employers. The supplemental annuity tax was repealed for calendar years after 2001.
- 9 Beginning in 1991, the portion of the tier I tax rate which does not exceed the social security HI tax rate is applied to earnings up to the HI maximum taxable amount. In 1993, a 1.45 percent tax applied to earnings up to \$135,000 and a 6.2 percent tax applied to earnings up to \$57,600.
- 10 Beginning in 2004, the tier II tax rate will be determined annually from a tax rate schedule based on the average account benefits ratio. The average account benefits ratio is the average for the 10 fiscal years preceding the calendar year of the ratio of the fair market value of the assets in the Railroad Retirement Account and the National Railroad Retirement Investment Trust as of the close of each fiscal year to the total benefits and administrative expenses paid from those accounts during the fiscal year. Employer tax rates can range from 8.2 percent to 22.1 percent. Employee tax rates can range from 0 percent to 4.9 percent.

RCAF Unemployment Insurance Tax

	<u>Unemployment Ins.</u>			RRB	Factor	Avg. Ann.	Un. Ins.
	<u>Tax</u>	<u>Earnings</u>	<u>Hourly</u>	<u>Sample</u>	<u>To Update</u>	<u>Taxable</u>	<u>Hourly</u>
	<u>Rate</u>	<u>Base</u>	<u>Earnings</u>	<u>Year</u>	<u>RRB Sample</u>	<u>Earnings</u>	<u>Rate</u>
			\$34.752	(2011)			
2012 Avg.	5.00%	\$16,380	\$36.269		1.043652	\$15,446.41	\$0.411
3Q/13 reb.	0.67%	\$16,860	\$37.587		1.081578	\$15,902.69	\$0.057
4Q/13	0.67%	\$16,860	\$37.545		1.080369	\$15,902.09	\$0.057
1Q/14	0.68%	\$17,280	\$37.908		1.090815	\$16,289.96	\$0.059
2Q/14	0.68%	\$17,280	\$38.121		1.096944	\$16,293.07	\$0.059
3Q/14	0.68%	\$17,280	\$39.016		1.122698	\$16,305.78	\$0.059
			\$36.269	(2012)			
2013 Avg.	0.67%	\$16,860	\$36.760		1.013538	\$15,578.13	\$0.057
3Q/14 reb.	0.68%	\$17,280	\$38.308		1.056219	\$15,976.08	\$0.059
4Q/14	0.68%	\$17,280	\$38.319		1.056522	\$15,976.25	\$0.059
1Q/15	2.31%	\$17,460	\$39.385		1.085914	\$16,152.67	\$0.204
2Q/15	2.31%	\$17,460	\$39.595		1.091704	\$16,155.78	\$0.204
3Q/15	2.31%	\$17,460	\$39.581		1.091318	\$16,155.57	\$0.204
			\$36.760	(2013)			
2014 Avg.	0.68%	\$17,280	\$38.866		1.057291	\$16,395.26	\$0.059
3Q/15 reb.	2.31%	\$17,460	\$40.503		1.101823	\$16,583.82	\$0.203
4Q/15	2.31%	\$17,460	\$40.590		1.104189	\$16,585.04	\$0.203
1Q/16	2.73%	\$17,460	\$40.888		1.112296	\$16,589.15	\$0.240
2Q/16	2.73%	\$17,460	\$40.731		1.108025	\$16,586.99	\$0.240
3Q/16	2.73%	\$17,460	\$40.545		1.102965	\$16,584.41	\$0.240
			\$38.866	(2014)			
2015 Avg.	2.31%	\$17,460	\$39.887		1.026257	\$16,460.37	\$0.208
3Q/16 reb.	2.73%	\$17,460	\$39.731		1.022244	\$16,458.00	\$0.246
4Q/16	2.73%	\$17,460	\$39.703		1.021523	\$16,457.57	\$0.246
1Q/17	3.37%	\$18,540	\$39.736		1.022372	\$17,436.31	\$0.321
2Q/17					0.000000		\$0.000
3Q/17					0.000000		\$0.000

Note: Average Annual Taxable Earnings is calculated from the RRB 1% sample data, by multiplying the average annual earnings in the file times the "Factor", and limiting the amount to the earnings base. Thus, the annual hourly earnings used for the calculation of the Factor is for the RRB sample year, and the Factor brings the earnings in the RRB 1% sample file to the current quarter's level.

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2741	45117871.70	16460.37
QTRLY_US	2741	47792912.57	17436.31

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2741	2812.97	1.0262570
FactorQ	2741	2802.32	1.0223720
Capa	2741	47857860.00	17460.00
Capq	2741	50818140.00	18540.00



ASSOCIATION OF AMERICAN RAILROADS

MEMORANDUM

TO: File
FROM: Tiffany Placker
cc: Clyde Crimmel
DATE: November 16, 2016
RE: Unemployment Insurance Tax Rate for 2017

Unemployment Insurance rates for 2017 can range from a minimum of 0.65 percent to a maximum of 12 percent on monthly earnings up to \$1,545. A 1.5 percentage point surcharge will be in effect for 2017, meaning the minimum tax rate is effectively 2.15 percent. Michael Rizzo at the Railroad Retirement Board said in his November e-mail that the weighted average 2017 Unemployment Insurance rate for Class I railroads is **3.37 percent** which includes Delaware and Hudson Railway (D&H) and Dakota, Minnesota & Eastern Railroad Corporation (DME).

Note: Effective October 2016, Marla Huddleston will be retiring, and the future contact for this information will be Michael Rizzo. Michael.Rizzo@rrb.gov

**Tax Rates and Maximum Taxable Earnings Under Social Security,
Railroad Retirement and Railroad Unemployment Insurance Programs, Continued**

Period	Railroad Retirement					Railroad Unemployment Insurance				Unemployment Repayment	
	Maximum earnings base [5]		Tax rate (percent) [5]			Maximum monthly taxable earnings	Employer tax rate [7] (percent)	Surcharge or (pooled credit)	New employer tax rate (percent)	Tax [6]	
			Tier I	Tier II						Maximum taxable earnings	Employer tax rate (percent)
	Tier I [9]	Tier II	Employer & employee each	Employer	Employee						
1991	53,400	39,600	7.65	16.1	4.9	765	5.55 - 12.0	...	8.00	765	4.0
1992	55,500	41,400	7.65	16.1	4.9	785	3.10 - 12.0	(3.12)	8.00	785	4.0
1993	57,600	42,900	7.65	16.1	4.9	810	0.65 - 12.0	(5.31)	7.30	810	4.0
1994	60,600	45,000	7.65	16.1	4.9	840	0.65 - 12.0	(0.22)	6.06		
1995	61,200	45,300	7.65	16.1	4.9	850	0.65 - 12.0	...	4.15		
1996	62,700	46,500	7.65	16.1	4.9	865	0.65 - 12.0	...	2.31		
1997	65,400	48,600	7.65	16.1	4.9	890	0.65 - 12.0	...	1.16		
1998	68,400	50,700	7.65	16.1	4.9	925	2.15 - 12.0	1.5	0.85		
1999	72,600	53,700	7.65	16.1	4.9	970	2.15 - 12.0	1.5	0.92		
2000	76,200	56,700	7.65	16.1	4.9	1,005	0.65 - 12.0	...	1.67		
2001	80,400	59,700	7.65	16.1	4.9	1,050	2.15 - 12.0	1.5	2.59		
2002	84,900	63,000	7.65	15.6	4.9	1,100	3.15 - 12.0	2.5	2.71		
2003	87,000	64,500	7.65	14.2	4.9	1,120	3.15 - 12.0	2.5	2.36		
2004	87,900	65,100	7.65	13.1	4.9	1,130	2.15 - 12.0	1.5	2.38		
2005	90,000	66,900	7.65	12.6	4.4	1,150	2.15 - 12.0	1.5	3.43		
2006	94,200	69,900	7.65	12.6	4.4	1,195	2.15 - 12.0	1.5	4.03		
2007	97,500	72,600	7.65	12.1	3.9	1,230	2.15 - 12.0	1.5	3.75		
2008	102,000	75,900	7.65	12.1	3.9	1,280	2.15 - 12.0	1.5	3.02		
2009	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.61		
2010	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.51		
2011	106,800	79,200	[2] 7.65	12.1	3.9	1,330	3.15 - 12.0	2.5	2.50		
2012	110,100	81,900	[2] 7.65	12.1	3.9	1,365	2.15 - 12.0	1.5	2.65		
2013	113,700	84,300	[3] 7.65	12.6	4.4	1,405	0.65 - 12.0	...	3.69		
2014	117,000	87,000	[3] 7.65	12.6	4.4	1,440	0.65 - 12.0	...	4.53		
2015	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	4.09		
2016	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	2.52		
2017	127,200	94,500	[3] 7.65	13.1	4.9	1,545	2.15 - 12.0	1.5	1.62		
2018 and later	[4]	[4]	[3] 7.65	[10]	[10]	[4]	[7]	[7]	[7]		

See footnotes at end of table.

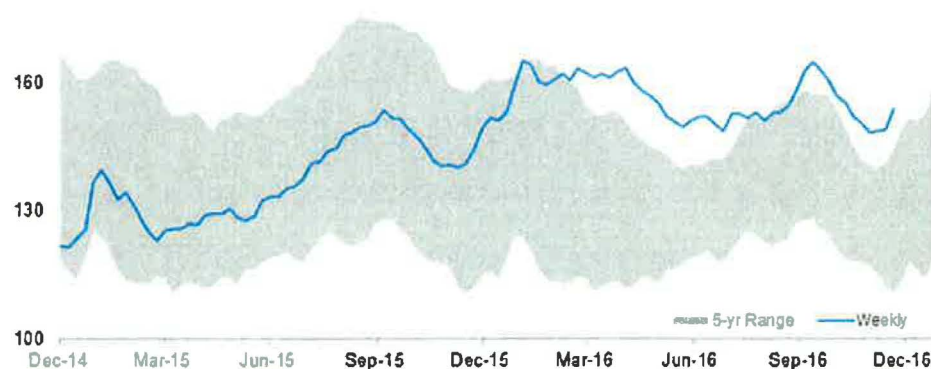
	Year ago	Most recent						
	11/27/15	11/23/16	11/18/16	11/11/16	11/04/16	10/28/16	10/21/16	10/14/16
Contract 1	1.352	1.517	1.458	NA	1.430	1.542	1.574	1.567
Contract 2	1.378	1.533	1.469	NA	1.449	1.558	1.593	1.588
Contract 3	1.402	1.548	1.481	NA	1.465	1.577	1.612	1.610
Contract 4	1.421	1.561	1.489	NA	1.473	1.592	1.627	1.627

Markets were closed on 11/24/2016 and 11/25/2016.

Distillate stocks (million barrels) and days of supply

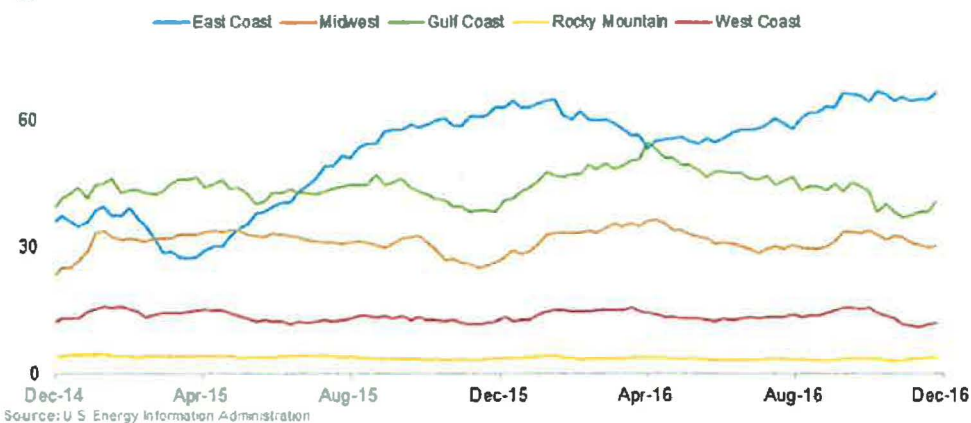
U.S. distillate stocks

million barrels
190



Regional distillate stocks

million barrels
90



U.S.

Summary by Composition Category

	MS-2015		Prev. Idx	2016Q4		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	917,714,420	0.1138	298.15	309.93		33.93	35.27	
Metal Products	4,919,531,031	0.6102	171.74	166.55		104.80	101.63	
Misc. Products	2,224,493,596	0.2759	337.76	441.86		93.19	121.91	
Total	8,061,739,047	0.9999	231.92	258.81				1.1159
Total Linked			231.67	258.52				
'77 = 100 Link Fact.=	1.423		329.67	367.87				
'80 = 100 Link Fact.=	1.061		245.80	274.29				

As info only	Change
Forest Products	3.95%
Metal Products	-3.02%
Misc. Products	<u>30.82%</u>
Total ('80=100)	11.59%
Rounded 80 Indices	11.6%
Rounded 77 Indices	11.6%

RCAF (Forecast)

	1980	June 3Q/16	Sept. 4Q/16	Dec. 1Q/17	Mar. 2Q/17	June 3Q/17
RATE						
RR-OWNED TIME	31.00	64.00	64.00	64.00	--	--
RR-OWNED MILEAGE	4.69	6.70	6.70	6.70	--	--
PRIVATELY-OWNED CARS	25.47	51.47	55.07	55.18	--	--
AUTORACKS	47.00	82.48	84.26	86.17	--	--
INDEX						
RR-OWNED TIME	100.0	206.5	206.5	206.5	--	--
RR-OWNED MILEAGE	100.0	142.9	142.9	142.9	--	--
PRIVATELY-OWNED CARS	100.0	202.1	216.2	216.7	--	--
AUTORACKS	100.0	175.5	179.3	183.3	--	--
CAR HIRE INDEX (old wts) 2014	100.0	198.5	--	--	--	--
CAR HIRE INDEX (new wts) 2015	100.0	198.0	209.1	209.6	--	--
CAR HIRE INDEX (LINKED)	100.0	198.0	209.1	209.6	--	--

Note: The Car Hire Index for third quarter using *old weights* and *linked* should match that quarter's filing. The third quarter *new weights* version is used in the fourth quarter linked index calculation to ensure that the transition from old weights to new weights does not impact the linked index.

Note: Indexes are rounded, rates are full float.

Equipment Rents Data From CHARM

	2016 (first day of month)						2017 (first day of month)							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Railroad Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	8,221	8,230	8,223	8,360	8,469	8,474								
Rate (in cents)														
Superstructures #3 - Auto Rack	59.0	59.0	59.0	60.0	62.0	61.0								
All other #1 - Time	64.0	64.0	64.0	64.0	64.0	64.0								
All other #2 - Mileage	6.7	6.7	6.7	6.7	6.7	6.7								
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	55,135	55,284	55,495	55,461	55,557	55,700								
Covered Hoppers	384,653	386,864	388,061	388,522	390,438	392,048								
Tank Cars	401,942	402,781	403,243	403,552	404,110	404,703								
Others	289,832	289,264	289,515	290,003	290,971	291,569								
Rate (in cents)														
Superstructures #1 - Time	83.0	83.0	83.0	83.0	83.0	83.0								
Superstructures #2 - Mileage	1.6	1.6	1.6	1.6	1.6	1.6								
Superstructures #3 - Auto Rack	87.0	87.0	88.0	88.0	89.0	90.0								
Covered Hoppers #2 - Mileage	45.2	45.3	45.3	45.3	45.3	45.2								
Tank Cars #2 - Mileage	80.4	80.6	89.7	89.9	90.0	90.1								
Others #1 -Time	82.0	82.0	83.0	83.0	84.0	84.0								
Others #2 - Mileage	7.8	7.9	8.0	8.0	8.0	8.0								
AVERAGE RATES														
Private Superstructures	21.11	21.11	21.11	21.11	21.11	21.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Others	26.00	26.10	26.43	26.43	26.65	26.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Total	51.61	51.76	55.07	55.13	55.20	55.18	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	83.37	83.37	84.26	84.33	85.43	86.17	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

WEIGHTS	"Old Wts"	"New Wts"
	2014	2015
For RCAF & RCR		
RR-owned Time	0.156	0.124
RR-owned Mileage	0.060	0.062
Privately-owned Cars	0.758	0.776
Autoracks	0.026	0.038
----- Check sum	1.000	1.000

Weights for Equipment Rents (not used in Car Hire calculation)		
	2014	2015
Car Hire - U.S.	0.565	0.582
Lease Rentals - U.S.	0.435	0.418
----- Check sum	1.000	1.000

Note: The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 12/2016

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	8,474	118	0.079	61
Railroad	Number of Zero-Rated Vehicular Flats	51	.	.	.
Railroad	All Other Cars	440,542	64	0.067	.
Railroad	Number of Zero-Rated Other Cars	18,092	.	.	.
Railroad	Total Railroad Equipment	467,159	.	.	.
		.	.	.	.
Private	Vehicular Flats	55,700	83	0.016	90
Private	Number of Zero-Rated Vehicular Flats	73	.	.	.
Private	Covered Hoppers	392,048	0	0.452	.
Private	Number of Zero-Rated Covered Hoppers	12,593	.	.	.
Private	Tanks	404,703	0	0.901	.
Private	Number of Zero-Rated Tanks	8,682	.	.	.
Private	All Other Cars	291,569	84	0.080	.
Private	Number of Zero-Rated Other Cars	24,526	.	.	.
Private	Total Private Equipment	1,189,894	.	.	.

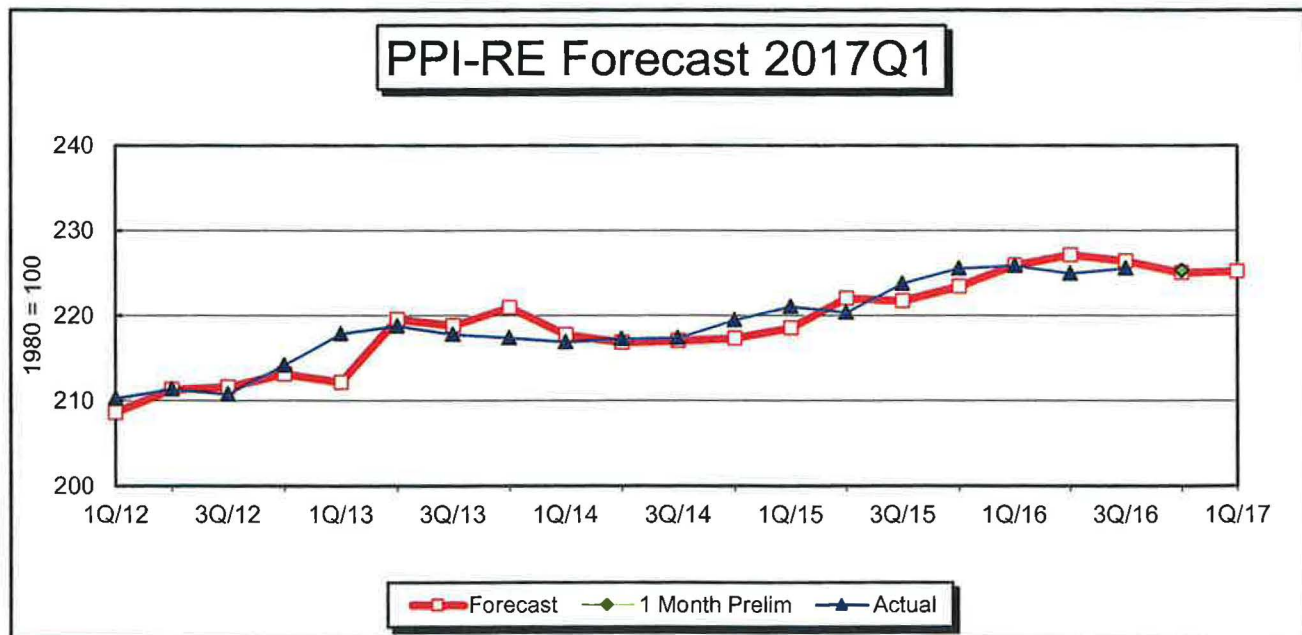
Notes
This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).
All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.
Equipment can be zero rated due to owners supplying incorrect or insufficient information to the car accounting process.
Zero-rated equipment includes those with Umler Rate_Indicator of 6 and 0 (zero).
Zero-rated equipment is excluded from the averages shown in this report.
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
1Q/12	208.7	210.3	
2Q/12	211.4	211.4	
3Q/12	211.7	210.8	
4Q/12	213.2	214.2	
1Q/13	212.2	217.9	
2Q/13	219.6	218.8	
3Q/13	218.9	217.8	
4Q/13	221.0	217.4	
1Q/14	217.8	216.9	
2Q/14	216.9	217.3	
3Q/14	217.1	217.4	
4Q/14	217.4	219.5	
1Q/15	218.6	221.1	
2Q/15	222.1	220.4	
3Q/15	221.8	223.8	
4Q/15	223.5	225.6	
1Q/16	226.0	225.9	
2Q/16	227.2	225.0	
3Q/16	226.5	225.6	
4Q/16	225.1		225.3
1Q/17	225.3		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2017Q1						
Low	199.7	220.9	-2.2%			
Midpoint	203.7	225.3	-0.3%	0.0%	-0.1%	0.1%
High	207.7	229.8	1.7%			



Forecast Report for PPIRE

Description: PPIRE

Expert Analysis

Using rule-based logic I have narrowed down the choice to exponential smoothing or Box-Jenkins. I will perform an out-of-sample test to select between these two approaches.

The cumulative MAD for Exponential smoothing was 1.72 and for Box-Jenkins was 0.61. The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Box-Jenkins.

Model Details

Expert selection
Box-Jenkins
ARIMA(0, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	195.77	Std. deviation	6.06
R-square	0.97	Adj. R-square	0.97
Durbin-Watson	2.44	Ljung-Box(18)	24.5 P=0.86
Forecast error	1.01	BIC	1.01
MAPE	0.36	SMAPE	0.36
RMSE	1.01	MAD	0.71
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2010-Nov	184.2
2010-Dec	184.2
2011-Jan	184.9
2011-Feb	185.1
2011-Mar	187
2011-Apr	186.6
2011-May	186.7
2011-Jun	186.8
2011-Jul	187.3
2011-Aug	187.4
2011-Sep	187.5
2011-Oct	187.5
2011-Nov	187.7
2011-Dec	189.9
2012-Jan	190.1
2012-Feb	190.1
2012-Mar	190.6
2012-Apr	191.8

2012-May	191.6
2012-Jun	191.5
2012-Jul	192
2012-Aug	190.4
2012-Sep	190.9
2012-Oct	194.9
2012-Nov	193.9
2012-Dec	194.1
2013-Jan	196
2013-Feb	195.2
2013-Mar	195.8
2013-Apr	195.2
2013-May	198.1
2013-Jun	196.3
2013-Jul	195.4
2013-Aug	194.5
2013-Sep	194.6
2013-Oct	195.1
2013-Nov	195.2
2013-Dec	196.9
2014-Jan	196
2014-Feb	197.4
2014-Mar	196.8
2014-Apr	196.2
2014-May	196.7
2014-Jun	196.8
2014-Jul	197.8
2014-Aug	197.9
2014-Sep	198.3
2014-Oct	199.3
2014-Nov	199.9
2014-Dec	199.5
2015-Jan	200.8
2015-Feb	200.5
2015-Mar	199.5
2015-Apr	200.5
2015-May	200
2015-Jun	201.4
2015-Jul	201.6
2015-Aug	202.8
2015-Sep	202.8
2015-Oct	204.4
2015-Nov	203.9
2015-Dec	204.5
2016-Jan	204
2016-Feb	204.2
2016-Mar	203.3
2016-Apr	203
2016-May	203.5
2016-Jun	203.5
2016-Jul	203.5
2016-Aug	203.5

2016-Sep	204.8 ✓
2016-Oct	203.7 ✓

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2016-Nov	201.697	203.7	205.703
2016-Dec	200.867	203.7	206.533
2017-Jan	200.23	203.7	207.17
2017-Feb	199.694	203.7	207.706
2017-Mar	199.221	203.7	208.179
2017-Apr	198.793	203.7	208.607
2017-May	198.4	203.7	209
2017-Jun	198.034	203.7	209.366
2017-Jul	197.69	203.7	209.71
2017-Aug	197.365	203.7	210.035
2017-Sep	197.056	203.7	210.344
2017-Oct	196.761	203.7	210.639

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Data extracted on: November 16, 2016 (9:06:06 AM)

Producer Price Index-Commodities

Series Id: WPU144

Not Seasonally Adjusted

Group: Transportation equipment

Item: Railroad equipment

Base Date: 198200

 Download:  [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	200.8	200.5	199.5	200.5	200.0	201.4	201.6	202.8	202.8	204.4	203.9	204.5
2016	204.0	204.2	203.3	203.0	203.5	203.5	203.5(P)	203.5(P)	204.8(P)	203.7(P)		

P : Preliminary. All indexes are subject to revision four months after original publication.

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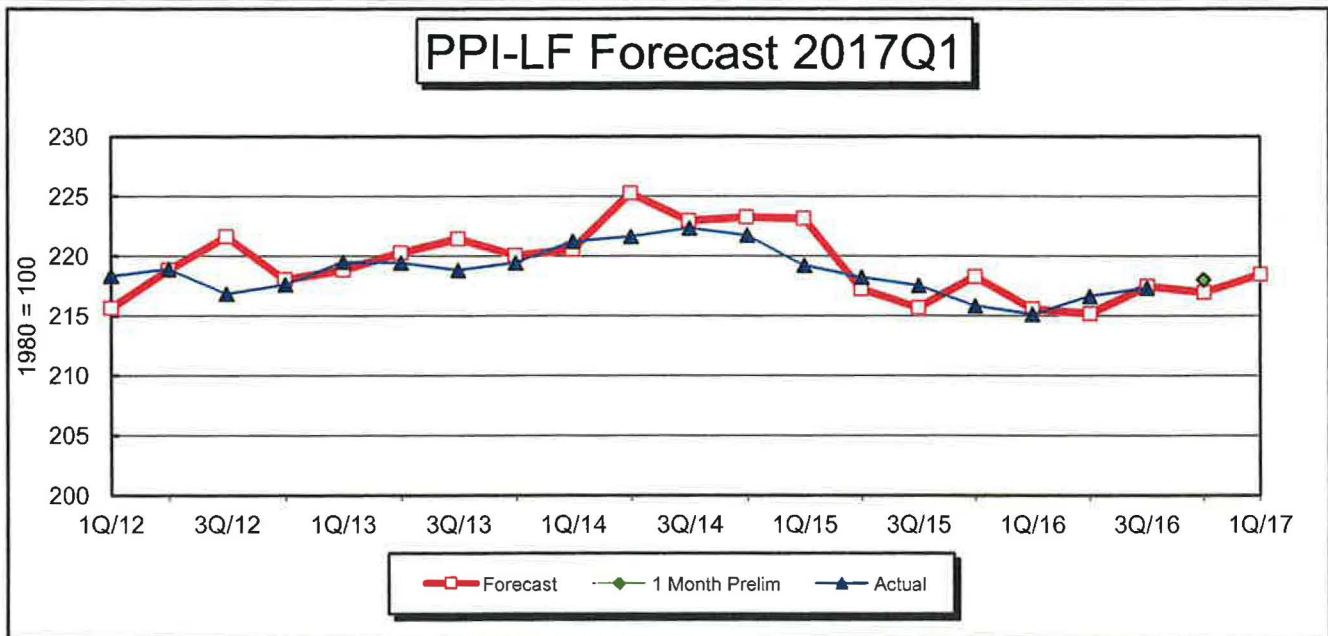
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PPI-LF Forecast (for Other and Lease Rentals Components)

	Forecast	Actual	1 Month Prelim
1Q/12	215.6	218.3	
2Q/12	218.8	218.9	
3Q/12	221.6	216.8	
4Q/12	218.0	217.6	
1Q/13	218.8	219.5	
2Q/13	220.2	219.4	
3Q/13	221.4	218.8	
4Q/13	220.0	219.4	
1Q/14	220.5	221.2	
2Q/14	225.2	221.6	
3Q/14	222.9	222.3	
4Q/14	223.2	221.7	
1Q/15	223.1	219.2	
2Q/15	217.2	218.2	
3Q/15	215.6	217.5	
4Q/15	218.2	215.8	
1Q/16	215.5	215.1	
2Q/16	215.1	216.6	
3Q/16	217.4	217.3	
4Q/16	216.9		218.0
1Q/17	218.4		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2017Q1						
Low	191.8	215.0	0.0%			
Midpoint	194.8	218.4	1.5%	0.2%	0.5%	0.7%
High	197.7	221.6	3.0%			

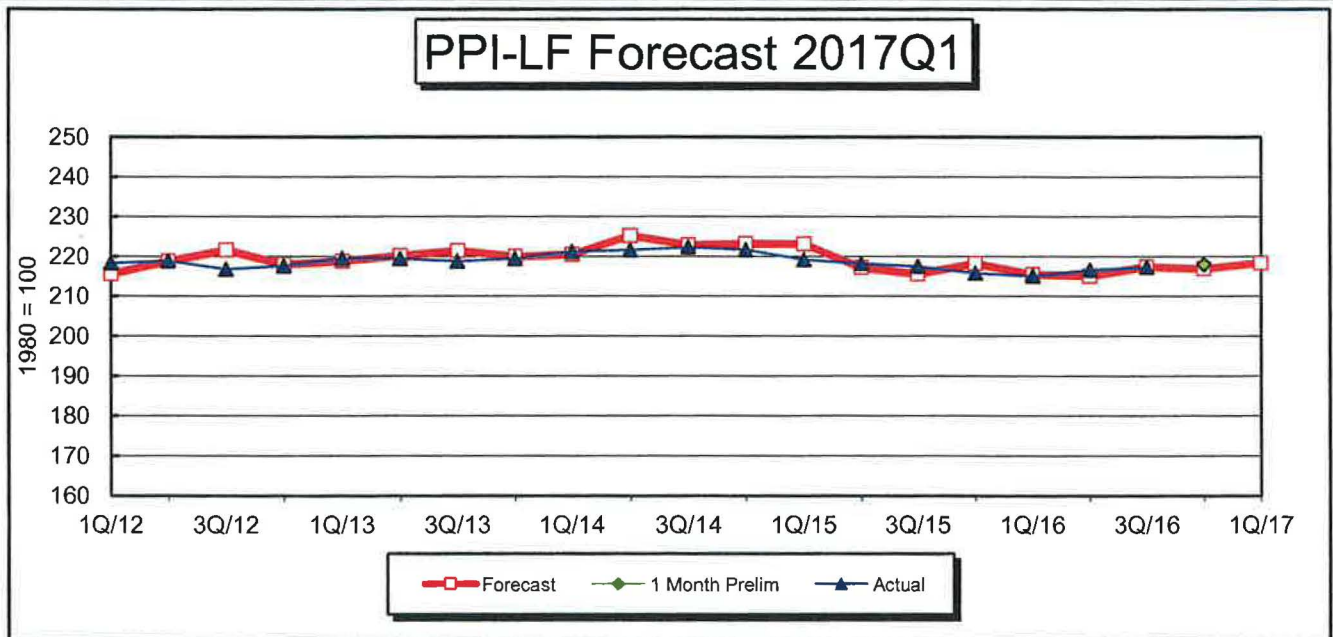


PPI-LF Forecast (for Other and Lease Rentals Components)

	Forecast	Actual	1 Month Prelim
1Q/12	215.6	218.3	
2Q/12	218.8	218.9	
3Q/12	221.6	216.8	
4Q/12	218.0	217.6	
1Q/13	218.8	219.5	
2Q/13	220.2	219.4	
3Q/13	221.4	218.8	
4Q/13	220.0	219.4	
1Q/14	220.5	221.2	
2Q/14	225.2	221.6	
3Q/14	222.9	222.3	
4Q/14	223.2	221.7	
1Q/15	223.1	219.2	
2Q/15	217.2	218.2	
3Q/15	215.6	217.5	
4Q/15	218.2	215.8	
1Q/16	215.5	215.1	
2Q/16	215.1	216.6	
3Q/16	217.4	217.3	
4Q/16	216.9		218.0
1Q/17	218.4		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2017Q1						
Low	191.8	215.0	0.0%			
Midpoint	194.8	218.4	1.5%	0.2%	0.5%	0.7%
High	197.7	221.6	3.0%			



Forecast Report for PPILF

Description: PPILF

Expert Analysis

Using rule-based logic I have narrowed down the choice to exponential smoothing or Box-Jenkins.
I will perform an out-of-sample test to select between these two approaches.

The cumulative MAD for Exponential smoothing was 2.06 and for Box-Jenkins was 1.03.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Box-Jenkins.

Model Details

Expert selection

Box-Jenkins

ARIMA(1, 0, 1)

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.9918	0.01036	95.76	1
b[1]	-0.5329	0.1	-5.328	1
_CONST	1.601			

Within-Sample Statistics

Sample size	72	No. parameters	2
Mean	194.42	Std. deviation	2.43
R-square	0.95	Adj. R-square	0.95
Durbin-Watson	1.61	Ljung-Box(18)	25.4 P=0.88
Forecast error	0.55	BIC	0.58
MAPE	0.21	SMAPE	0.21
RMSE	0.54	MAD	0.4
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2010-Nov	185.4
2010-Dec	186.3
2011-Jan	188.6
2011-Feb	190.2
2011-Mar	191.2
2011-Apr	193
2011-May	193.7
2011-Jun	193.9
2011-Jul	194.6
2011-Aug	194.5
2011-Sep	194.6
2011-Oct	193.9
2011-Nov	193.2
2011-Dec	192.7

2012-Jan	193.8
2012-Feb	194.7
2012-Mar	195.7
2012-Apr	195.8
2012-May	195.4
2012-Jun	193.7
2012-Jul	193.3
2012-Aug	193.3
2012-Sep	193.7
2012-Oct	193.9
2012-Nov	194
2012-Dec	194.2
2013-Jan	195.3
2013-Feb	196.1
2013-Mar	196.1
2013-Apr	195.9
2013-May	195.5
2013-Jun	195.4
2013-Jul	195.2
2013-Aug	195.3
2013-Sep	195.1
2013-Oct	195.4
2013-Nov	195.5
2013-Dec	195.9
2014-Jan	197.2
2014-Feb	197.6
2014-Mar	197.3
2014-Apr	197.7
2014-May	197.6
2014-Jun	197.7
2014-Jul	198.2
2014-Aug	198.4
2014-Sep	198.3
2014-Oct	198.2
2014-Nov	197.4
2014-Dec	196.7
2015-Jan	196
2015-Feb	195.4
2015-Mar	195
2015-Apr	194.8
2015-May	194.9
2015-Jun	195.2
2015-Jul	194.9
2015-Aug	193.9
2015-Sep	193.1
2015-Oct	192.9
2015-Nov	192.3
2015-Dec	191.9
2016-Jan	191.9
2016-Feb	191.8
2016-Mar	192.1
2016-Apr	192.8

2016-May	193.4
2016-Jun	193.7
2016-Jul	193.5
2016-Aug	193.8
2016-Sep	194
2016-Oct	194.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2016-Nov	193.707	194.775	195.842
2016-Dec	192.825	194.772	196.718
2017-Jan	192.24	194.769	197.297
2017-Feb	191.773	194.766	197.759
2017-Mar	191.375	194.763	198.151
2017-Apr	191.024	194.76	198.496
2017-May	190.708	194.757	198.806
2017-Jun	190.419	194.755	199.09
2017-Jul	190.152	194.752	199.351
2017-Aug	189.904	194.749	199.594
2017-Sep	189.671	194.746	199.821
2017-Oct	189.452	194.744	200.035

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Producer Price Index-Commodities

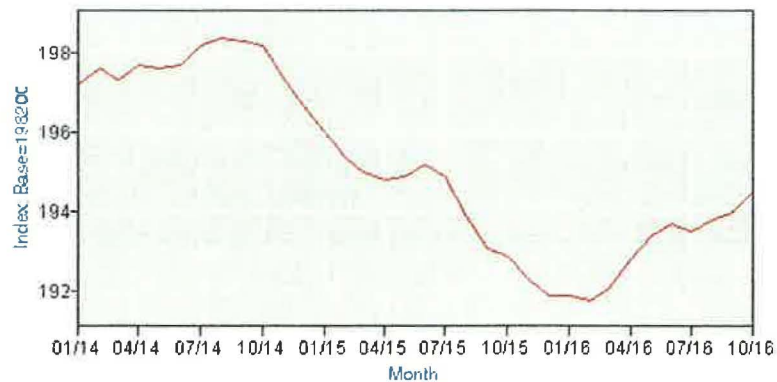
Series Id: WPU03T15M05

Not Seasonally Adjusted

Group: Industrial Commodities less fuels

Item: Industrial commodities less fuels

Base Date: 198200


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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	197.2	197.6	197.3	197.7	197.6	197.7	198.2	198.4	198.3	198.2	197.4	196.7
2015	196.0	195.4	195.0	194.8	194.9	195.2	194.9	193.9	193.1	192.9	192.3	191.9
2016	191.9	191.8	192.1	192.8	193.4	193.7	193.5(P)	193.8(P)	194.0(P)	194.5(P)		

P : Preliminary. All indexes are subject to revision four months after original publication.

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Forecast Error Calculation

	2014 Weight	Third Quarter 2016		Difference		Notes
		2016Q3 Forecast	2016Q3 Actual	Pt.	Pct.	
Labor	31.7%	415.2	415.2	0.0	0%	* actual=forecast
Fuel	20.9%	195.6	183.1	-12.5	-6%	from 1st month of quarter
M&S	5.2%	240.6	240.6	0.0	0%	* actual=forecast
Equip Rents	5.4%	216.8	217.6	0.8	0%	from Equipment Rents below
Depreciation	12.6%	226.5	225.6	-0.9	0%	PPI-RE
Interest	1.5%	57.5	57.5	0.0	0%	* actual=forecast
Other	22.7%	217.4	217.3	-0.1	0%	PPI-LF
Weighted Avg	100.0%					
1980 = 100		275.5	272.8			calculated
1980 = 100 (linked)		263.0	259.7			calculated
4Q12r = 100	2.976	88.4	87.3			calculated
4Q07 = 100	2.459	107.0	105.6			calculated
4Q02 = 100	1.921	136.9	135.2			calculated
4Q97 = 100	1.732	151.8	149.9			calculated
4Q92 = 100	1.569	167.6	165.5			calculated
Forecast Error		-1.1				calculated
						-0.011 = RCAF adj.
Prior Quarter						
1980 = 100		265.8	267.9 **			
1980 = 100 (linked)		253.7	255.0			
4Q12r = 100		85.2	85.7			calculated
4Q07 = 100		103.2	103.7			calculated
4Q02 = 100		132.1	132.7			calculated
4Q97 = 100		146.5	147.2			calculated
4Q92 = 100		161.7	162.5			calculated
Equipment Rents						
Car Hire	56.5%	198.0	199.0			from Equipment Rents/CHARM
Lease Rentals	43.5%	217.4	217.3			(equals PPI-LF from above)
Weighted Average		206.4	207.0			calculated
Linked		216.8	217.6			calculated
Prior Quarter						
Weighted Average		204.8	206.0 **			
Linked		215.1	216.5			
Sum of Weights	ok					** if fourth quarter, weighted avg for prior needs to use new
Sum of ER Wt.	ok					weights, linked is ok

Factors to change from
1982=100 to 1980 = 100

0.9040

0.8920

All-Inclusive Index (Actual)

	14 Wts	3Q/15 13 Wts	3Q/15 14 Wts	% Chg.	4Q/15 14 Wts	% Chg.	1Q/16 14 Wts	% Chg.	2Q/16 14 Wts	% Chg.	3Q/16 14 Wts	% Chg.
Labor	31.7%	404.3	404.3	0.0%	403.6	-0.2%	417.7	3.5%	416.4	-0.3%	415.2	-0.3%
Fuel	20.9%	220.1	220.1	0.0%	198.5	-9.8%	132.7	-33.1%	157.8	18.9%	183.1	16.0%
M&S	5.2%	258.9	258.9	0.0%	264.8	2.3%	246.9	-6.8%	246.9	0.0%	240.6	-2.6%
Equipment Rents	5.4%	214.2	214.2	0.0%	214.3	0.0%	215.2	0.4%	216.5	0.6%	217.6	0.5%
Depreciation	12.6%	223.8	223.8	0.0%	225.6	0.8%	225.9	0.1%	225.0	-0.4%	225.6	0.3%
Interest	1.5%	70.6	70.6	0.0%	57.5	-18.6%	57.5	0.0%	57.5	0.0%	57.5	0.0%
Other	22.7%	217.5	217.5	0.0%	215.8	-0.8%	215.1	-0.3%	216.6	0.7%	217.3	0.3%
	1.0000											
Weighted Avg.		276.9	277.8	0.3%	273.0	-1.7%	262.8	-3.7%	267.9	1.9%	272.8	1.8%
Linked		264.4			259.8	-1.7%	250.1	-3.7%	255.0	2.0%	259.7	1.8%
10/1/80	1.027	257.4			253.0	-1.7%	243.5	-3.8%	248.3	2.0%	252.9	1.9%
10/1/82	1.209	218.7			214.9	-1.7%	206.9	-3.7%	210.9	1.9%	214.8	1.8%
4Q/87	1.322	200.0			196.5	-1.8%	189.2	-3.7%	192.9	2.0%	196.4	1.8%
4Q/92	1.569	168.5			165.6	-1.7%	159.4	-3.7%	162.5	1.9%	165.5	1.8%
4Q/97	1.732	152.7			150.0	-1.8%	144.4	-3.7%	147.2	1.9%	149.9	1.8%
4Q/02	1.921	137.6			135.2	-1.7%	130.2	-3.7%	132.7	1.9%	135.2	1.9%
4Q/07	2.459	107.5			105.7	-1.7%	101.7	-3.8%	103.7	2.0%	105.6	1.8%
4Q/12	2.976	88.8			87.3	-1.7%	84.0	-3.8%	85.7	2.0%	87.3	1.9%

Equipment Rents

Car Hire	56.5%	193.3	193.3	0.0%	194.8	0.8%	196.8	1.0%	197.9	0.6%	199.0	0.6%
Lease Rentals	43.5%	217.5	217.5	0.0%	215.8	-0.8%	215.1	-0.3%	216.6	0.7%	217.3	0.3%
	1.0000											
ER Weighted Avg		204.7	203.8	-0.4%	203.9	0.0%	204.8	0.4%	206.0	0.6%	207.0	0.5%
ER Linked		214.2			214.3	0.0%	215.2	0.4%	216.5	0.6%	217.6	0.5%

Impact/Check of weight change	13 Wts	14 Wts
Labor	127.759	128.163
Fuel	48.642	46.001
Material & Supplies	12.686	13.463
Equipment Rents	11.567	11.567
Depreciation	26.856	28.199
Interest	1.341	1.059
Other	48.068	49.373
Weighted Avg.	276.919	277.824
ER Weighted Avg.	204.7224	203.827

As info only

RCAF Fuel (Actual All-Inclusive Index)

July 2016

Monthly Report

	July 2016 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	July 2016 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	July 2016 1980=100 Current Index (6)
U.S.	149.87	89.34	99.415	166.77	1.096	182.78

(4) = (1) / (2) x (3)

(6) = (4) x (5)

Final Actual All-inclusive Index Used for RCAF's Forecast Error Adjustment

	July 2016 1980=100 Current Index	Adjustment Factor	July 2016 1980=100 Linked Index
U.S.	182.78	1.00192	183.13 ←

January	=	Q1
April	=	Q2
July	=	Q3
October	=	Q4

RCAF (Actual)

		1980	Aug 3Q/16	Nov 4Q/16	Feb 1Q/17	May 2Q/17	Aug 3Q/17
RATE							
RR-OWNED TIME		31.00	64.00	--	--	--	--
RR-OWNED MILEAGE		4.69	6.70	--	--	--	--
PRIVATELY-OWNED CARS		25.47	51.76	--	--	--	--
AUTORACKS		47.00	83.37	--	--	--	--
INDEX							
RR-OWNED TIME		100.0	206.5	--	--	--	--
RR-OWNED MILEAGE		100.0	142.9	--	--	--	--
PRIVATELY-OWNED CARS		100.0	203.2	--	--	--	--
AUTORACKS		100.0	177.4	--	--	--	--
CAR HIRE INDEX (old wts)	2014	100.0	199.4	--	--	--	--
CAR HIRE INDEX (new wts)	2015	100.0	198.9	--	--	--	--
CAR HIRE INDEX (LINKED)		100.0	199.0	--	--	--	--

Note: Indexes are rounded, rates are full float.

RCAF (Actual)

		1980	Aug 3Q/15	Nov 4Q/15	Feb 1Q/16	May 2Q/16	Aug 3Q/16
RATE							
RR-OWNED TIME		31.00	63.00	63.00	64.00	64.00	64.00
RR-OWNED MILEAGE		4.69	6.70	6.70	6.70	6.70	6.70
PRIVATELY-OWNED CARS		25.47	50.18	50.58	51.10	51.42	51.76
AUTORACKS		47.00	74.33	78.76	78.89	81.26	83.37
INDEX							
RR-OWNED TIME		100.0	203.2	203.2	206.5	206.5	206.5
RR-OWNED MILEAGE		100.0	142.9	142.9	142.9	142.9	142.9
PRIVATELY-OWNED CARS		100.0	197.0	198.6	200.6	201.9	203.2
AUTORACKS		100.0	158.2	167.6	167.9	172.9	177.4
CAR HIRE INDEX (old wts)	2013	100.0	193.7	--	--	--	--
CAR HIRE INDEX (new wts)	2014	100.0	193.7	195.2	197.2	198.3	199.4
CAR HIRE INDEX (LINKED)		100.0	193.3	194.8	196.8	197.9	199.0

Note: Indexes are rounded, rates are full float.

Equipment Rents Data From CHARM

	2016 (first day of month)						2017 (first day of month)							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Railroad Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	8,221	8,230	8,223											
Rate (in cents)														
Superstructures #3 - Auto Rack	59.0	59.0	59.0											
All other #1 - Time	64.0	64.0	64.0											
All other #2 - Mileage	6.7	6.7	6.7											
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	55,135	55,284	55,495											
Covered Hoppers	384,653	386,864	388,061											
Tank Cars	401,942	402,781	403,243											
Others	289,832	289,264	289,515											
Rate (in cents)														
Superstructures #1 - Time	83.0	83.0	83.0											
Superstructures #2 - Mileage	1.6	1.6	1.6											
Superstructures #3 - Auto Rack	87.0	87.0	88.0											
Covered Hoppers #2 - Mileage	45.2	45.3	45.3											
Tank Cars #2 - Mileage	80.4	80.6	89.7											
Others #1 -Time	82.0	82.0	83.0											
Others #2 - Mileage	7.8	7.9	8.0											
AVERAGE RATES														
Private Superstructures	21.11	21.11	21.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Others	26.00	26.10	26.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Total	51.61	51.76	55.07	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	83.37	83.37	84.26	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

WEIGHTS	Old Wts	New Wts
	2014	2015
For RCAF & RCR		
RR-owned Time	0.156	0.124
RR-owned Mileage	0.060	0.062
Privately-owned Cars	0.758	0.776
Autoracks	0.026	0.038
----- Check sum	1.000	1.000

Weights for Equipment Rents (not used in Car Hire calculation)		
	2014	2015
Car Hire - U.S.	0.565	0.582
Lease Rentals - U.S.	0.435	0.418
----- Check sum	1.000	1.000

Note: The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 08/2016

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	8,230	119	0.079	59
Railroad	Number of Zero-Rated Vehicular Flats	140	.	.	.
Railroad	All Other Cars	445,452	64	0.067	.
Railroad	Number of Zero-Rated Other Cars	19,143	.	.	.
Railroad	Total Railroad Equipment	472,965	.	.	.
		.	.	.	.
Private	Vehicular Flats	55,284	83	0.016	87
Private	Number of Zero-Rated Vehicular Flats	86	.	.	.
Private	Covered Hoppers	386,864	0	0.453	.
Private	Number of Zero-Rated Covered Hoppers	11,672	.	.	.
Private	Tanks	402,781	0	0.806	.
Private	Number of Zero-Rated Tanks	8,577	.	.	.
Private	All Other Cars	289,264	82	0.079	.
Private	Number of Zero-Rated Other Cars	24,605	.	.	.
Private	Total Private Equipment	1,179,133	.	.	.

Notes
This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).
All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.
Equipment can be zero rated due to owners supplying incorrect or insufficient information to the car accounting process.
Zero-rated equipment includes those with Umler Rate_Indicator of 6 and 0 (zero).
Zero-rated equipment is excluded from the averages shown in this report.
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

RCAF - Depreciation

Series ID : wpu144

Not Seasonally Adjusted

Group : Transportation equipment

Item : Railroad equipment

		Forecast Year 2017			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	17Q1	17Q2	17Q3	17Q4
For Actual	→	16Q3	16Q4	17Q1	17Q2
January	2016	204.0	204.0	204.0	204.0
February	2016	204.2	204.2	204.2	204.2
March	2016	203.3	203.3	203.3	203.3
April	2016	203.0	203.0	203.0	203.0
May	2016	203.5	203.5	203.5	203.5
June	2016	203.5	203.5	203.5	203.5
July	2016	203.5			
August	2016	203.5			
September	2016	204.8			
October	2016	203.7			
November	2016				
December	2016				
January	2017				
February	2017				
March	2017				
April	2017				
May	2017				
June	2017				
July	2017				
Actual Qtr.		203.9	NA	NA	NA

1980=100

Actual Qtr.

First Mo. next qtr.

225.6	NA	NA	NA
225.3	NA	NA	NA

0.904 =1980

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Producer Price Index-Commodities

Series Id: WPU144
 Not Seasonally Adjusted
 Group: Transportation equipment
 Item: Railroad equipment
 Base Date: 198200

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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	200.8	200.5	199.5	200.5	200.0	201.4	201.6	202.8	202.8	204.4	203.9	204.5
2016	204.0	204.2	203.3	203.0	203.5	203.5	203.5(P)	203.5(P)	204.8(P)	203.7(P)		

P : Preliminary. All indexes are subject to revision four months after original publication.

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RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2017			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	17Q1	17Q2	17Q3	17Q4
For Actual	→	16Q3	16Q4	17Q1	17Q2
January	2016	191.9			
February	2016	191.8			
March	2016	192.1			
April	2016	192.8			
May	2016	193.4			
June	2016	193.7			
July	2016	193.5			
August	2016	193.8			
September	2016	194.0			
October	2016	194.5			
November	2016				
December	2016				
January	2017				
February	2017				
March	2017				
April	2017				
May	2017				
June	2017				
July	2017				
Actual Qtr.		193.8	NA	NA	NA
1980=100					
Actual Qtr.		217.3	NA	NA	NA
First Mo. next qtr.		218.0	NA	NA	NA

0.892 =1980

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Producer Price Index-Commodities

Series Id: WPU03T15M05

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Group: Industrial Commodities less fuels

Item: Industrial commodities less fuels

Base Date: 198200

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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	196.0	195.4	195.0	194.8	194.9	195.2	194.9	193.9	193.1	192.9	192.3	191.9
2016	191.9	191.8	192.1	192.8	193.4	193.7	193.5(P)	193.8(P)	194.0(P)	194.5(P)		

P : Preliminary. All indexes are subject to revision four months after original publication.

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