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Senior Vice President - Policy & Economics

June 3, 2022

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

This submission is the AAR forecast of the third quarter 2022 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2022-3) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the third quarter 2022 results and compares to the previous quarter. Both quarters are shown on a 4Q\2017=100 base.

	<u>2022Q2</u>	<u>2022Q3</u>	<u>% Change</u>
All-Inclusive Index	118.6	124.3	4.8
Preliminary RCAF	1.186	1.243	4.8
Forecast Error Adjustment	0.011	0.007	
RCAF (Unadjusted)	1.197	1.250	4.4
Productivity Adjustment Factor	2.4285	2.4436	
RCAF (Adjusted)	0.493	0.512	3.9
PAF-5	2.5636	2.5687	
RCAF-5	0.467	0.487	4.3

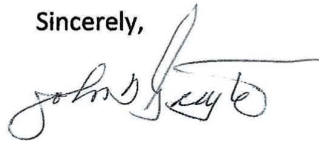
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June 3, 2022

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 provided to Mr. Ramirez's Data Collection and Auditing Team. All work papers are available for STB inspection. Questions should be directed to me or Rapik Saat (202 639-2329) of this office.

Sincerely,

A handwritten signature in black ink, appearing to read "John T. Gray", with a stylized flourish extending from the end of the name.

John T. Gray

Attachments

**Third Quarter 2022
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2022-3)

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

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

June 3, 2022

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Introduction

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

This quarter's projection of railroad costs is for the third quarter 2022.

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 expense 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 2020 (current) and 2019 (previous) weights are shown below. Weights calculated from 2019 data were used for the fourth quarter of 2020 through the third quarter of 2021. Beginning with the fourth quarter of 2021, weights calculated using 2020 data are used. The component with the biggest change in weight was Fuel, which decreased by 4.5 percentage points. Labor and Materials & Supplies fell by 0.2 and 0.4 percentage points, respectively. Equipment Rents was unchanged. The weight for Depreciation increased 2.6 percentage points, and Other increased by 2.3 percentage points.

Weights for RCAF's All-Inclusive Index		
	2020	2019
Labor	32.4 %	32.6 %
Fuel	9.7	14.2
Materials & Supplies	4.5	4.9
Equipment Rents	5.2	5.2
Depreciation	18.5	15.9
Interest	2.7	2.5
Other	27.0	24.7
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

Third Quarter 2022

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.

	2020 Weights	Forecast		Percent Change
		Previous 2022Q2	Current 2022Q3	
1. Labor	32.4%	470.4	472.4	0.4 %
2. Fuel	9.7%	345.3	459.6	33.1
3. M&S	4.5%	292.0	305.0	4.5
4. Equipment Rents	5.2%	251.1	256.0	2.0
5. Depreciation	18.5%	232.9	233.2	0.1
6. Interest	2.7%	51.1	51.1	0.0
7. Other	27.0%	290.1	302.4	4.2
8. Weighted Average				
a. 1980 = 100		334.9	350.8	
b. 1980 = 100 (linked)		313.8	328.7 ¹	
c. 4Q17 = 100		118.6	124.3 ²	4.8

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index

$$= (350.8 / 334.9) \times 313.8$$

$$= 328.7$$

² To calculate the 4Q17 = 100 index:

$$\text{Index4Q17} = (\text{Current Linked Index} / 4\text{Q17 Basing Factor}) * 100$$

$$= 328.7 \text{ divided by } 264.5 \text{ times } 100$$

$$= 124.3$$

Indexes based on other periods:

$$4\text{Q12 based index} = 328.7 / 297.6 \times 100 = 110.5$$

$$4\text{Q07 based index} = 328.7 / 245.9 \times 100 = 133.7$$

$$4\text{Q02 based index} = 328.7 / 192.1 \times 100 = 171.1$$

$$4\text{Q97 based index} = 328.7 / 173.2 \times 100 = 189.8$$

$$4\text{Q92 based index} = 328.7 / 156.9 \times 100 = 209.5$$

Forecast vs. Actual All-Inclusive Index

First Quarter 2022

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the first quarter actual index of 116.7 is 0.7 index points above the forecast value of 116.0. Therefore, the forecast error adjustment for third quarter 2022 is 0.7 index points.

	2020	First Quarter 2022		Amt
	Weights	Forecast	Actual	Difference
1. Labor	32.4%	469.5	469.5	
2. Fuel	9.7%	303.5	313.3	
3. M&S	4.5%	298.2	298.2	
4. Equipment Rents ¹	5.2%	249.9	247.7	
5. Depreciation	18.5%	229.0	233.1	
6. Interest	2.7%	51.1	51.1	
7. Other	27.0%	280.6	282.2	
8. Weighted Average				
a. 1980 = 100		327.5	329.5	
b. 1980 = 100 (linked)		306.9	308.8 ²	
c. 4Q17 = 100 ³		116.0	116.7	0.7

Forecast error  **0.7 index points**

¹	2020	First Quarter 2022	
	Weights	Forecast	Actual
Car-Hire	64.7%	209.9	205.8
Lease Rentals	35.3%	280.6	282.2
Weighted Average		234.9	232.8
Weighted Average (linked)		249.9	247.7

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

$$308.8 = 329.5 / 321.1 \times 300.9$$

³ The 4Q17 based indexes are 1980 based indexes divided by the 4Q17 basing factor (264.5/100).

Other basing factors are: 4Q12 = 297.6; 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; and 4Q92 = 156.9.

Productivity

On February 3, 2022, the Surface Transportation Board served a decision which proposed to adopt 2.5 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2020 and removed the year 2015. The components of this average annual value are shown on the following table in ratio format – therefore, 1.025 is the same as an increase of 2.5 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			
2016 - 2020			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
2016	0.955	0.941	1.015
2017	1.045	0.992	1.053
2018	1.032	1.004	1.028
2019	0.968	0.961	1.007
2020	0.923	0.904	1.021
Average			1.025
Previous Average (2015-2019)			1.008

Calculation of PAF and PAF-5				
For 2016-2020, use fourth root of avg. productivity change = 1.0062				
For 2015-2019, use fourth root of avg. productivity change = 1.0020				
Quarter	Year	PAF	PAF-5	
Q1	2022	2.4135	2.5585	2015-2019
Q2	2022	2.4285	2.5636	
Q3	2022	2.4436	2.5687	2016-2020
Q4	2022	2.4588	2.5738	
Q1	2023	2.4740	2.5898	

Rail Cost Adjustment Factor

Third Quarter 2022

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 the 2018Q1 index, the All-Inclusive Index was rebased to a 2017Q4=100 basis as required in the applicable statute.

	Previous 2022Q2	Current 2022Q3	Percent Change
All-Inclusive Index ¹	118.6	124.3	4.8
Preliminary RCAF ²	1.186	1.243	4.8
Forecast Error Adjustment ³	0.011	0.007	
RCAF (Unadjusted) ⁴	1.197	1.250	4.4
Productivity Adjustment Factor ⁵	2.4285	2.4436	
RCAF (Adjusted) ⁶	0.493	0.512	3.9
PAF-5 ⁷	2.5636	2.5687	
RCAF-5 ⁸	0.467	0.487	4.3

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

Third Quarter 2022

The third quarter 2022 Labor Index is 0.4 percent higher than the previous quarter.

Wage Rate Index

The Wage Rate Index portion of the Labor Index increased by 0.3%.

Wage Increases: There are no national or independent wage increases currently scheduled for the third quarter.

Lump Sums: The third quarter lump sum rate fell 0.1 cents. One amount was fully amortized and removed, and it was replaced by two new amounts that were slightly smaller.

Back Pay: The back pay rate increased 0.2 cents. There were two amounts previously that were very small and caused the rate to round to zero. There is now a third amount that is still small, but the three together have raised the rate from 0.000 to 0.002.

Other: In wages, "Other" contains the amortization of incentive compensation payments (similar to lump sums) that one railroad makes each year to its dispatchers, yardmasters, and locomotive engineers. The third quarter rate is 12.5 cents higher than the prior quarter.

Labor

Third Quarter 2022

Supplements Index

The Supplements Index increased 0.6 percent this quarter.

Health & Welfare: The Health & Welfare rate is unchanged this quarter.

Railroad Retirement: The Railroad Retirement rate increased 2.0 cents because of slightly higher taxable wages.

Unemployment Insurance: The Unemployment Insurance rate increased 0.1 cents due to slightly higher taxable wages.

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 third quarter rate is 9.8 cents higher than last quarter.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.3 percent increase in the Wage Rate Index and the 0.6 percent increase in the Supplements Index combined to cause the Labor Index to be 0.4 percent higher than the previous quarter. The linked third quarter 2022 Labor index is 472.4, which is 5.5 percent higher than one year ago.

Labor

Third Quarter 2022

Table A-1 Labor Index

	2022Q2	2022Q3	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$44.665	\$44.665	0.0%	\$0.000
Adjustments:				
Lump Sum	0.261	0.260	-0.4%	-\$0.001
Back Pay	0.000	0.002	#DIV/0!	\$0.002
Other	0.119	0.244	105.0%	\$0.125
Total Wages	<u>45.045</u>	<u>45.171</u>	0.3%	\$0.126
Health & Welfare Benefits	9.623	9.623	0.0%	\$0.000
RR Retirement & Medicare	9.404	9.424	0.2%	\$0.020
Unemployment Insurance	1.200	1.201	0.1%	\$0.001
Other	0.181	0.279	54.1%	\$0.098
Total Supplements	<u>\$20.408</u>	<u>\$20.527</u>	0.6%	\$0.119
Total Labor (as info only)	\$65.453	\$65.698		
Wage Index¹	385.5	386.6	0.3%	
Supplements Index²	754.2	758.6	0.6%	
Total labor Index, 2020 Weights ³	493.5	495.6		
Labor Index (linked)⁴	470.4	472.4	0.4%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2020 weights: wages, supplements 70.7% 29.3%

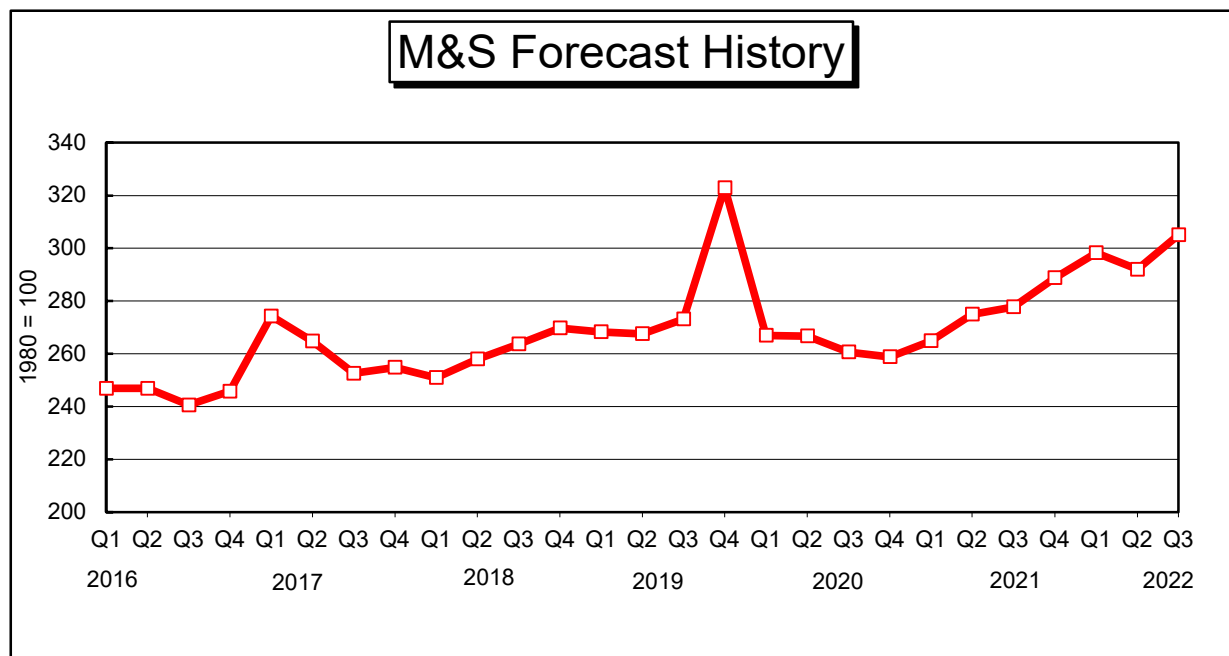
⁴ 2022Q3 linked Index = 2022Q2 linked x (2022Q3 / 2022Q2)
 = 470.4 x 495.6 / 493.5

Materials & Supplies

Third Quarter 2022

The third quarter 2022 Materials & Supplies Index increased 4.5 percent from the previous quarter. Prices increased for the Miscellaneous Products category.

2022Q3	Materials & Supplies Index =	305.0
2022Q2	Materials & Supplies Index =	292.0
Difference		13.0 basis points or 4.5 %



Equipment Rents

Third Quarter 2022

The Equipment Rents Index consists of two components – car hire and lease rentals. The methodologies 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.

Lease Rentals

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

Equipment Rents Index Calculation

The table below calculates the Equipment Rents Index. The third quarter Car Hire portion of the Index increased 0.2 percent because of higher rates for auto racks. A 4.2 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 rise 1.9 percent.

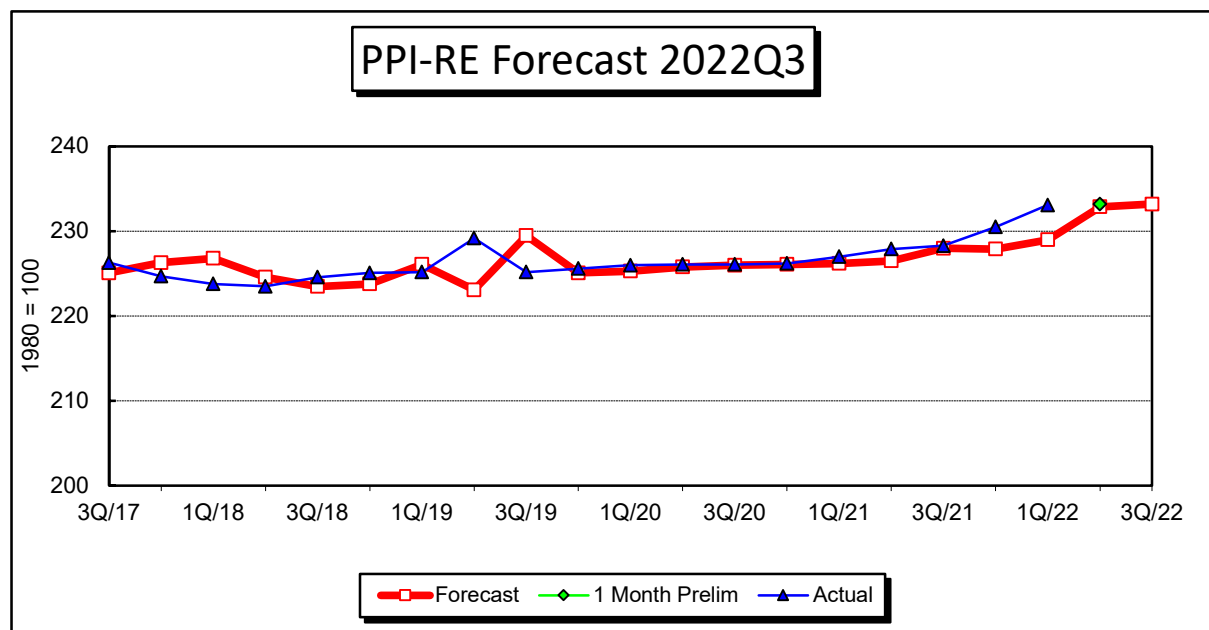
	2020			Percent
	Weight	2022Q2	2022Q3	Change
Car Hire	64.7%	206.5	206.9	0.2 %
Lease Rentals	35.3%	290.1	302.4	4.2
Weighted Average		236.0	240.6	1.9
Weighted Average (Linked)		251.1	256.0	2.0

Depreciation

Third Quarter 2022

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 is 0.1% higher than the previous quarter's forecast.

Forecast of Depreciation Index (1982=100)	210.8
Forecast of Depreciation Index (1980=100)	233.2
Change from previous quarter forecast	0.1% = 0.13%
Change from actual first month of previous quarter	0.0% = 0.00%
Change from same quarter of prior year (actual)	2.1%



Depreciation

Third Quarter 2022

PPI RAILROAD EQUIPMENT

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 2.85 and for Box-Jenkins was 2.46.

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	204.28	Std. deviation	2.28
R-square	0.84	Adj. R-square	0.84
Durbin-Watson	2.24	Ljung-Box(18)	18.2 P=0.56
Forecast error	0.91	BIC	0.91
MAPE	0.24	SMAPE	0.24
RMSE	0.91	MAD	0.48
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2021-Nov	208.7
2021-Dec	209.4
2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2022-May	209.005	210.800	212.595
2022-Jun	208.261	210.800	213.339
2022-Jul	207.69	210.800	213.91
2022-Aug	207.209	210.800	214.391
2022-Sep	206.786	210.800	214.814
QTR AVG	207.228	210.800	214.372

Interest

Third Quarter 2022

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 2020 data, and was updated in the Q4 filing submitted on September 3, 2021. The Interest Index based on 2020 decreased from 55.7 in 2019 to 51.1 in 2020, and is the lowest in recent history.

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 listed below account for the line number changes effective beginning with the 2016 annual report.

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	
29	Current Liabilities, Loans and Notes Payable
38	Equipment Obligations and Other Long Term Debt Due Within One Year
40	Non-Current Liabilities: Funded Debt Unmatured
41	Non-Current Liabilities: Equipment Obligations
42	Non-Current Liabilities: Capitalized Lease Obligations
43	Non-Current Liabilities: Debt in Default
44	Non-Current Liabilities: Accounts Payable: Affiliated Companies
45	Non-Current Liabilities: Unamortized Debt Premium

2020	Interest Rate	4.01%
1980	Interest Rate	7.85%
2022Q3	Interest Index	51.1
2022Q2	Interest Index	51.1
	Percent Change	0.0%

Other Expenses

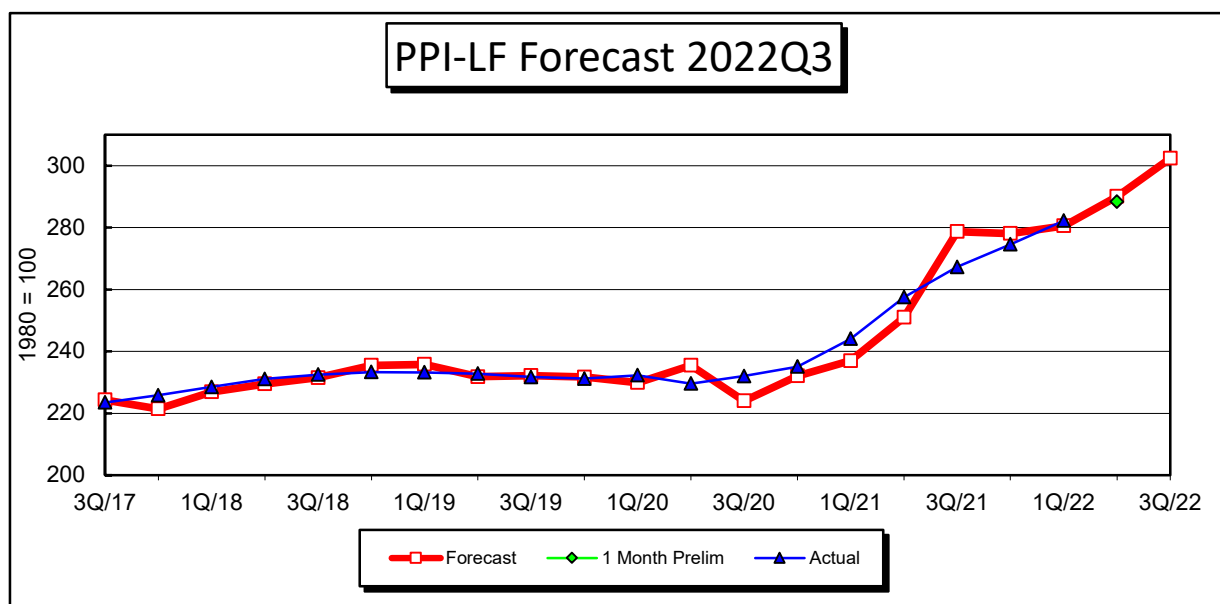
Third Quarter 2022

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

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent month available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The figure forecast by the model is 4.2 percent higher than the prior quarter forecast.

Forecast of Other Expense Index (1982=100)	269.7
Forecast of Other Expense Index (1980=100)	302.4

Change from previous quarter forecast	4.2%
Change from actual first month of previous quarter	4.9%
Change from same quarter of prior year (actual)	13.1%



Other Expenses

Third Quarter 2022

PPI INDUSTRIAL COMMODITIES LESS FUEL AND RELATED PRODUCTS AND POWER

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 5.27 and for Box-Jenkins was 9.01.
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 Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality
LM(0.935, 0.991, 0.995)

Confidence limits proportional to indexes and level

Component	Smoothing Wgt		Final Value
Level	0.9349		257.4
Trend	0.9911		3.089
Seasonal	0.9953		
Seasonal Indexes			
Jan - Mar	1.002	0.9987	0.9995
Apr - Jun	0.9992	0.9996	1
Jul - Sep	0.9999	1	0.9996
Oct - Dec	1.001	1.001	0.9999

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	211.18	Std. deviation	16.22
R-square	1	Adj. R-square	1
Durbin-Watson	1.91	Ljung-Box(18)	17.2 P=0.49
Forecast error	0.66	BIC	0.7
MAPE	0.22	SMAPE	0.22
RMSE	0.64	MAD	0.47
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2021-Nov	245.5
2021-Dec	246.5
2022-Jan	249.7
2022-Feb	251.2
2022-Mar	254.2
2022-Apr	257.2

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2022-May	258.779	260.407	262.036
2022-Jun	260.157	263.598	267.039
2022-Jul	262.051	266.638	271.224
2022-Aug	264.343	269.841	275.339
2022-Sep	266.471	272.749	279.028
QTR AVG	264.288	269.743	275.197

Railroad and Union Abbreviations

Third Quarter 2022

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.)
CMQ	Central Maine & Quebec (Part of Canadian Pacific's U.S. operations, included beginning 2021Q4.)
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.)

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	International Association of Sheet Metal, Air, Rail, and Transportation Workers - Transportation Division*
SMART-MD	International Association of Sheet Metal, Air, Rail, and Transportation Workers - Mechanical Division**
TCU	Transportation Communication International Union
TCU-Carmen	Brotherhood of Railway Carmen Division of the Transportation Communications International Union

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)
SMW	Sheet Metal Workers' International Association (see SMART-MD)
UTU	United Transportation Union (merged into SMART)
UTU-YMD	United Transportation Union Yardmaster Department (see SMART-TD)

* Represents employees formerly represented by the UTU (conductors and brakemen) and also has a separate yardmasters department.

** Represents employees formerly represented by the SMW (steel workers)

AAR Workpapers Sent to STB for 2022 Q3 RCAF

June 3, 2022

- 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 . 2022/Q3 RCAF Lump Sum Amortization summary, public version (1 page)
- 7 . 2022/Q3 RCAF Back Pay Amortization summary, public version (1 page)
- 8 . Health & Welfare worksheet (1 page)
- 9 . Railroad Retirement spreadsheet (5 pages)
- 10 . Unemployment Insurance Tax worksheet (1 page)
- 11 . 2-page SAS run for 2022 Q3 Unemployment Insurance Tax
- 12 . 2 pages from EIA including spot prices for various distillates
- 13 . Summary of Materials & Supplies - "U.S. Summary by Composition Category" (1 page)
- 14 . RCAF Car Hire Forecast Spreadsheet for Equipment Rents (2 pages) plus source data page
- 15 . 6 pages of PPI-RE for Depreciation including graph page, input/output, and BLS source data
- 16 . 6 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
- 17 . Forecast Error calc. and workpapers (10 pages: calc, fuel, 3 car hire, 2 deprec, 2 other, actual)

RCAF All-Inclusive Index's Labor Index Based on 2020 Benchmarks

	20 Wts.	3Q/21	3Q/21 Rebenched As Info Only	% Chg	4Q/21	% Chg	1Q/22	% Chg	2Q/22	% Chg	3Q/22	% Chg
Straight Time		\$37.189	\$37.452	0.7%	\$37.452	0.7%	\$37.452	0.0%	\$37.452	0.0%	\$37.452	0.0%
PFTNW		\$7.288	\$7.213	-1.0%	\$7.213	-1.0%	\$7.213	0.0%	\$7.213	0.0%	\$7.213	0.0%
Total		\$44.477	\$44.665	0.4%	\$44.665	0.4%	\$44.665	0.0%	\$44.665	0.0%	\$44.665	0.0%
Adjustments												
Lump Sum		\$0.125	\$0.146		\$0.142		\$0.139		\$0.261		\$0.260	
Back Pay		\$0.017	\$0.019		\$0.019		\$0.000		\$0.000		\$0.002	
Other		\$0.102	\$0.118		\$0.118		\$0.118		\$0.119		\$0.244	
Total Wages		\$44.721	\$44.948	0.5%	\$44.944	0.5%	\$44.922	0.0%	\$45.045	0.3%	\$45.171	0.3%
Pre-Tax Reduction		(\$1.395)	(\$1.440)		(\$1.440)		(\$1.440)		(\$1.439)		(\$1.439)	
Taxable Wages		\$43.326	\$43.508		\$43.504		\$43.482		\$43.606		\$43.732	
H & W		\$8.522	\$8.876	4.2%	\$8.876	4.2%	\$9.623	8.4%	\$9.623	0.0%	\$9.623	0.0%
RR Ret & Medicare		\$9.012	\$9.316	3.4%	\$9.315	3.4%	\$9.385	0.8%	\$9.404	0.2%	\$9.424	0.2%
Unemp. Insurance		\$0.569	\$0.593	4.2%	\$0.593	4.2%	\$1.200	102.4%	\$1.200	0.0%	\$1.201	0.1%
Other		\$0.311	\$0.362	16.4%	\$0.183	-41.2%	\$0.190	3.8%	\$0.181	-4.7%	\$0.279	54.1%
Total		\$18.414	\$19.147	4.0%	\$18.967	3.0%	\$20.398	7.5%	\$20.408	0.0%	\$20.527	0.6%
Adjustments												
Total Supplements		\$18.414	\$19.147	4.0%	\$18.967	3.0%	\$20.398	7.5%	\$20.408	0.0%	\$20.527	0.6%
Total Labor		\$63.135	\$64.095	1.5%	\$63.911	1.2%	\$65.320	2.2%	\$65.453	0.2%	\$65.698	0.4%
Wage Rate Index	0.7070	382.7	384.7	0.5%	384.6	0.5%	384.4	-0.1%	385.5	0.3%	386.6	0.3%
Supplements Index	0.2930	680.5	707.6	4.0%	700.9	3.0%	753.8	7.5%	754.2	0.1%	758.6	0.6%
Total Labor Index '19 Wts.		468.8										
Total Labor Index '20 Wts.		470.0	479.3	2.0%	477.3	1.6%	492.6	3.2%	493.5	0.2%	495.6	0.4%
Labor Index (Linked)		447.9			454.9	1.6%	469.5	3.2%	470.4	0.2%	472.4	0.4%

All Inclusive Index and RCAF using 2020 Benchmarks and Weights

	20 Wts.	3Q/21	20 Wts. 3Q/21	% Chg	4Q/21	% Chg	1Q/22	% Chg	2Q/22	% Chg	3Q/22	% Chg
Labor	0.324	447.90	447.9	0.0%	454.9	1.6%	469.5	3.2%	470.4	0.2%	472.4	0.4%
Fuel	0.097	254.50	254.5	0.0%	268.8	5.6%	303.5	12.9%	345.3	13.8%	459.6	33.1%
M&S	0.045	277.80	277.8	0.0%	288.8	4.0%	298.2	3.3%	292.0	-2.1%	305.0	4.5%
Equip. Rents	0.052	250.00	250.0	0.0%	248.4	-0.6%	249.9	0.6%	251.1	0.5%	256.0	2.0%
Depreciation	0.185	228.00	228.0	0.0%	227.9	0.0%	229.0	0.5%	232.9	1.7%	233.2	0.1%
Interest	0.027	55.70	55.7	0.0%	51.1	-8.3%	51.1	0.0%	51.1	0.0%	51.1	0.0%
Other	0.270	278.70	278.7	0.0%	278.1	-0.2%	280.6	0.9%	290.1	3.4%	302.4	4.2%
Weighted Avg.	1.000	315.30	314.2	-0.3%	318.0	1.2%	327.5	3.0%	334.9	2.3%	350.8	4.7%
Linked		294.40			298.0	1.2%	306.9	3.0%	313.8	2.2%	328.7	4.7%
Basing Factor												
10/1/80 basis	102.7	286.7			290.2	1.2%	298.8	3.0%	305.6	2.3%	320.1	4.7%
10/1/82	120.9	243.5			246.5	1.2%	253.8	3.0%	259.6	2.3%	271.9	4.7%
4Q/87	132.2	222.7			225.4	1.2%	232.1	3.0%	237.4	2.3%	248.6	4.7%
4Q/92	156.9	187.6			189.9	1.2%	195.6	3.0%	200.0	2.2%	209.5	4.8%
4Q/97	173.2	170.0			172.1	1.2%	177.2	3.0%	181.2	2.3%	189.8	4.7%
4Q/02	192.1	153.3			155.1	1.2%	159.8	3.0%	163.4	2.3%	171.1	4.7%
4Q/07	245.9	119.7			121.2	1.3%	124.8	3.0%	127.6	2.2%	133.7	4.8%
4Q/12	297.6	98.9			100.1	1.2%	103.1	3.0%	105.4	2.2%	110.5	4.8%
4Q/17 basis	264.5	111.3			112.7	1.3%	116.0	2.9%	118.6	2.2%	124.3	4.8%
Car Hire	0.647	211.20	211.2	0.0%	209.1	-1.0%	209.9	0.4%	206.5	-1.6%	206.9	0.2%
Lease Rents	0.353	278.70	278.7	0.0%	278.1	-0.2%	280.6	0.9%	290.1	3.4%	302.4	4.2%
Weighted Avg Eq Rents		237.30	235.0	-1.0%	233.5	-0.6%	234.9	0.6%	236.0	0.5%	240.6	1.9%
Linked Equipment Rents		250.00			248.4	-0.6%	249.9	0.6%	251.1	0.5%	256.0	2.0%
Preliminary RCAF		1.113			1.127	1.26%	1.160	2.9%	1.186	2.2%	1.243	4.8%
Forecast Error Adj.		0.021			0.012		(0.006)		0.011		0.007	
RCAF Unadjusted		1.134			1.139	0.44%	1.154	1.3%	1.197	3.7%	1.250	4.4%
PAF		2.4039			2.4087	0.20%	2.4135	0.20%	2.4285	0.62%	2.4436	0.6%
RCAF Adjusted		0.472			0.473	0.21%	0.478	1.1%	0.493	3.1%	0.512	3.9%
PAF-5		2.5470			2.5534	0.25%	2.5585	0.20%	2.5636	0.20%	2.5687	0.20%
RCAF-5		0.445			0.446	0.22%	0.451	1.1%	0.467	3.5%	0.487	4.3%

Hourly Rate for 2022 Q3

Straight Time and Time Paid For But Not Worked

2022Q3 Straight Time Hourly Rate (from national spreadsheet)	\$37.450
No change	

Adjustments to 2020 base:

Added 2021 Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	A few GWIs	0.001

Added 2021 Q2

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Added 2021 Q3

Miscellaneous Independents	Nothing	0.000
Soo Corp.	A few GWIs	0.001

Added 2021 Q4

Miscellaneous Independents	Nothing	0.000
Soo Corp.	A few GWIs but rounds to zero	0.000

Added 2022 Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	A few GWIs but rounds to zero	0.000

Added 2022 Q2

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Added 2022 Q3

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Adjusted STHR Total	\$37.452
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Pay For Time Not Worked

PFTNW (from national spreadsheet)		\$7.213
Ratio Adj STHR to Nat STHR	37.452 / 37.450 =	1.00005

Adjusted Pay For Time Not Worked	\$7.213
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Adjusted STHR + Adjusted Pay For Time Not Worked	\$44.665
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Notes:

1. Miscellaneous Independent is mostly trainmen, yardmasters, and non-union plus CN's IAM employees.
Includes 20 union groups with employees and 5 non-union groups with employees.
2. Soo Corp. includes SOO, D&H, DM&E, and CMQ.

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 3Q/2022

U.S. ST Hours = 233,382,710
 Wage Statistics are for 2020

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,566	(\$228.89)	(\$4,301,300.88)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	18,803	(\$228.89)	(\$51,645,824.04)
National BMW (All except SOO, DME, DH)	19,988	(\$228.89)	(\$54,900,639.84)
National BRS (All except DME)	6,236	(\$228.89)	(\$17,128,296.48)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	5,268	(\$228.89)	(\$14,469,510.24)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	574	(\$228.89)	(\$1,576,594.32)
National IBEW (All except DME)	4,304	(\$228.89)	(\$11,821,710.72)
National NCFO (All except DME and WC)	1,675	(\$228.89)	(\$4,600,689.00)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	644	(\$228.89)	(\$1,768,861.92)
National TCU (All except DME and DH)	4,107	(\$228.89)	(\$11,280,614.76)
National TCU-CAR (All except DME)	6,780	(\$228.89)	(\$18,622,490.40)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	28,368	(\$228.89)	(\$77,917,818.24)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,359	(\$228.89)	(\$3,732,738.12)
Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	3,454	(\$231.65)	(\$9,601,429.20)
Total Union	103,126		(\$283,368,518.16)
All Other @ \$4,380,345.49 total per month			(\$52,564,145.88)
Total			(\$335,932,664.04)

Reduction in Wage Rate Per ST Hour	-\$1.43940682
Deduct this amount from the Wage Rate	-\$1.439

National Contracts U.S.

Straight Time Hourly Rate															Check
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Sum
Weight	0.219418	0.03139	0.169244	0.004842	0.050052	0.16002	0.052721	0.012743	0.041265	0.00436	0.033416	0.021306	0.010707	0.188516	1.00000
2020 Avg.	32.720	31.926	34.937	33.380	35.675	30.832	33.391	28.884	33.755	33.138	33.880	45.331	43.330	54.354	505.533
12/31/20	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	505.557
1/1/21	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
4/1/21	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
7/1/21	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
10/1/21	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
1/1/22	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
4/1/22	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
7/1/22	32.720	31.926	34.937	33.380	35.680	30.832	33.397	28.886	33.757	33.138	33.884	45.331	43.337	54.354	
Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2020 Avg.	7.179	1.002	5.913	0.162	1.786	4.934	1.760	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
12/31/20	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
1/1/21	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
4/1/21	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
7/1/21	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
10/1/21	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
1/1/22	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
4/1/22	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450
7/1/22	7.179	1.002	5.913	0.162	1.786	4.934	1.761	0.368	1.393	0.144	1.132	0.966	0.464	10.247	37.450

Note: The 2020 Average and 12/31/20 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/21 through 7/1/22 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 2020 are not shown on this page and are handled separately.

National Contracts U.S.

Pay For Time Not Worked Hourly Rate															Check Sum
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	1.00000
2020 Avg.	0.219418	0.03139	0.169244	0.004842	0.050052	0.16002	0.052721	0.012743	0.041265	0.00436	0.033416	0.021306	0.010707	0.188516	89.098
12/31/20	11.314	4.708	12.808	5.374	8.212	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.970	1.147	
1/1/21	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
4/1/21	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
7/1/21	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
10/1/21	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
1/1/22	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
4/1/22	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	
7/1/22	11.314	4.708	12.808	5.374	8.213	4.825	4.814	4.067	5.128	4.331	5.914	7.488	8.972	1.147	

Pay For Time Not Worked Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2020 Avg.	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.212
12/31/20	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
1/1/21	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
4/1/21	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
7/1/21	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
10/1/21	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
1/1/22	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
4/1/22	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213
7/1/22	2.482	0.148	2.168	0.026	0.411	0.772	0.254	0.052	0.212	0.019	0.198	0.160	0.096	0.216	7.213

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				32.72007	11.31387
12/31/20 Industry Rate				32.72007	11.31387
1/1/21			93.628%	32.72007	11.31387
4/1/21			93.628%	32.72007	11.31387
7/1/21			93.628%	32.72007	11.31387
10/1/21			93.628%	32.72007	11.31387
1/1/22			93.628%	32.72007	11.31387
4/1/22			93.628%	32.72007	11.31387
7/1/22			93.628%	32.72007	11.31387

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				31.92598	4.70821
12/31/20 Industry Rate				31.92598	4.70821
1/1/21			97.830%	31.92598	4.70821
4/1/21			97.830%	31.92598	4.70821
7/1/21			97.830%	31.92598	4.70821
10/1/21			97.830%	31.92598	4.70821
1/1/22			97.830%	31.92598	4.70821
4/1/22			97.830%	31.92598	4.70821
7/1/22			97.830%	31.92598	4.70821

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				34.93658	12.80776
12/31/20 Industry Rate				34.93658	12.80776
1/1/21			63.923%	34.93658	12.80776
4/1/21			63.923%	34.93658	12.80776
7/1/21			63.923%	34.93658	12.80776
10/1/21			63.923%	34.93658	12.80776
1/1/22			63.923%	34.93658	12.80776
4/1/22			63.923%	34.93658	12.80776
7/1/22			63.923%	34.93658	12.80776

U.S. National Contract

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				33.37959	5.37374
12/31/20 Industry Rate				33.37959	5.37374
1/1/21			100.000%	33.37959	5.37374
4/1/21			100.000%	33.37959	5.37374
7/1/21			100.000%	33.37959	5.37374
10/1/21			100.000%	33.37959	5.37374
1/1/22			100.000%	33.37959	5.37374
4/1/22			100.000%	33.37959	5.37374
7/1/22			100.000%	33.37959	5.37374

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				35.67541	8.21198
12/31/20 Industry Rate				35.67960	8.21295
1/1/21			98.091%	35.67960	8.21295
4/1/21			98.091%	35.67960	8.21295
7/1/21			98.091%	35.67960	8.21295
10/1/21			98.091%	35.67960	8.21295
1/1/22			98.091%	35.67960	8.21295
4/1/22			98.091%	35.67960	8.21295
7/1/22			98.091%	35.67960	8.21295

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				30.83204	4.82474
12/31/20 Industry Rate				30.83204	4.82474
1/1/21			97.380%	30.83204	4.82474
4/1/21			97.380%	30.83204	4.82474
7/1/21			97.380%	30.83204	4.82474
10/1/21			97.380%	30.83204	4.82474
1/1/22			97.380%	30.83204	4.82474
4/1/22			97.380%	30.83204	4.82474
7/1/22			97.380%	30.83204	4.82474

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				33.39062	4.81360
12/31/20 Industry Rate				33.39670	4.81448
1/1/21			98.321%	33.39670	4.81448
4/1/21			98.321%	33.39670	4.81448
7/1/21			98.321%	33.39670	4.81448
10/1/21			98.321%	33.39670	4.81448
1/1/22			98.321%	33.39670	4.81448
4/1/22			98.321%	33.39670	4.81448
7/1/22			98.321%	33.39670	4.81448

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				28.88391	4.06721
12/31/20 Industry Rate				28.88569	4.06746
1/1/21			99.060%	28.88569	4.06746
4/1/21			99.060%	28.88569	4.06746
7/1/21			99.060%	28.88569	4.06746
10/1/21			99.060%	28.88569	4.06746
1/1/22			99.060%	28.88569	4.06746
4/1/22			99.060%	28.88569	4.06746
7/1/22			99.060%	28.88569	4.06746

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				33.75459	5.12765
12/31/20 Industry Rate				33.75713	5.12804
1/1/21			98.942%	33.75713	5.12804
4/1/21			98.942%	33.75713	5.12804
7/1/21			98.942%	33.75713	5.12804
10/1/21			98.942%	33.75713	5.12804
1/1/22			98.942%	33.75713	5.12804
4/1/22			98.942%	33.75713	5.12804
7/1/22			98.942%	33.75713	5.12804

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				33.13831	4.33053
12/31/20 Industry Rate				33.13831	4.33053
1/1/21			93.731%	33.13831	4.33053
4/1/21			93.731%	33.13831	4.33053
7/1/21			93.731%	33.13831	4.33053
10/1/21			93.731%	33.13831	4.33053
1/1/22			93.731%	33.13831	4.33053
4/1/22			93.731%	33.13831	4.33053
7/1/22			93.731%	33.13831	4.33053

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				33.88044	5.91369
12/31/20 Industry Rate				33.88356	5.91423
1/1/21			98.655%	33.88356	5.91423
4/1/21			98.655%	33.88356	5.91423
7/1/21			98.655%	33.88356	5.91423
10/1/21			98.655%	33.88356	5.91423
1/1/22			98.655%	33.88356	5.91423
4/1/22			98.655%	33.88356	5.91423
7/1/22			98.655%	33.88356	5.91423

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				45.33094	7.48787
12/31/20 Industry Rate				45.33094	7.48787
1/1/21			73.011%	45.33094	7.48787
4/1/21			73.011%	45.33094	7.48787
7/1/21			73.011%	45.33094	7.48787
10/1/21			73.011%	45.33094	7.48787
1/1/22			73.011%	45.33094	7.48787
4/1/22			73.011%	45.33094	7.48787
7/1/22			73.011%	45.33094	7.48787

U.S. National Contract

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				43.33045	8.97042
12/31/20 Industry Rate				43.33694	8.97177
1/1/21			65.927%	43.33694	8.97177
4/1/21			65.927%	43.33694	8.97177
7/1/21			65.927%	43.33694	8.97177
10/1/21			65.927%	43.33694	8.97177
1/1/22			65.927%	43.33694	8.97177
4/1/22			65.927%	43.33694	8.97177
7/1/22			65.927%	43.33694	8.97177

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2020 Industry Avg.				54.35410	1.14687
12/31/20 Industry Rate				54.35410	1.14687
1/1/21			100.000%	54.35410	1.14687
4/1/21			100.000%	54.35410	1.14687
7/1/21			100.000%	54.35410	1.14687
10/1/21			100.000%	54.35410	1.14687
1/1/22			100.000%	54.35410	1.14687
4/1/22			100.000%	54.35410	1.14687
7/1/22			100.000%	54.35410	1.14687

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2020 AVG			505.53303	89.09816
12/31/20			505.55724	
		1278.498%		
		ok matches	ok matches	ok matches
			ok matches	

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

1278.498%

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

Secured Overnight Financing Rate (SOFR) [As of 5/23/22]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	0.78	0.80	0.80	0.01

DTCC GCF Repo Index

	LATEST	VALUE TRADED (BILLIONS)	52-WEEK	
			HIGH	LOW
Treasury	0.782	31.860	0.810	-0.001
MBS	0.819	34.250	0.820	0.009

Secondary Market

Tuesday, May 24, 2022

Fannie Mae 30-year Mortgage Yields

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
30 days	4.603	4.725	4.972	2.216
60 days	4.664	4.795	5.074	2.261

U.S. Government Rates

Tuesday, May 24, 2022

Discount Rates [Effective Date: 5/05/22]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	1.00	1.00	1.00	0.25

Federal Funds [Effective Date: 5/05/22]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Effective rate	0.84	0.84	0.85	0.05
Target rate	0.75-1.00	0.75-1.00	0.75-1.00	0.00-0.25
High	0.9500	0.9500	0.9700	0.0700
Low	0.8200	0.8200	0.8300	0.0100
Bid	0.8300	0.8200	0.8300	0.0300
Offer	0.8800	0.8700	0.8800	0.0500

Treasury Bill Auction

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
4 weeks	0.640	0.600	0.640	0.000
13 weeks	1.060	1.050	1.060	0.015
26 weeks	1.530	1.490	1.530	0.030

Weekly Survey

Thursday, May 19, 2022

Freddie Mac

52-WEEK

**RCAF Lump Sum Amortization
2022/Q3**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2021Q2 PPI	2021Q3	2021Q4				233,382,710
NS - BLET 2021Q3 PPI	2021Q4	2022Q1				233,382,710
NS - BLET 2021Q4 PPI	2022Q1	2022Q2				233,382,710
NS - BLET 2022 Ave PPI	2022Q1	2022Q2				233,382,710
NS - BLET 2022 TPB	2022Q1	2022Q2				233,382,710
CSX - ATDA 2022Q3	2022Q3	2022Q3				233,382,710
NS - BLET 2022Q1 PPI	2022Q2	2022Q3				233,382,710
Total			\$60,387,420	0.25875		

Should be slightly less
than amortized amount.

Fell out

NS - BLET 2021Q1 PPI	2021Q2	2021Q3				233,382,710
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Interest Rate

2020/Q2	1.505
2020/Q3	0.130
2020/Q4	0.100
2021/Q1	0.085
2021/Q2	0.030
2021/Q3	0.015
2021/Q4	0.055
2022/Q1	0.050
2022/Q2	0.380
2022/Q3	1.060
2022/Q4	
2023/Q1	

Lump Sum Adjustment for 2022/Q3	→	0.260198
		or
		0.260

**RCAF Back Pay Amortization
2022/Q3**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
CMQ - all unions 2022	2022Q1	2022Q2				233,382,710	2020
DME - all unions 2022	2022Q1	2022Q2				233,382,710	2020
CSX - ATDA 2022Q3	2022Q2	2022Q3				233,382,710	2020
Total			\$383,253	0.00164216			

Should be slightly less
than amortized amount.

Fell out

None

Notes:

"UTU" is now called SMART-TD (Transportation Division), and SMW is now called SMART-MD (Mechanical Division)

CN railroads 2018Q4 = IC BLET, CCP BLET, GTW UTU, GTW UTU-YMD, WC UTU-YMD

CP railroads 2018Q4 = DH BRC, DH IAM, SOO NCFO, SOO IBEW, SOO BRS, SOO UTU-YDM

CP railroads 2019Q3 = DME IAM, SOO IAM, SOO BRC

Interest Rate

2020/Q2	1.505
2020/Q3	0.130
2020/Q4	0.100
2021/Q1	0.085
2021/Q2	0.030
2021/Q3	0.015
2021/Q4	0.055
2022/Q1	0.050
2022/Q2	0.380
2022/Q3	1.060
2022/Q4	
2023/Q1	
2023/Q2	

Back Pay Adjustment for 2022/Q3

0.00165

or

0.002

Health and Welfare 2022Q3

	Employees Receiving			Total	
	Pay 2020	Monthly Contribution 2020 Avg. 2022		2020 Avg.	2022
1. All Employees					
a. Group health	123,991	\$1,606.79	\$1,856.96	\$199,227,498.89	\$230,246,327.36
b. Group dental	123,991	63.67	75.01	7,894,506.97	9,300,564.91
c. Early retirement major medical	123,991	114.37	84.14	14,180,850.67	10,432,602.74
d. Group vision	123,991	8.44	8.51	1,046,484.04	1,055,163.41
2. Supplemental Sickness					
a. Signalmen	6,266	38.31	62.17	240,050.46	389,557.22
b. Shopcrafts	17,630	61.93	98.52	1,091,825.90	1,736,907.60
c. MOW	20,538	39.94	48.22	820,287.72	990,342.36
d. Yardmasters	1,455	54.00	74.61	78,570.00	108,557.55
3. Short-Term Disability					
a. Engineers (CSX, KCS, SOO, UP)	9,101	40.00	40.00	364,040.00	364,040.00
4. Monthly Total Premiums				224,944,114.65	254,624,063.15
5. Monthly Employee Contributions To H&W					
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,566	(\$228.89)	(\$228.89)	(\$358,441.74)	(358,441.74)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	18,803	(\$228.89)	(\$228.89)	(\$4,303,818.67)	(4,303,818.67)
c. National BMW (All except SOO, DME, DH)	19,988	(\$228.89)	(\$228.89)	(\$4,575,053.32)	(4,575,053.32)
d. National BRS (All except DME)	6,236	(\$228.89)	(\$228.89)	(\$1,427,358.04)	(1,427,358.04)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	5,268	(\$228.89)	(\$228.89)	(\$1,205,792.52)	(1,205,792.52)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	574	(\$228.89)	(\$228.89)	(\$131,382.86)	(131,382.86)
g. National IBEW (All except DME)	4,304	(\$228.89)	(\$228.89)	(\$985,142.56)	(985,142.56)
h. National NCFO (All except DME and WC)	1,675	(\$228.89)	(\$228.89)	(\$383,390.75)	(383,390.75)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	644	(\$228.89)	(\$228.89)	(\$147,405.16)	(147,405.16)
j. National TCU (All except DME and DH)	4,107	(\$228.89)	(\$228.89)	(\$940,051.23)	(940,051.23)
k. National TCU-CAR (All except DME)	6,780	(\$228.89)	(\$228.89)	(\$1,551,874.20)	(1,551,874.20)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	28,368	(\$228.89)	(\$228.89)	(\$6,493,151.52)	(6,493,151.52)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,359	(\$228.89)	(\$228.89)	(\$311,061.51)	(311,061.51)
n. Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	3,454	(\$230.17)	(\$231.65)	(\$794,992.43)	(800,128.83)
Total Major Union	103,126			(\$23,608,916.51)	(\$23,614,052.91)
All Other Employee Contributions*				(\$4,380,345.50)	(\$4,380,345.50)
6. Net Employer Monthly Payments				\$196,954,852.65	\$226,629,664.75
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments					1.15067
8. H&W hourly rate for base year 2020				\$8.363	
9. H&W hourly rate for projected quarter					\$9.623

* Non-union employee contributions net of opt-outs. The \$23,608,916.51 in major union contributions, plus \$4,380,345.50 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	2019	Tier I Maximum Taxable Earnings for 2022	147,000
Wage Statistics Year	2020	Tier II Maximum Taxable Earnings for 2022	109,200
Current Year	2022	Medicare Maximum Taxable Earnings for 2022	no limit
Employees Receiving Pay*	123,991	Tier I Employer Tax Rate for 2022	6.20%
* from 2020 final wage statistics		Tier II Employer Tax Rate for 2022	13.10%
		Medicare Employer Tax Rate for 2022	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2019	\$43.000			
2020	\$43.981	1.02281	\$564,946,478	\$9.281
1Q/2022	\$43.482	1.01121	\$571,253,634	\$9.385
2Q/2022	\$43.606	1.01409	\$572,442,102	\$9.404
3Q/2022	\$43.732	1.01702	\$573,649,738	\$9.424
4Q/2022		0.00000	--	\$0.000

Railroad Retirement & Medicare, U.S.

From 2019 Earnings Distribution			1Q/2022 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	\$29,625	1.335 %	1,655	\$29,957	\$7,489	\$7,489	\$7,489	\$7,489	\$12,396,836	\$12,396,836	\$12,396,836
41,700 - 43,699	\$42,987	0.321	398	43,469	10,867	10,867	10,867	10,867	4,325,272	4,325,272	4,325,272
43,700 - 45,699	\$44,680	0.588	729	45,181	11,295	11,295	11,295	11,295	8,234,964	8,234,964	8,234,964
45,700 - 47,699	\$46,762	0.374	464	47,286	11,822	11,822	11,822	11,822	5,481,961	5,481,961	5,481,961
47,700 - 49,699	\$48,651	0.427	529	49,196	12,299	12,299	12,299	12,299	6,511,647	6,511,647	6,511,647
49,700 - 51,699	\$50,543	0.908	1,126	51,110	12,777	12,777	12,777	12,777	14,385,272	14,385,272	14,385,272
51,700 - 53,699	\$52,897	0.855	1,060	53,490	13,372	13,372	13,372	13,372	14,176,479	14,176,479	14,176,479
53,700 - 55,699	\$54,523	1.122	1,391	55,134	13,784	13,784	13,784	13,784	19,175,373	19,175,373	19,175,373
55,700 - 57,699	\$56,596	1.282	1,590	57,230	14,308	14,308	14,308	14,308	22,742,855	22,742,855	22,742,855
57,700 - 59,699	\$58,698	1.656	2,053	59,356	14,839	14,839	14,839	14,839	30,468,766	30,468,766	30,468,766
59,700 - 61,699	\$60,693	2.350	2,914	61,373	15,343	15,343	15,343	15,343	44,707,223	44,707,223	44,707,223
61,700 - 63,699	\$62,631	2.457	3,046	63,333	15,833	15,833	15,833	15,833	48,235,383	48,235,383	48,235,383
63,700 - 65,699	\$64,778	3.259	4,041	65,504	16,376	16,376	16,376	16,376	66,173,350	66,173,350	66,173,350
65,700 - 67,699	\$66,760	3.686	4,570	67,508	16,877	16,877	16,877	16,877	77,133,473	77,133,473	77,133,473
67,700 - 69,699	\$68,621	3.686	4,570	69,390	17,348	17,348	17,348	17,348	79,283,644	79,283,644	79,283,644
69,700 - 71,699	\$70,651	2.885	3,577	71,443	17,861	17,861	17,861	17,861	63,890,363	63,890,363	63,890,363
71,700 - 73,699	\$72,674	3.098	3,841	73,489	18,372	18,372	18,372	18,372	70,571,883	70,571,883	70,571,883
73,700 - 75,699	\$74,697	2.244	2,782	75,534	18,884	18,884	18,884	18,884	52,540,868	52,540,868	52,540,868
75,700 - 77,699	\$76,615	3.472	4,305	77,474	19,368	19,368	19,368	19,368	83,380,549	83,380,549	83,380,549
77,700 - 79,699	\$78,710	3.632	4,503	79,592	19,898	19,898	19,898	19,898	89,608,040	89,608,040	89,608,040
79,700 - 81,699	\$80,668	3.739	4,636	81,572	20,393	20,393	20,393	20,393	94,542,696	94,542,696	94,542,696
81,700 - 83,699	\$82,706	3.526	4,372	83,633	20,908	20,908	20,908	20,908	91,409,336	91,409,336	91,409,336
83,700 - 85,699	\$84,707	3.205	3,974	85,657	21,414	21,414	21,414	21,414	85,097,845	85,097,845	85,097,845
85,700 - 87,699	\$86,537	3.098	3,841	87,507	21,877	21,877	21,877	21,877	84,033,892	84,033,892	84,033,892
87,700 - 89,699	\$88,699	2.671	3,312	89,693	22,423	22,423	22,423	22,423	74,261,521	74,261,521	74,261,521
89,700 - 91,699	\$90,625	3.312	4,107	91,641	22,910	22,910	22,910	22,910	94,082,657	94,082,657	94,082,657
91,700 - 93,699	\$92,881	2.297	2,848	93,922	23,481	23,481	23,481	23,481	66,874,278	66,874,278	66,874,278
93,700 - 95,699	\$94,749	1.816	2,252	95,811	23,953	23,953	23,953	23,953	53,933,885	53,933,885	53,933,885
95,700 - 97,699	\$96,731	2.350	2,914	97,815	24,454	24,454	24,454	24,454	71,253,265	71,253,265	71,253,265
97,700 - 99,699	\$98,711	2.030	2,517	99,817	24,954	24,954	24,954	24,954	62,810,582	62,810,582	62,810,582
99,700 - 101,699	\$100,745	1.923	2,384	101,874	25,469	25,469	25,469	25,469	60,725,907	60,725,907	60,725,907
101,700 - 103,699	\$102,687	1.976	2,450	103,838	25,960	25,960	25,960	25,960	63,602,419	63,602,419	63,602,419
103,700 - 105,699	\$104,713	2.297	2,848	105,887	26,472	26,472	26,472	26,472	75,393,312	75,393,312	75,393,312
105,700 - 107,699	\$106,735	2.137	2,650	107,931	26,983	26,983	26,983	26,983	71,496,141	71,496,141	71,496,141
107,700 - 109,699	\$108,566	2.297	2,848	109,783	27,446	27,446	27,300	27,446	78,167,471	77,752,400	78,167,471
109,700 - 111,699	\$110,604	1.603	1,988	111,844	27,961	27,961	27,300	27,961	55,574,502	54,260,817	55,574,502
111,700 - 113,699	\$112,537	1.496	1,855	113,798	28,450	28,450	27,300	28,450	52,771,344	50,638,916	52,771,344
113,700 - 115,699	\$114,692	1.549	1,921	115,978	28,994	28,994	27,300	28,994	55,687,250	52,432,942	55,687,250
\$115,700 - over	\$150,555	17.041	21,129	152,243	38,061	36,750	27,300	38,061	776,502,007	576,830,062	804,195,219
TOTAL	\$92,816	100.000	123,991								
Total Taxable Earnings									2,881,644,512	2,674,857,077	2,909,337,725
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$178,661,960	\$350,406,277	\$42,185,397

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

\$571,253,634

Railroad Retirement & Medicare, U.S.

From 2019 Earnings Distribution			2Q/2022 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	\$29,625	1.335 %	1,655	\$30,043	\$7,511	\$7,511	\$7,511	\$7,511	\$12,432,189	\$12,432,189	\$12,432,189
41,700 - 43,699	\$42,987	0.321	398	43,593	10,898	10,898	10,898	10,898	4,337,606	4,337,606	4,337,606
43,700 - 45,699	\$44,680	0.588	729	45,310	11,327	11,327	11,327	11,327	8,258,448	8,258,448	8,258,448
45,700 - 47,699	\$46,762	0.374	464	47,421	11,855	11,855	11,855	11,855	5,497,594	5,497,594	5,497,594
47,700 - 49,699	\$48,651	0.427	529	49,337	12,334	12,334	12,334	12,334	6,530,217	6,530,217	6,530,217
49,700 - 51,699	\$50,543	0.908	1,126	51,255	12,814	12,814	12,814	12,814	14,426,296	14,426,296	14,426,296
51,700 - 53,699	\$52,897	0.855	1,060	53,642	13,411	13,411	13,411	13,411	14,216,907	14,216,907	14,216,907
53,700 - 55,699	\$54,523	1.122	1,391	55,291	13,823	13,823	13,823	13,823	19,230,057	19,230,057	19,230,057
55,700 - 57,699	\$56,596	1.282	1,590	57,394	14,348	14,348	14,348	14,348	22,807,712	22,807,712	22,807,712
57,700 - 59,699	\$58,698	1.656	2,053	59,525	14,881	14,881	14,881	14,881	30,555,655	30,555,655	30,555,655
59,700 - 61,699	\$60,693	2.350	2,914	61,548	15,387	15,387	15,387	15,387	44,834,717	44,834,717	44,834,717
61,700 - 63,699	\$62,631	2.457	3,046	63,514	15,878	15,878	15,878	15,878	48,372,938	48,372,938	48,372,938
63,700 - 65,699	\$64,778	3.259	4,041	65,691	16,423	16,423	16,423	16,423	66,362,060	66,362,060	66,362,060
65,700 - 67,699	\$66,760	3.686	4,570	67,701	16,925	16,925	16,925	16,925	77,353,439	77,353,439	77,353,439
67,700 - 69,699	\$68,621	3.686	4,570	69,588	17,397	17,397	17,397	17,397	79,509,741	79,509,741	79,509,741
69,700 - 71,699	\$70,651	2.885	3,577	71,647	17,912	17,912	17,912	17,912	64,072,563	64,072,563	64,072,563
71,700 - 73,699	\$72,674	3.098	3,841	73,698	18,425	18,425	18,425	18,425	70,773,137	70,773,137	70,773,137
73,700 - 75,699	\$74,697	2.244	2,782	75,750	18,937	18,937	18,937	18,937	52,690,701	52,690,701	52,690,701
75,700 - 77,699	\$76,615	3.472	4,305	77,695	19,424	19,424	19,424	19,424	83,618,330	83,618,330	83,618,330
77,700 - 79,699	\$78,710	3.632	4,503	79,819	19,955	19,955	19,955	19,955	89,863,580	89,863,580	89,863,580
79,700 - 81,699	\$80,668	3.739	4,636	81,805	20,451	20,451	20,451	20,451	94,812,309	94,812,309	94,812,309
81,700 - 83,699	\$82,706	3.526	4,372	83,872	20,968	20,968	20,968	20,968	91,670,013	91,670,013	91,670,013
83,700 - 85,699	\$84,707	3.205	3,974	85,901	21,475	21,475	21,475	21,475	85,340,523	85,340,523	85,340,523
85,700 - 87,699	\$86,537	3.098	3,841	87,757	21,939	21,939	21,939	21,939	84,273,536	84,273,536	84,273,536
87,700 - 89,699	\$88,699	2.671	3,312	89,949	22,487	22,487	22,487	22,487	74,473,296	74,473,296	74,473,296
89,700 - 91,699	\$90,625	3.312	4,107	91,902	22,976	22,976	22,976	22,976	94,350,958	94,350,958	94,350,958
91,700 - 93,699	\$92,881	2.297	2,848	94,190	23,547	23,547	23,547	23,547	67,064,987	67,064,987	67,064,987
93,700 - 95,699	\$94,749	1.816	2,252	96,084	24,021	24,021	24,021	24,021	54,087,691	54,087,691	54,087,691
95,700 - 97,699	\$96,731	2.350	2,914	98,094	24,524	24,524	24,524	24,524	71,456,461	71,456,461	71,456,461
97,700 - 99,699	\$98,711	2.030	2,517	100,102	25,026	25,026	25,026	25,026	62,989,702	62,989,702	62,989,702
99,700 - 101,699	\$100,745	1.923	2,384	102,165	25,541	25,541	25,541	25,541	60,899,083	60,899,083	60,899,083
101,700 - 103,699	\$102,687	1.976	2,450	104,134	26,034	26,034	26,034	26,034	63,783,798	63,783,798	63,783,798
103,700 - 105,699	\$104,713	2.297	2,848	106,189	26,547	26,547	26,547	26,547	75,608,316	75,608,316	75,608,316
105,700 - 107,699	\$106,735	2.137	2,650	108,239	27,060	27,060	27,060	27,060	71,700,031	71,700,031	71,700,031
107,700 - 109,699	\$108,566	2.297	2,848	110,096	27,524	27,524	27,300	27,524	78,390,385	77,752,400	78,390,385
109,700 - 111,699	\$110,604	1.603	1,988	112,163	28,041	28,041	27,300	28,041	55,732,987	54,260,817	55,732,987
111,700 - 113,699	\$112,537	1.496	1,855	114,123	28,531	28,531	27,300	28,531	52,921,835	50,638,916	52,921,835
113,700 - 115,699	\$114,692	1.549	1,921	116,308	29,077	29,077	27,300	29,077	55,846,056	52,432,942	55,846,056
\$115,700 - over	\$150,555	17.041	21,129	152,677	38,169	36,750	27,300	38,169	776,502,007	576,830,062	806,488,587
TOTAL		100.000	123,991								
Total Taxable Earnings									2,887,647,862	2,680,169,730	2,917,634,442
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$179,034,167	\$351,102,235	\$42,305,699

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

\$572,442,102

Railroad Retirement & Medicare, U.S.

From 2019 Earnings Distribution			3Q/2022 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	\$29,625	1.335 %	1,655	\$30,129	\$7,532	\$7,532	\$7,532	\$7,532	\$12,468,112	\$12,468,112	\$12,468,112
41,700 - 43,699	\$42,987	0.321	398	43,719	10,930	10,930	10,930	10,930	4,350,140	4,350,140	4,350,140
43,700 - 45,699	\$44,680	0.588	729	45,441	11,360	11,360	11,360	11,360	8,282,311	8,282,311	8,282,311
45,700 - 47,699	\$46,762	0.374	464	47,558	11,890	11,890	11,890	11,890	5,513,479	5,513,479	5,513,479
47,700 - 49,699	\$48,651	0.427	529	49,479	12,370	12,370	12,370	12,370	6,549,086	6,549,086	6,549,086
49,700 - 51,699	\$50,543	0.908	1,126	51,403	12,851	12,851	12,851	12,851	14,467,981	14,467,981	14,467,981
51,700 - 53,699	\$52,897	0.855	1,060	53,797	13,449	13,449	13,449	13,449	14,257,987	14,257,987	14,257,987
53,700 - 55,699	\$54,523	1.122	1,391	55,451	13,863	13,863	13,863	13,863	19,285,622	19,285,622	19,285,622
55,700 - 57,699	\$56,596	1.282	1,590	57,559	14,390	14,390	14,390	14,390	22,873,616	22,873,616	22,873,616
57,700 - 59,699	\$58,698	1.656	2,053	59,697	14,924	14,924	14,924	14,924	30,643,946	30,643,946	30,643,946
59,700 - 61,699	\$60,693	2.350	2,914	61,726	15,432	15,432	15,432	15,432	44,964,267	44,964,267	44,964,267
61,700 - 63,699	\$62,631	2.457	3,046	63,697	15,924	15,924	15,924	15,924	48,512,712	48,512,712	48,512,712
63,700 - 65,699	\$64,778	3.259	4,041	65,881	16,470	16,470	16,470	16,470	66,553,814	66,553,814	66,553,814
65,700 - 67,699	\$66,760	3.686	4,570	67,896	16,974	16,974	16,974	16,974	77,576,952	77,576,952	77,576,952
67,700 - 69,699	\$68,621	3.686	4,570	69,789	17,447	17,447	17,447	17,447	79,739,485	79,739,485	79,739,485
69,700 - 71,699	\$70,651	2.885	3,577	71,854	17,963	17,963	17,963	17,963	64,257,701	64,257,701	64,257,701
71,700 - 73,699	\$72,674	3.098	3,841	73,911	18,478	18,478	18,478	18,478	70,977,636	70,977,636	70,977,636
73,700 - 75,699	\$74,697	2.244	2,782	75,969	18,992	18,992	18,992	18,992	52,842,952	52,842,952	52,842,952
75,700 - 77,699	\$76,615	3.472	4,305	77,919	19,480	19,480	19,480	19,480	83,859,946	83,859,946	83,859,946
77,700 - 79,699	\$78,710	3.632	4,503	80,050	20,012	20,012	20,012	20,012	90,123,242	90,123,242	90,123,242
79,700 - 81,699	\$80,668	3.739	4,636	82,041	20,510	20,510	20,510	20,510	95,086,270	95,086,270	95,086,270
81,700 - 83,699	\$82,706	3.526	4,372	84,114	21,028	21,028	21,028	21,028	91,934,894	91,934,894	91,934,894
83,700 - 85,699	\$84,707	3.205	3,974	86,149	21,537	21,537	21,537	21,537	85,587,116	85,587,116	85,587,116
85,700 - 87,699	\$86,537	3.098	3,841	88,010	22,003	22,003	22,003	22,003	84,517,045	84,517,045	84,517,045
87,700 - 89,699	\$88,699	2.671	3,312	90,209	22,552	22,552	22,552	22,552	74,688,488	74,688,488	74,688,488
89,700 - 91,699	\$90,625	3.312	4,107	92,168	23,042	23,042	23,042	23,042	94,623,586	94,623,586	94,623,586
91,700 - 93,699	\$92,881	2.297	2,848	94,462	23,616	23,616	23,616	23,616	67,258,772	67,258,772	67,258,772
93,700 - 95,699	\$94,749	1.816	2,252	96,362	24,090	24,090	24,090	24,090	54,243,978	54,243,978	54,243,978
95,700 - 97,699	\$96,731	2.350	2,914	98,378	24,594	24,594	24,594	24,594	71,662,936	71,662,936	71,662,936
97,700 - 99,699	\$98,711	2.030	2,517	100,391	25,098	25,098	25,098	25,098	63,171,712	63,171,712	63,171,712
99,700 - 101,699	\$100,745	1.923	2,384	102,460	25,615	25,615	25,615	25,615	61,075,051	61,075,051	61,075,051
101,700 - 103,699	\$102,687	1.976	2,450	104,435	26,109	26,109	26,109	26,109	63,968,102	63,968,102	63,968,102
103,700 - 105,699	\$104,713	2.297	2,848	106,496	26,624	26,624	26,624	26,624	75,826,787	75,826,787	75,826,787
105,700 - 107,699	\$106,735	2.137	2,650	108,552	27,138	27,138	27,138	27,138	71,907,209	71,907,209	71,907,209
107,700 - 109,699	\$108,566	2.297	2,848	110,414	27,604	27,604	27,300	27,604	78,616,895	77,752,400	78,616,895
109,700 - 111,699	\$110,604	1.603	1,988	112,487	28,122	28,122	27,300	28,122	55,894,028	54,260,817	55,894,028
111,700 - 113,699	\$112,537	1.496	1,855	114,453	28,613	28,613	27,300	28,613	53,074,753	50,638,916	53,074,753
113,700 - 115,699	\$114,692	1.549	1,921	116,644	29,161	29,161	27,300	29,161	56,007,424	52,432,942	56,007,424
\$115,700 - over	\$150,555	17.041	21,129	153,118	38,279	36,750	27,300	38,279	776,830,007	576,830,062	808,818,944
TOTAL		100.000	123,991								
Total Taxable Earnings									2,893,748,041	2,685,568,072	2,926,064,978
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$179,412,379	\$351,809,417	\$42,427,942
Total Tier I, Tier II, and Medicare Paid this Quarter											\$573,649,738

Railroad Retirement & Medicare, U.S.

From 2019 Earnings Distribution			4Q/2022 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	\$29,625	1.335 %	1,655	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,987	0.321	398	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,680	0.588	729	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,762	0.374	464	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,651	0.427	529	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,543	0.908	1,126	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,897	0.855	1,060	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,523	1.122	1,391	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,596	1.282	1,590	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,698	1.656	2,053	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,693	2.350	2,914	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,631	2.457	3,046	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,778	3.259	4,041	0	0	(0)	(0)	0	(0)	(0)	0
65,700 - 67,699	\$66,760	3.686	4,570	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,621	3.686	4,570	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,651	2.885	3,577	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,674	3.098	3,841	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,697	2.244	2,782	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,615	3.472	4,305	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,710	3.632	4,503	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,668	3.739	4,636	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,706	3.526	4,372	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,707	3.205	3,974	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,537	3.098	3,841	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,699	2.671	3,312	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,625	3.312	4,107	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,881	2.297	2,848	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,749	1.816	2,252	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,731	2.350	2,914	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,711	2.030	2,517	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,745	1.923	2,384	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,687	1.976	2,450	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,713	2.297	2,848	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,735	2.137	2,650	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,566	2.297	2,848	0	0	0	673	0	0	1,917,550	0
109,700 - 111,699	\$110,604	1.603	1,988	0	0	0	2,223	0	0	4,419,066	0
111,700 - 113,699	\$112,537	1.496	1,855	0	0	0	3,694	0	0	6,851,183	0
113,700 - 115,699	\$114,692	1.549	1,921	0	0	0	5,333	0	0	10,241,904	0
\$115,700 - over	\$150,555	17.041	21,129	0	0	4,259	27,300	0	89,996,730	576,830,062	0
TOTAL		100.000	123,991						89,996,730	600,259,765	0
									Employer Tax Rate	6.20%	13.10%
									Quarterly Payment	\$5,579,797	\$78,634,029
											\$0

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

\$84,213,826

RCAF Unemployment Insurance Tax

	Unemployment Ins.			RRB	Factor	Avg. Ann.	Un. Ins.
	Tax	Earnings	Hourly	Sample	To Update	Taxable	Hourly
	Rate	Base	Earnings	Year	RRB Sample	Earnings	Rate
			\$39.231	(2016)			
2017 Avg.	3.37%	\$18,540	\$39.599		1.009380	\$17,625.49	\$0.319
3Q/18 reb.	3.76%	\$18,720	\$42.946		1.094696	\$17,832.94	\$0.360
4Q/18	3.76%	\$18,720	\$42.976		1.095460	\$17,833.29	\$0.360
1Q/19	3.38%	\$19,260	\$42.805		1.091101	\$18,330.97	\$0.333
2Q/19	3.38%	\$19,260	\$42.756		1.089852	\$18,330.37	\$0.333
3Q/19	3.38%	\$19,260	\$43.306		1.103872	\$18,336.98	\$0.333
			\$39.599	(2017)			
2018 Avg.	3.76%	\$18,720	\$41.687		1.052729	\$17,600.87	\$0.347
3Q/19 reb.	3.38%	\$19,260	\$43.672		1.102856	\$18,120.16	\$0.321
4Q/19	3.38%	\$19,260	\$43.660		1.102553	\$18,119.99	\$0.321
1Q/20	0.99%	\$19,860	\$43.839		1.107073	\$18,666.82	\$0.097
2Q/20	0.99%	\$19,860	\$43.626		1.101694	\$18,663.57	\$0.097
3Q/20	0.99%	\$19,860	\$43.572		1.100331	\$18,662.74	\$0.097
			\$41.687	(2018)			
2019 Avg.	3.38%	\$19,260	\$43.000		1.031497	\$17,742.46	\$0.318
3Q/20 reb.	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
4Q/20	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
1Q/21	5.69%	\$20,520	\$43.620		1.046369	\$18,867.16	\$0.569
2Q/21	5.69%	\$20,520	\$43.397		1.041020	\$18,863.22	\$0.569
3Q/21	5.69%	\$20,520	\$43.326		1.039317	\$18,861.96	\$0.569
			\$43.000	(2019)			
2020 Avg.	0.99%	\$19,860	\$43.981		1.022814	\$18,813.21	\$0.100
3Q/21 reb.	5.69%	\$20,520	\$43.508		1.011814	\$19,413.47	\$0.593
4Q/21	5.69%	\$20,520	\$43.504		1.011721	\$19,413.42	\$0.593
1Q/22	11.23%	\$21,060	\$43.482		1.011209	\$19,907.93	\$1.200
2Q/22	11.23%	\$21,060	\$43.606		1.014093	\$19,909.70	\$1.200
3Q/22	11.23%	\$21,060	\$43.732		1.017023	\$19,911.50	\$1.201

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 SAS System
TOTAL GROSS EARNINGS AND AVERAGE GROSS EARNINGS-2019 RRB File

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2410	45339832.42	18813.21
QTRLY_US	2410	47986721.31	19911.50

The SAS System
Factors and Caps 2020 and 2022Q3

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2410	2464.98	1.0228140
FactorQ	2410	2451.03	1.0170230
Capa	2410	47862600.00	19860.00
Capq	2410	50754600.00	21060.00



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Spot Prices

(Crude Oil in Dollars per Barrel, Products in Dollars per Gallon)

Period:

Product by Area	 	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	79.15	71.71	83.22	91.64	108.50	101.78	1986-2022
Brent - Europe	☐	81.05	74.17	86.51	97.13	117.25	104.58	1987-2022
Conventional Gasoline								
New York Harbor, Regular	☐	2.390	2.203	2.449	2.739	3.184	3.193	1986-2022
U.S. Gulf Coast, Regular	☐	2.280	2.129	2.400	2.648	3.197	3.180	1986-2022
RBOB Regular Gasoline								
Los Angeles	☐	2.530	2.315	2.548	2.818	3.784	3.408	2003-2022
No. 2 Heating Oil								
New York Harbor	☐	2.253	2.118	2.481	2.737	3.635	3.952	1986-2022
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	2.391	2.251	2.616	2.872	3.780	4.042	2006-2022
U.S. Gulf Coast	☐	2.324	2.195	2.550	2.810	3.676	3.953	2006-2022
Los Angeles	☐	2.509	2.291	2.674	2.851	3.631	3.887	1996-2022
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.193	2.095	2.446	2.682	3.495	3.914	1990-2022
Propane								
Mont Belvieu, Texas	☐	1.252	1.033	1.169	1.283	1.448	1.302	1992-2022

Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

- = No Data Reported; -- = Not Applicable; **NA** = Not Available; **W** = Withheld to avoid disclosure of individual company data.

Notes: Weekly, monthly, and annual prices are calculated by EIA from daily data by taking an unweighted average of the daily closing spot prices for a given product over the specified time period. See Definitions, Sources, and Notes link above for more information on this table.

Release Date: 5/25/2022

Next Release Date: 6/2/2022



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Spot Prices

(Crude Oil in Dollars per Barrel, Products in Dollars per Gallon)

Period:

Product by Area		04/15/22	04/22/22	04/29/22	05/06/22	05/13/22	05/20/22	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	101.46	104.02	102.85	106.69	105.00	112.18	1986-2022
Brent - Europe	☐	105.42	105.72	103.92	110.36	107.43	112.93	1987-2022
Conventional Gasoline								
New York Harbor, Regular	☐	3.186	3.121	3.382	3.653	3.745	3.931	1986-2022
U.S. Gulf Coast, Regular	☐	3.131	3.208	3.331	3.569	3.771	3.772	1986-2022
RBOB Regular Gasoline								
Los Angeles	☐	3.302	3.411	3.618	3.896	3.996	4.099	2003-2022
No. 2 Heating Oil								
New York Harbor	☐	3.705	4.022	4.626	4.874	4.830	4.470	1986-2022
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	3.759	4.091	4.685	4.977	5.212	4.512	2006-2022
U.S. Gulf Coast	☐	3.640	3.917	4.746	4.332	3.949	3.643	2006-2022
Los Angeles	☐	3.811	4.099	4.055	4.175	3.954	3.944	1996-2022
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	3.604	3.859	4.626	4.266	4.042	3.602	1990-2022
Propane								
Mont Belvieu, Texas	☐	1.306	1.309	1.282	1.261	1.216	1.217	1992-2022

Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

- = No Data Reported; -- = Not Applicable; **NA** = Not Available; **W** = Withheld to avoid disclosure of individual company data.

Notes: Weekly, monthly, and annual prices are calculated by EIA from daily data by taking an unweighted average of the daily closing spot prices for a given product over the specified time period. See Definitions, Sources, and Notes link above for more information on this table.

Release Date: 5/25/2022

Next Release Date: 6/2/2022

U.S.

Summary by Composition Category

	MS-2021		Prev. Idx	2022Q2		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	748,703,531	0.1729	371.31	395.71		64.20	68.42	
Metal Products	2,475,909,550	0.5717	192.61	201.82		110.12	115.38	
Misc. Products	1,106,315,926	0.2554	419.05	431.12		107.03	110.11	
Total	4,330,929,007	1.0000	281.35	293.91				1.0446
Total Linked			275.19	287.46				
'77 = 100 Link Fact.= 1.423			391.60	409.06				
'80 = 100 Link Fact.= 1.061			291.98	305.00				

As info only	Change
Forest Products	6.57%
Metal Products	4.78%
Misc. Products	2.88%
Total ('80=100)	4.46%
Rounded 80 Indices	4.5%
Rounded 77 Indices	4.5%

Car Hire for RCAF - 2020 Weights

Car Hire Index used in RCAF's All-Inclusive Index (Forecast)

		1980	June 3Q/21	Sept. 4Q/21	Dec. 1Q/22	Mar. 2Q/22	June 3Q/22
RATE							
RR-OWNED TIME		31.00	65.00	66.00	66.00	66.00	66.00
RR-OWNED MILEAGE		4.69	6.60	6.60	6.60	6.60	6.60
PRIVATELY-OWNED CARS		25.47	55.83	55.17	55.36	54.43	54.50
AUTORACKS		47.00	84.91	85.08	85.89	83.41	84.28
INDEX							
RR-OWNED TIME		100.0	209.7	212.9	212.9	212.9	212.9
RR-OWNED MILEAGE		100.0	140.7	140.7	140.7	140.7	140.7
PRIVATELY-OWNED CARS		100.0	219.2	216.6	217.4	213.7	214.0
AUTORACKS		100.0	180.7	181.0	182.7	177.5	179.3
CAR HIRE INDEX (old wts)	2019	100.0	214.0	--	--	--	--
CAR HIRE INDEX (new wts)	2020	100.0	214.3	212.2	213.0	209.5	209.9
CAR HIRE INDEX (LINKED)		100.0	211.2	209.1	209.9	206.5	206.9

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.

Car Hire Data From CHARM

	2021 (first day of month)						2022 (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)	11,180	11,157	11,138	11,094	11,067	10,999	10,976	11,009	11,044	11,095	10,962	11,268		
Rate (in cents)														
Superstructures #3 - Auto Rack	94.0	95.0	95.0	95.0	95.0	95.0	93.0	94.0	95.0	95.0	94.0	95.0		
All other #1 - Time	65.0	65.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0		
All other #2 - Mileage	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6		
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	53,299	53,262	53,225	53,166	53,141	53,094	53,045	52,989	53,028	52,969	52,928	52,905		
Covered Hoppers	432,640	433,233	433,686	433,509	433,387	433,129	432,599	432,568	432,448	431,939	431,003	432,770		
Tank Cars	421,980	422,998	423,421	423,125	423,323	423,585	423,592	423,923	423,580	423,560	422,799	424,519		
Others	294,153	293,445	292,806	292,174	291,742	291,190	290,818	290,563	290,184	290,084	288,998	291,107		
Rate (in cents)														
Superstructures #1 - Time	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0		
Superstructures #2 - Mileage	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0	1.3	1.4		
Superstructures #3 - Auto Rack	83.0	83.0	83.0	83.0	84.0	84.0	80.0	81.0	81.0	81.0	81.0	82.0		
Covered Hoppers #2 - Mileage	45.1	45.1	45.2	45.2	45.3	45.3	45.0	45.0	45.1	45.1	45.1	45.1		
Tank Cars #2 - Mileage	88.7	88.7	86.1	86.2	86.2	86.2	85.9	86.0	83.7	83.7	83.8	83.8		
Others #1 -Time	102.0	102.0	103.0	103.0	103.0	104.0	104.0	104.0	104.0	104.0	105.0	105.0		
Others #2 - Mileage	8.5	8.5	8.5	8.5	8.6	8.6	8.6	4.3	8.6	8.5	8.4	8.4		
AVERAGE RATES														
Private Superstructures	21.21	21.21	21.21	21.21	21.21	21.21	21.21	20.71	21.21	21.21	21.51	21.61	0.00	0.00
Private Others	31.14	31.14	31.37	31.37	31.47	31.69	31.69	27.39	31.69	31.59	31.71	31.71	0.00	0.00
Private Total	55.93	55.97	55.17	55.21	55.28	55.36	55.16	54.15	54.43	54.41	54.50	54.50	#DIV/0!	#DIV/0!
Autoracks	84.91	85.08	85.08	85.07	85.90	85.89	82.23	83.24	83.41	83.42	83.23	84.28	#DIV/0!	#DIV/0!

Car Hire Weights	"Old Wts" "New Wts"	
	2019	2020
For RCAF & RCR		
RR-owned Time	0.040	0.052
RR-owned Mileage	0.042	0.039
Privately-owned Cars	0.879	0.874
Autoracks	0.039	0.035
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2019	2020
Car Hire - U.S.	0.614	0.647
Lease Rentals - U.S.	0.386	0.353
----- Check sum	1.000	1.000

Notes:

The Car Hire Index and Lease Rentals Index are weighed together to calculate the Equipment Rents Index

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 04/22

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,095	107	0.057	95
Railroad	Number of Zero-Rated Vehicular Flats	111			
Railroad	All Other Cars	362,302	66	0.066	
Railroad	Number of Zero-Rated Other Cars	12,124			
Railroad	Total Railroad Equipment	385,632			
Private	Vehicular Flats	52,969	86	0.010	81
Private	Number of Zero-Rated Vehicular Flats	39			
Private	Covered Hoppers	431,939	0	0.451	
Private	Number of Zero-Rated Covered Hoppers	13,909			
Private	Tanks	423,560	0	0.837	
Private	Number of Zero-Rated Tanks	14,654			
Private	All Other Cars	290,084	104	0.085	
Private	Number of Zero-Rated Other Cars	22,043			
Private	Total Private Equipment	1,249,197			

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.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 05/22

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,962	107	0.059	94
Railroad	Number of Zero-Rated Vehicular Flats	102			
Railroad	All Other Cars	361,237	66	0.066	
Railroad	Number of Zero-Rated Other Cars	11,498			
Railroad	Total Railroad Equipment	383,799			
Private	Vehicular Flats	52,928	86	0.013	81
Private	Number of Zero-Rated Vehicular Flats	37			
Private	Covered Hoppers	431,003	0	0.451	
Private	Number of Zero-Rated Covered Hoppers	13,808			
Private	Tanks	422,799	0	0.838	
Private	Number of Zero-Rated Tanks	14,635			
Private	All Other Cars	288,998	105	0.084	
Private	Number of Zero-Rated Other Cars	21,888			
Private	Total Private Equipment	1,246,096			

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.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 06/22

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,268	106	0.056	95
Railroad	Number of Zero-Rated Vehicular Flats	109			
Railroad	All Other Cars	362,401	66	0.066	
Railroad	Number of Zero-Rated Other Cars	11,846			
Railroad	Total Railroad Equipment	385,624			
Private	Vehicular Flats	52,905	86	0.014	82
Private	Number of Zero-Rated Vehicular Flats	42			
Private	Covered Hoppers	432,770	0	0.451	
Private	Number of Zero-Rated Covered Hoppers	13,857			
Private	Tanks	424,519	0	0.838	
Private	Number of Zero-Rated Tanks	14,616			
Private	All Other Cars	291,107	105	0.084	
Private	Number of Zero-Rated Other Cars	22,146			
Private	Total Private Equipment	1,251,962			

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.

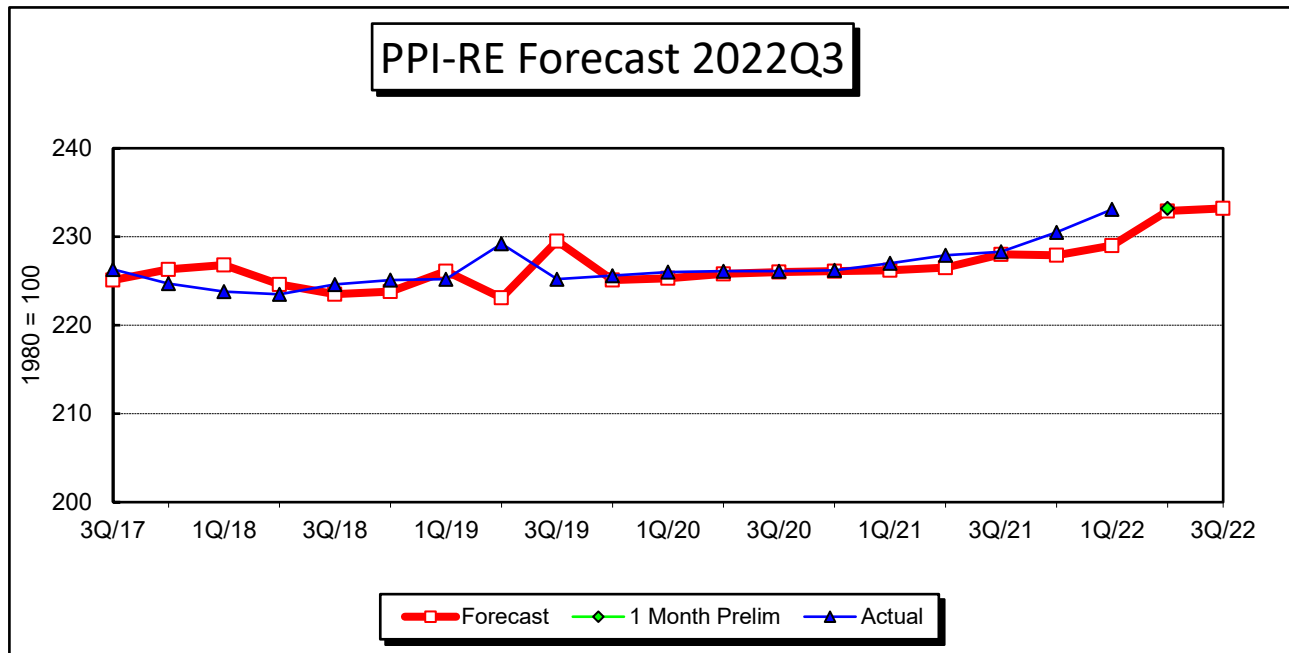
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
3Q/17	225.1	226.3	
4Q/17	226.3	224.7	
1Q/18	226.8	223.8	
2Q/18	224.6	223.5	
3Q/18	223.5	224.6	
4Q/18	223.8	225.1	
1Q/19	226.1	225.2	
2Q/19	223.1	229.2	
3Q/19	229.5	225.2	
4Q/19	225.1	225.6	
1Q/20	225.3	226.0	
2Q/20	225.8	226.1	
3Q/20	226.0	226.1	
4Q/20	226.1	226.2	
1Q/21	226.2	227.0	
2Q/21	226.5	227.9	
3Q/21	228.0	228.3	
4Q/21	227.9	230.5	
1Q/22	229.0	233.1	
2Q/22	232.9		233.2
3Q/22	233.2		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2022Q3						
Low	207.2	229.2	0.4%			
Midpoint	210.8	233.2	2.1%	0.0%	0.0%	0.1%
High	214.4	237.2	3.9%			



PPI RAILROAD EQUIPMENT

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 2.85 and for Box-Jenkins was 2.46.
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	204.28	Std. deviation	2.28
R-square	0.84	Adj. R-square	0.84
Durbin-Watson	2.24	Ljung-Box(18)	18.2 P=0.56
Forecast error	0.91	BIC	0.91
MAPE	0.24	SMAPE	0.24
RMSE	0.91	MAD	0.48
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2021-Nov	208.7
2021-Dec	209.4
2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2022-May	209.005	210.800	212.595
2022-Jun	208.261	210.800	213.339
2022-Jul	207.69	210.800	213.91
2022-Aug	207.209	210.800	214.391
2022-Sep	206.786	210.800	214.814
QTR AVG	207.228	210.800	214.372

Depreciation

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 2.85 and for Box-Jenkins was 2.46.
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	204.28	Std. deviation	2.28
R-square	0.84	Adj. R-square	0.84
Durbin-Watson	2.24	Ljung-Box(18)	18.2 P=0.56
Forecast error	0.91	BIC	0.91
MAPE	0.24	SMAPE	0.24
RMSE	0.91	MAD	0.48
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2016-May	203.5
2016-Jun	203.5
2016-Jul	203.5
2016-Aug	204.4
2016-Sep	203.7
2016-Oct	203.7
2016-Nov	201.5
2016-Dec	201.8
2017-Jan	201.9
2017-Feb	204.1
2017-Mar	203.3
2017-Apr	203.4
2017-May	203.5
2017-Jun	204.6
2017-Jul	203.6
2017-Aug	204.5
2017-Sep	203.8

Depreciation

2017-Oct	202.8
2017-Nov	201.7
2017-Dec	201.6
2018-Jan	202.1
2018-Feb	202.1
2018-Mar	202
2018-Apr	202.1
2018-May	202.1
2018-Jun	202.1
2018-Jul	204.1
2018-Aug	204.1
2018-Sep	201.1
2018-Oct	201.3
2018-Nov	201.3
2018-Dec	201.3
2019-Jan	202.1
2019-Feb	203.1
2019-Mar	206.5
2019-Apr	203.4
2019-May	203.4
2019-Jun	203.4
2019-Jul	203.5
2019-Aug	203.5
2019-Sep	203.7
2019-Oct	203.7
2019-Nov	203.9
2019-Dec	204
2020-Jan	204.3
2020-Feb	204.3
2020-Mar	204.3
2020-Apr	204.4
2020-May	204.4
2020-Jun	204.4
2020-Jul	204.4
2020-Aug	204.4
2020-Sep	204.4
2020-Oct	204.4
2020-Nov	204.4
2020-Dec	204.6
2021-Jan	204.9
2021-Feb	204.9
2021-Mar	205.8
2021-Apr	206
2021-May	206
2021-Jun	206.1
2021-Jul	206.4
2021-Aug	206.4
2021-Sep	206.5
2021-Oct	207.2
2021-Nov	208.7
2021-Dec	209.4

Depreciation

2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2022-May	209.005	210.8	212.595
2022-Jun	208.261	210.8	213.339
2022-Jul	207.69	210.8	213.91
2022-Aug	207.209	210.8	214.391
2022-Sep	206.786	210.8	214.814
2022-Oct	206.402	210.8	215.198
2022-Nov	206.05	210.8	215.55
2022-Dec	205.722	210.8	215.878
2023-Jan	205.414	210.8	216.186
2023-Feb	205.123	210.8	216.477
2023-Mar	204.846	210.8	216.754
2023-Apr	204.581	210.8	217.019



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022 GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#) ➔

Data extracted on: May 16, 2022 (7:55:48 AM)

PPI Commodity Data

Series Id: WPU144
Not Seasonally Adjusted
Series Title: PPI Commodity data for Transportation equipment-Railroad equipment, 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
2021	204.9	204.9	205.8	206.0	206.0	206.1	206.359	206.359	206.524	207.166	208.716	209.447
2022	210.597(P)	210.711(P)	210.732(P)	210.762(P)								

P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.

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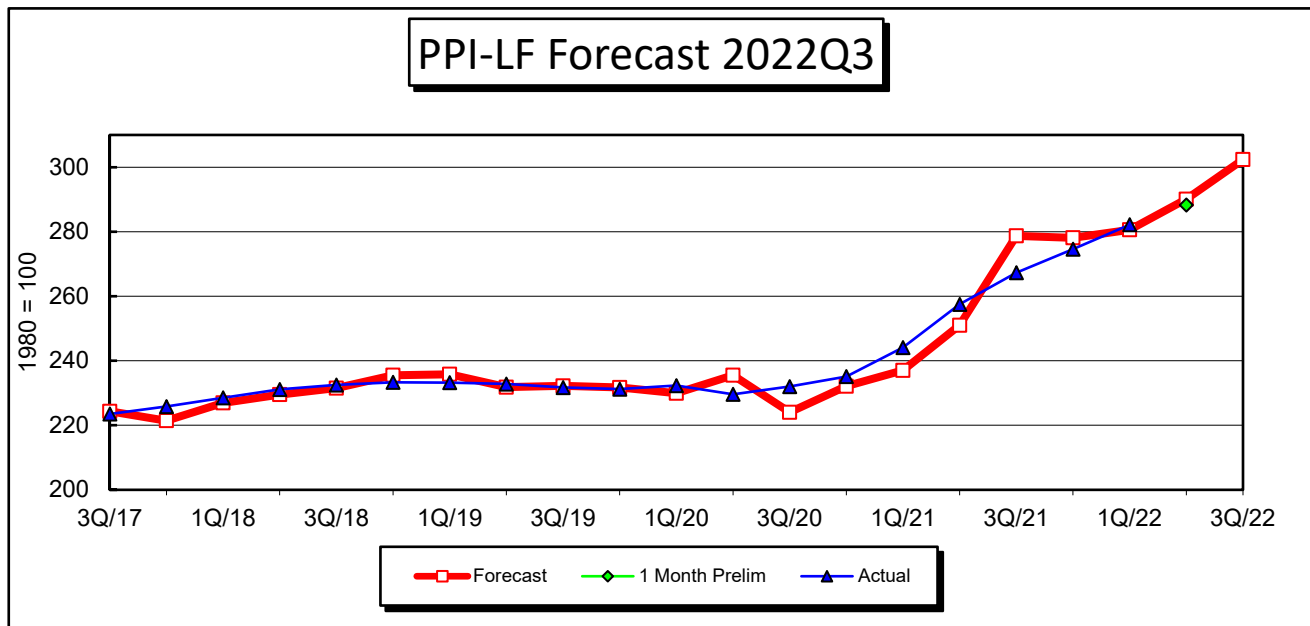
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PPI-LF Forecast (for Other and Lease Rentals Components)

	Forecast	Actual	1 Month Prelim
3Q/17	224.3	223.5	
4Q/17	221.4	225.8	
1Q/18	226.9	228.5	
2Q/18	229.5	231.1	
3Q/18	231.5	232.5	
4Q/18	235.5	233.3	
1Q/19	235.8	233.2	
2Q/19	231.8	232.8	
3Q/19	232.2	231.7	
4Q/19	231.7	231.2	
1Q/20	229.9	232.3	
2Q/20	235.5	229.6	
3Q/20	224.0	232.0	
4Q/20	232.1	235.1	
1Q/21	237.0	244.1	
2Q/21	251.0	257.5	
3Q/21	278.7	267.3	
4Q/21	278.1	274.6	
1Q/22	280.6	282.2	
2Q/22	290.1		288.3
3Q/22	302.4		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2022Q3						
Low	264.3	296.3	10.8%			
Midpoint	269.7	302.4	13.1%	4.9%	7.2%	4.2%
High	275.2	308.5	15.4%			



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

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 5.27 and for Box-Jenkins was 9.01.
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 Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality

LM(0.935, 0.991, 0.995)

Confidence limits proportional to indexes and level

Component	Smoothing Wgt		Final Value
Level	0.9349		257.4
Trend	0.9911		3.089
Seasonal	0.9953		
Seasonal Indexes			
Jan - Mar	1.002	0.9987	0.9995
Apr - Jun	0.9992	0.9996	1
Jul - Sep	0.9999	1	0.9996
Oct - Dec	1.001	1.001	0.9999

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	211.18	Std. deviation	16.22
R-square	1	Adj. R-square	1
Durbin-Watson	1.91	Ljung-Box(18)	17.2 P=0.49
Forecast error	0.66	BIC	0.7
MAPE	0.22	SMAPE	0.22
RMSE	0.64	MAD	0.47
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2021-Nov	245.5
2021-Dec	246.5
2022-Jan	249.7
2022-Feb	251.2
2022-Mar	254.2
2022-Apr	257.2

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2022-May	258.779	260.407	262.036
2022-Jun	260.157	263.598	267.039
2022-Jul	262.051	266.638	271.224
2022-Aug	264.343	269.841	275.339
2022-Sep	266.471	272.749	279.028
QTR AVG	264.288	269.743	275.197

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 5.27 and for Box-Jenkins was 9.01.
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 Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality

LM(0.935, 0.991, 0.995)

Confidence limits proportional to indexes and level

Component	Smoothing Wgt		Final Value
Level	0.9349		257.4
Trend	0.9911		3.089
Seasonal	0.9953		
Seasonal Indexes			
Jan - Mar	1.002	0.9987	0.9995
Apr - Jun	0.9992	0.9996	1
Jul - Sep	0.9999	1	0.9996
Oct - Dec	1.001	1.001	0.9999

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	211.18	Std. deviation	16.22
R-square	1	Adj. R-square	1
Durbin-Watson	1.91	Ljung-Box(18)	17.2 P=0.49
Forecast error	0.66	BIC	0.7
MAPE	0.22	SMAPE	0.22
RMSE	0.64	MAD	0.47
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2016-May	193.4
2016-Jun	193.7
2016-Jul	193.7
2016-Aug	194
2016-Sep	193.9
2016-Oct	194.3

Other

2016-Nov	194.9
2016-Dec	195.6
2017-Jan	196.8
2017-Feb	197.8
2017-Mar	198.7
2017-Apr	199.3
2017-May	199.2
2017-Jun	199.4
2017-Jul	199.2
2017-Aug	199.7
2017-Sep	200
2017-Oct	200.9
2017-Nov	201.5
2017-Dec	201.7
2018-Jan	203
2018-Feb	203.8
2018-Mar	204.8
2018-Apr	205.4
2018-May	206.3
2018-Jun	207
2018-Jul	207.4
2018-Aug	207.6
2018-Sep	207.9
2018-Oct	208.7
2018-Nov	208.5
2018-Dec	207.8
2019-Jan	208.3
2019-Feb	208.2
2019-Mar	208.4
2019-Apr	208.2
2019-May	207.7
2019-Jun	207.1
2019-Jul	206.9
2019-Aug	206.5
2019-Sep	206.1
2019-Oct	206.5
2019-Nov	206.4
2019-Dec	206.3
2020-Jan	207.2
2020-Feb	207.1
2020-Mar	207.1
2020-Apr	205.2
2020-May	204.4
2020-Jun	205
2020-Jul	205.8
2020-Aug	207
2020-Sep	208.1
2020-Oct	208.7
2020-Nov	209.2
2020-Dec	211.5
2021-Jan	214.9

Other

2021-Feb	217.5
2021-Mar	221.5
2021-Apr	225.9
2021-May	230.5
2021-Jun	234
2021-Jul	236.5
2021-Aug	238.5
2021-Sep	240
2021-Oct	242.8
2021-Nov	245.5
2021-Dec	246.5
2022-Jan	249.7
2022-Feb	251.2
2022-Mar	254.2
2022-Apr	257.2

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2022-May	258.779	260.407	262.036
2022-Jun	260.157	263.598	267.039
2022-Jul	262.051	266.638	271.224
2022-Aug	264.343	269.841	275.339
2022-Sep	266.471	272.749	279.028
2022-Oct	269.188	276.161	283.133
2022-Nov	271.669	279.273	286.878
2022-Dec	273.897	282.084	290.271
2023-Jan	276.948	285.679	294.409
2023-Feb	278.698	287.941	297.185
2023-Mar	281.531	291.258	300.985
2023-Apr	284.055	294.243	304.431



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022

☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: May 16, 2022 (8:17:56 AM)

PPI Commodity Data

Series Id: WPU03T15M05
Not Seasonally Adjusted
Series Title: PPI Commodity data for Industrial commodities less fuels, not seasonally adjusted
Group: Industrial Commodities less fuels
Item: Industrial commodities less fuels
Base Date: 198200

Download: [.xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	214.9	217.5	221.5	225.9	230.5	234.0	236.539	238.534	240.004	242.825	245.549	246.483
2022	249.696(P)	251.199(P)	254.218(P)	257.175(P)								

P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.

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Forecast Error Calculation

	2020	First Quarter 2022		Difference		Notes
		2022Q1	2022Q1	Pt.	Pct.	
	Weight	Forecast	Actual			
Labor	32.4%	469.5	469.5	0.0	0%	* actual=forecast
Fuel	9.7%	303.5	313.3	9.8	3%	from 1st month of quarter
M&S	4.5%	298.2	298.2	0.0	0%	* actual=forecast
Equip Rents	5.2%	249.9	247.7	-2.2	-1%	from Equipment Rents below
Depreciation	18.5%	229.0	233.1	4.1	2%	PPI-RE
Interest	2.7%	51.1	51.1	0.0	0%	* actual=forecast
Other	27.0%	280.6	282.2	1.6	1%	PPI-LF
Weighted Avg	100.0%					
1980 = 100		327.5	329.5			calculated
1980 = 100 (linked)		306.9	308.8			calculated
4Q17 = 100	2.645	116.0	116.7			calculated
4Q12 = 100	2.976	103.1	103.8			calculated
4Q07 = 100	2.459	124.8	125.6			calculated
4Q02 = 100	1.921	159.8	160.7			calculated
4Q97 = 100	1.732	177.2	178.3			calculated
Forecast Error		0.7				calculated
						0.007 = RCAF adj.
Prior Quarter						
1980 = 100		318.0	321.1 **			
1980 = 100 (linked)		298.0	300.9			
4Q17 = 100		112.7	113.8			calculated
4Q12 = 100		100.1	101.1			calculated
4Q07 = 100		121.2	122.4			calculated
4Q02 = 100		155.1	156.6			calculated
4Q97 = 100		172.1	173.7			calculated
Equipment Rents						
Car Hire	64.7%	209.9	205.8			from Equipment Rents/CHARM
Lease Rentals	35.3%	280.6	282.2			(equals PPI-LF from above)
Weighted Average		234.9	232.8			calculated
Linked		249.9	247.7			calculated
Prior Quarter						
Weighted Average		233.5	232.7 **			
Linked		248.4	247.6			
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

0.007 = RCAF adj.

RCAF Fuel (Actual All-Inclusive Index)

January 2022

Monthly Report

	January 2022 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	January 2022 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	January 2022 1980=100 Current Index (6)
U.S.	256.37	89.34	99.415	285.28	1.096	312.67

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

(6) = (4) x (5)

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

	January 2022 1980=100 Current Index	Adjustment Factor	January 2022 1980=100 Linked Index
U.S.	312.67	1.00192	313.27 ←

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

Car Hire for RCAF - 2020 Weights

Car Hire Index used in RCAF's All-Inclusive Index (Actual)

		1980	Aug 3Q/21	Nov 4Q/21	Feb 1Q/22	May 2Q/22	Aug 3Q/22
RATE							
RR-OWNED TIME		31.00	65.00	66.00	66.00	--	--
RR-OWNED MILEAGE		4.69	6.60	6.60	6.60	--	--
PRIVATELY-OWNED CARS		25.47	55.97	55.28	54.15	--	--
AUTORACKS		47.00	85.08	85.90	83.24	--	--
INDEX							
RR-OWNED TIME		100.0	209.7	212.9	212.9	--	--
RR-OWNED MILEAGE		100.0	140.7	140.7	140.7	--	--
PRIVATELY-OWNED CARS		100.0	219.7	217.1	212.6	--	--
AUTORACKS		100.0	181.0	182.8	177.1	--	--
CAR HIRE INDEX (old wts)	2019	100.0	214.5	--	--	--	--
CAR HIRE INDEX (new wts)	2020	100.0	214.7	212.7	208.6	--	--
CAR HIRE INDEX (LINKED)		100.0	211.8	209.8	205.8	--	--

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

	2021 (first day of month)						2022 (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)	11,180	11,157	11,138	11,094	11,067	10,999	10,976	11,009	11,044					
Rate (in cents)														
Superstructures #3 - Auto Rack	94.0	95.0	95.0	95.0	95.0	95.0	93.0	94.0	95.0					
All other #1 - Time	65.0	65.0	66.0	66.0	66.0	66.0	66.0	66.0	66.0					
All other #2 - Mileage	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6					
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	53,299	53,262	53,225	53,166	53,141	53,094	53,045	52,989	53,028					
Covered Hoppers	432,640	433,233	433,686	433,509	433,387	433,129	432,599	432,568	432,448					
Tank Cars	421,980	422,998	423,421	423,125	423,323	423,585	423,592	423,923	423,580					
Others	294,153	293,445	292,806	292,174	291,742	291,190	290,818	290,563	290,184					
Rate (in cents)														
Superstructures #1 - Time	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0					
Superstructures #2 - Mileage	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0					
Superstructures #3 - Auto Rack	83.0	83.0	83.0	83.0	84.0	84.0	80.0	81.0	81.0					
Covered Hoppers #2 - Mileage	45.1	45.1	45.2	45.2	45.3	45.3	45.0	45.0	45.1					
Tank Cars #2 - Mileage	88.7	88.7	86.1	86.2	86.2	86.2	85.9	86.0	83.7					
Others #1 -Time	102.0	102.0	103.0	103.0	103.0	104.0	104.0	104.0	104.0					
Others #2 - Mileage	8.5	8.5	8.5	8.5	8.6	8.6	8.6	4.3	8.6					
AVERAGE RATES														
Private Superstructures	21.21	21.21	21.21	21.21	21.21	21.21	21.21	20.71	21.21	0.00	0.00	0.00	0.00	0.00
Private Others	31.14	31.14	31.37	31.37	31.47	31.69	31.69	27.39	31.69	0.00	0.00	0.00	0.00	0.00
Private Total	55.93	55.97	55.17	55.21	55.28	55.36	55.16	54.15	54.43	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	84.91	85.08	85.08	85.07	85.90	85.89	82.23	83.24	83.41	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Car Hire Weights	"Old Wts" "New Wts"	
	2019	2020
For RCAF & RCR		
RR-owned Time	0.040	0.052
RR-owned Mileage	0.042	0.039
Privately-owned Cars	0.879	0.874
Autoracks	0.039	0.035
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2019	2020
Car Hire - U.S.	0.614	0.647
Lease Rentals - U.S.	0.386	0.353
----- Check sum	1.000	1.000

Notes:

The Car Hire Index and Lease Rentals Index are weighed together to calculate the Equipment Rents Index

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 02/22

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,009	107	0.057	94
Railroad	Number of Zero-Rated Vehicular Flats	118			
Railroad	All Other Cars	363,257	66	0.066	
Railroad	Number of Zero-Rated Other Cars	12,321			
Railroad	Total Railroad Equipment	386,705			
Private	Vehicular Flats	52,989	86	0.005	81
Private	Number of Zero-Rated Vehicular Flats	42			
Private	Covered Hoppers	432,568	0	0.450	
Private	Number of Zero-Rated Covered Hoppers	13,948			
Private	Tanks	423,923	0	0.860	
Private	Number of Zero-Rated Tanks	14,528			
Private	All Other Cars	290,563	104	0.043	
Private	Number of Zero-Rated Other Cars	22,191			
Private	Total Private Equipment	1,250,752			

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 2022			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	22Q1	22Q2	22Q3	22Q4
For Actual	→	21Q3	21Q4	22Q1	22Q2
January	2021	204.9	204.9	204.9	204.9
February	2021	204.9	204.9	204.9	204.9
March	2021	205.8	205.8	205.8	205.8
April	2021	206.0	206.0	206.0	206.0
May	2021	206.0	206.0	206.0	206.0
June	2021	206.1	206.1	206.1	206.1
July	2021	206.3	206.4	206.4	
August	2021	206.4	206.4	206.4	
September	2021	206.4	206.5	206.5	
October	2021	207.3	207.2	207.2	
November	2021		208.8	208.7	
December	2021		209.3	209.4	
January	2022		210.5	210.6	
February	2022			210.7	
March	2022			210.7	
April	2022			210.8	
May	2022				
June	2022				
July	2022				
Actual Qtr.		206.4	208.4	210.7	NA

1980=100

Actual Qtr.	228.3	230.5	233.1	NA
First Mo. next qtr.	229.3	232.9	233.2	NA

0.904 =1980



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022

☐ include graphs ☐ include annual averages

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Data extracted on: May 16, 2022 (7:55:48 AM)

PPI Commodity Data

Series Id: WPU144
Not Seasonally Adjusted
Series Title: PPI Commodity data for Transportation equipment-Railroad equipment, 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
2021	204.9	204.9	205.8	206.0	206.0	206.1	206.359	206.359	206.524	207.166	208.716	209.447
2022	210.597(P)	210.711(P)	210.732(P)	210.762(P)								

P : Preliminary. All indexes are subject to monthly revisions up to 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 2022			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	22Q1	22Q2	22Q3	22Q4
For Actual	→	21Q3	21Q4	22Q1	22Q2
January	2021	214.9	214.9	214.9	214.9
February	2021	217.5	217.5	217.5	217.5
March	2021	221.5	221.5	221.5	221.5
April	2021	225.9	225.9	225.9	225.9
May	2021	230.5	230.5	230.5	230.5
June	2021	234.0	234.0	234.0	234.0
July	2021	236.4	236.5	236.5	
August	2021	238.4	238.5	238.5	
September	2021	240.3	240.0	240.0	
October	2021	242.5	242.8	242.8	
November	2021		245.5	245.5	
December	2021		246.4	246.5	
January	2022		249.3	249.7	
February	2022			251.2	
March	2022			254.2	
April	2022			257.2	
May	2022				
June	2022				
July	2022				
Actual Qtr.		238.4	244.9	251.7	NA
1980=100					
Actual Qtr.		267.3	274.6	282.2	NA
First Mo. next qtr.		271.9	279.5	288.3	NA

0.892 =1980



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022

☐ include graphs ☐ include annual averages

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Data extracted on: May 16, 2022 (8:17:56 AM)

PPI Commodity Data

Series Id: WPU03T15M05
Not Seasonally Adjusted
Series Title: PPI Commodity data for Industrial commodities less fuels, not seasonally adjusted
Group: Industrial Commodities less fuels
Item: Industrial commodities less fuels
Base Date: 198200

Download: [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	214.9	217.5	221.5	225.9	230.5	234.0	236.539	238.534	240.004	242.825	245.549	246.483
2022	249.696(P)	251.199(P)	254.218(P)	257.175(P)								

P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.

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All-Inclusive Index (Actual) - 2020 Weights

	20 Wts	3Q/21 19 Wts	3Q/21 20 Wts	% Chg.	4Q/21 20 Wts	% Chg.	1Q/22 20 Wts	% Chg.	2Q/22 20 Wts	% Chg.	3Q/22 20 Wts	% Chg.
Labor	32.4%	447.9	447.9	0.0%	454.9	1.6%	469.5	3.2%		NA		NA
Fuel		270.0	270.0	0.0%	306.2	13.4%	313.3	2.3%		NA		NA
M&S	4.5%	277.8	277.8	0.0%	288.8	4.0%	298.2	3.3%		NA		NA
Equipment Rents	5.2%	246.2	246.2	0.0%	247.6	0.6%	247.7	0.0%	0.0	NA	#DIV/0!	NA
Depreciation	18.5%	228.3	228.3	0.0%	230.5	1.0%	233.1	1.1%		NA		NA
Interest	2.7%	55.7	55.7	0.0%	51.1	-8.3%	51.1	0.0%	51.1	0.0%	51.1	0.0%
Other	27.0%	267.3	267.3	0.0%	274.6	2.7%	282.2	2.8%		NA		NA
	1.0000											
Weighted Avg.		314.5	312.5	-0.6%	321.1	2.8%	329.5	2.6%	1.4	NA	#DIV/0!	NA
Linked		292.8			300.9	2.8%	308.8	2.6%	1.3	NA	#DIV/0!	NA
10/1/80	1.027	285.1			293.0	2.8%	300.7	2.6%	1.3	NA	#DIV/0!	NA
10/1/82	1.209	242.2			248.9	2.8%	255.4	2.6%	1.1	NA	#DIV/0!	NA
4Q/87	1.322	221.5			227.6	2.8%	233.6	2.6%	1.0	NA	#DIV/0!	NA
4Q/92	1.569	186.6			191.8	2.8%	196.8	2.6%	0.8	NA	#DIV/0!	NA
4Q/97	1.732	169.1			173.7	2.7%	178.3	2.6%	0.8	NA	#DIV/0!	NA
4Q/02	1.921	152.4			156.6	2.8%	160.7	2.6%	0.7	NA	#DIV/0!	NA
4Q/07	2.459	119.1			122.4	2.8%	125.6	2.6%	0.5	NA	#DIV/0!	NA
4Q/12	2.976	98.4			101.1	2.7%	103.8	2.7%	0.4	NA	#DIV/0!	NA
4Q/17	2.645	110.7			113.8	2.8%	116.7	2.5%	0.5	NA	#DIV/0!	NA
Equipment Rents												
Car Hire	64.7%	211.8	211.8	0.0%	209.8	-0.9%	205.8	-1.9%		NA		NA
Lease Rentals	35.3%	267.3	267.3	0.0%	274.6	2.7%	282.2	2.8%	0.0	NA	0.0	NA
	1.0000											
ER Weighted Avg		233.2	231.4	-0.8%	232.7	0.6%	232.8	0.0%	0.0	NA	0.0	NA
ER Linked		246.2			247.6	0.6%	247.7	0.0%	0.0	NA	#DIV/0!	NA