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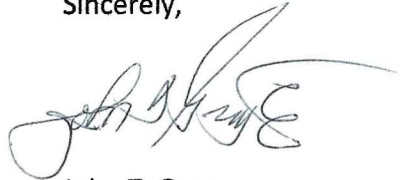
This submission is the AAR forecast of the fourth quarter 2023 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2023-4) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the fourth quarter 2023 results and compares to the previous quarter. Both quarters are shown on a 4Q\2022=100 base.

	<u>2023Q3</u>	<u>2023Q4</u>	<u>% Change</u>
All-Inclusive Index	100.2	103.0	2.8
Preliminary RCAF	1.002	1.030	2.8
Forecast Error Adjustment	-0.027	-0.018	
RCAF (Unadjusted)	0.975	1.012	3.8
Productivity Adjustment Factor	2.5083	2.5256	
RCAF (Adjusted)	0.389	0.401	3.1
PAF-5	2.6221	2.6384	
RCAF-5	0.372	0.384	3.2

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 Kiara Williams (202 639-2327) of this office.

Sincerely,

A handwritten signature in black ink, appearing to read "John T. Gray", with a large, sweeping flourish extending to the right.

John T. Gray

Attachments

**Fourth Quarter 2023
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2023-4)

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

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

September 5, 2023

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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 fourth quarter 2023. The All-Inclusive Index utilizes new weights (see page 2), which are based on 2022 Annual Report Form R-1 data. New annual report and wage statistics data have also been utilized to rebenchmark labor (see Appendix A), and the annual report data have also been used to update the Interest Index (see Appendix F).

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 2022 (current) and 2021 (previous) weights are shown below. Weights calculated from 2021 data were used for the fourth quarter of 2022 through the third quarter of 2023. Beginning with the fourth quarter of 2023, weights calculated using 2022 data are used. The component with the biggest change in weight was Fuel, which increased by 6.2 percentage points. Labor and Depreciation fell by 2 and 2.3 percentage points, respectively. Materials & Supplies increased .2 percentage points. The weight for Other decreased 1.3 percentage point, Equipment Rents decreased by .5 percentage points, and Interest decreased by .3 percentage points.

Weights for RCAF's All-Inclusive Index		
	2022	2021
Labor	29.4 %	31.4 %
Fuel	20.4	14.2
Materials & Supplies	4.7	4.5
Equipment Rents	4.4	4.9
Depreciation	15.2	17.5
Interest	2.1	2.4
Other	23.8	25.1
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

Fourth Quarter 2023

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.

	2022 Weights	Forecast		Percent Change
		Previous 2023Q3	Current 2023Q4	
1. Labor	29.4%	584.1	581.2	-0.5 %
2. Fuel	20.4%	330.3	387.9	17.4
3. M&S	4.7%	336.2	342.5	1.9
4. Equipment Rents	4.4%	261.0	263.6	1.0
5. Depreciation	15.2%	237.6	238.4	0.3
6. Interest	2.1%	50.1	51.0	1.8
7. Other	23.8%	287.7	283.9	-1.3
8. Weighted Average				
a. 1980 = 100		372.0	382.6	
b. 1980 = 100 (linked)		342.9	352.7 ¹	
c. 4Q22 = 100		100.2	103.0 ²	2.8

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

$$= (382.6 / 372.0) \times 342.9$$

$$= 352.7$$

² To calculate the 4Q22 = 100 index:

Index4Q22 = (Current Linked Index / 4Q22 Basing Factor) * 100

$$= 352.7 \text{ divided by } 342.3 \text{ times } 100$$

$$= 103.0$$

Indexes based on other periods:

$$4Q17 \text{ based index} = 352.7 / 264.5 \times 100 = 133.3$$

$$4Q12 \text{ based index} = 352.7 / 297.6 \times 100 = 118.5$$

$$4Q07 \text{ based index} = 352.7 / 245.9 \times 100 = 143.4$$

$$4Q02 \text{ based index} = 352.7 / 192.1 \times 100 = 183.6$$

$$4Q97 \text{ based index} = 352.7 / 173.2 \times 100 = 203.6$$

$$4Q92 \text{ based index} = 352.7 / 156.9 \times 100 = 224.8$$

Forecast vs. Actual All-Inclusive Index

Second Quarter 2023

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the second quarter actual index of 99.0 is 1.8 index points below the forecast value of 100.8. Therefore, the forecast error adjustment for fourth quarter 2023 is -1.8 index points.

	2021	Second Quarter 2023		Amt
	Weights	Forecast	Actual	Difference
1. Labor	31.4%	570.2	570.2	
2. Fuel	14.2%	378.2	341.9	
3. M&S	4.5%	322.6	322.6	
4. Equipment Rents ¹	4.9%	261.4	258.3	
5. Depreciation	17.5%	235.5	237.5	
6. Interest	2.4%	50.1	50.1	
7. Other	25.1%	290.4	289.7	
8. Weighted Average				
a. 1980 = 100		375.4	370.2	
b. 1980 = 100 (linked)		344.9	338.9 ²	
c. 4Q22 = 100 ³		100.8	99.0	-1.8

Forecast error **—————> -1.8 index points**

¹	2021	Second Quarter 2023	
	Weights	Forecast	Actual
Car-Hire	68.1%	220.1	220.9
Lease Rentals	31.9%	290.4	289.7
Weighted Average		242.5	242.8
Weighted Average (linked)		261.4	258.3

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
 338.9 = 370.2 / 368.8 x 337.6

³ The 4Q22 based indexes are 1980 based indexes divided by the 4Q22 basing factor (342.3/100).
 Other basing factors are: 4Q22 = 264.5; 4Q12 = 297.6; 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; and 4Q92 = 156.9.

Productivity

On February 10, 2023, the Surface Transportation Board served a decision which proposed to adopt 2.8 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2021 and removed the year 2016. The components of this average annual value are shown on the following table in ratio format – therefore, 1.028 is the same as an increase of 2.8 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			
2017 - 2021			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
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
2021	1.028	0.999	1.029
Average			1.028
Previous Average (2016-2020)			1.025

Calculation of PAF and PAF-5			
For 2017-2021, use fourth root of avg. productivity change = 1.0069			
For 2016-2020, use fourth root of avg. productivity change = 1.0062			
Quarter	Year	PAF	PAF-5
Q1	2023	2.4740	2.5898
Q2	2023	2.4911	2.6059
Q3	2023	2.5083	2.6221
Q4	2023	2.5256	2.6384
Q1	2024	2.5430	2.6566

Rail Cost Adjustment Factor

Fourth Quarter 2023

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 2023Q1 index, the All-Inclusive Index was rebased to a 2022Q4=100 basis as required in the applicable statute.

	Previous 2023Q3	Current 2023Q4	Percent Change	
All-Inclusive Index ¹	100.2	103.0	2.8	%
Preliminary RCAF ²	1.002	1.030	2.8	
Forecast Error Adjustment ³	<u>-0.027</u>	<u>-0.018</u>		
RCAF (Unadjusted) ⁴	0.975	1.012	3.8	
Productivity Adjustment Factor ⁵	<u>2.5083</u>	<u>2.5256</u>		
RCAF (Adjusted) ⁶	0.389	0.401	3.1	
PAF-5 ⁷	2.6221	2.6384		
RCAF-5 ⁸	0.372	0.384	3.2	

¹ See All-Inclusive Index on page 3.

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

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

⁴ Preliminary RCAF plus the forecast error adjustment.

⁵ See Productivity on page 5.

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

⁷ See Productivity on page 5.

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

Appendixes

Labor

Fourth Quarter 2023

The fourth quarter 2023 Labor Index is .5 percent lower than the previous quarter.

Rebenchmarking and Reweighting: Each year in the fourth quarter, the index is rebenchmarked to newer annual data. The internal weights used to determine the proportion of labor costs represented by wages and supplements are also updated in the fourth quarter. The Labor rate is basically a group of benchmarks from annual data that are updated each quarter using additional information such as labor agreements, payroll taxes, health & welfare rates, and other data. By rebenchmarking the index to newer annual data, the distance between the benchmark year and the current quarter becomes smaller, making the index a more accurate picture of the current reality. The impact of rebenchmarking is captured in the Labor Index, and by itself can cause a change in the index.

The new benchmark year is 2022, and this replaces data for 2011. One of the major data sources underlying the fourth quarter rebenchmarking is the Annual Report Form R-1 submitted to the Surface Transportation Board (STB) by each Class I Railroad. The other major data source is the 112-Class Wage Statistics report received by the AAR from each Class I railroad. The totals in each of the 112-Class Wage Statistics Report matches the corresponding total in the less-detailed Wage Form A&B submitted to the STB. The extra detail allows the AAR to divide the wage statistics by labor union, which enables wage rate updates to be more accurate. Data from the two major sources are used for labor benchmarks, and the annual report data are also used to calculate index weights. The source for the wage and supplements internal weights, like the external weights, is the Annual Report Form R-1 Summary. Unlike rebenchmarking, reweighting by itself is prevented from causing a change in the index. A linking procedure, where the previous quarter unlinked index is recalculated using the new weights, eliminates changes that would be caused solely by changing weights.

Wage Rate Index

The Wage Rate Index portion of the Labor Index increased .8 percent.

Wage Increases: There are no wage increases currently reported for the fourth quarter, change is due to new wage statistics. Due to implementation timing of national labor contracts, the benchmark data using the 112-Class Wage Statistics report received by the AAR did not fully capture the 14.1% general wage increases previously captured. A wage increase adjustment was required to fully capture the impact of new labor agreements from 2022, until 2023 wage statistics data becomes the new benchmark.

Lump Sums: The fourth quarter lump sum rate is increased 46 cents from the previous quarter due to the \$1000 lump sum payment included in labor agreements.

Back Pay: Back pay decreased slightly due to a fully amortized payment and rebenching to newer wage statistics .

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 fourth quarter rate slightly decreased from last quarter due to rebenching.

¹ Index procedure, decided by the Interstate Commerce Commission in 1988, is to amortize lump sums and/or back pay over four quarters using the rates for 13-week (a.k.a. 3-month) U.S. Treasury bills.

Labor

Fourth Quarter 2023

Supplements Index

The Supplements Index decreased 2.5 percent this quarter.

Health & Welfare: The Health & Welfare rate remains relatively unchanged.

Railroad Retirement: The Railroad Retirement rate increased 2 cents, due to slightly higher wage rate and rebenchmarking.

Unemployment Insurance: The Unemployment Insurance rate decreased 44 cents, solely the result of rebenchmarking to newer wage statistics.

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 fourth quarter rate is 15 cents lower than last quarter. Rebenchmarking was not the cause of this drop.

Labor Index Calculation

As shown in Table A-1 on the next page, the .8 percent increase in the Wage Rate Index and the 2.5 percent decrease in the Supplements Index combined to cause the Labor Index to be .5 percent lower than the previous quarter. The linked fourth quarter 2023 Labor index is 581.2, which is 21.2 percent higher than one year ago.

Labor
Fourth Quarter 2023
Table A-1 Labor Index

	2023Q3		2023Q4	
	Used in Previous Index Filing	Updated to Reflect New Benchmarks	Based on 2022 Data	Pct Chg From Prev. Filing
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$52.746	\$52.816	\$52.816	0.1%
Adjustments:				
Lump Sum	0.161	0.160	0.622	286.3%
Back Pay	7.057	7.002	6.993	-0.9%
Other	0.222	0.220	0.220	-0.9%
Total Wages	<u>60.186</u>	<u>\$60.198</u>	<u>60.651</u>	0.8%
Health & Welfare Benefits	9.530	9.532	9.532	0.0%
RR Retirement & Medicare	12.253	12.216	12.282	0.2%
Unemployment Insurance	0.876	0.432	0.432	-50.7%
Other	0.335	0.333	0.182	-45.7%
Total Supplements	<u>\$22.994</u>	<u>\$22.513</u>	<u>\$22.428</u>	-2.5%
Total Labor (a check sum only)	\$83.180	\$82.711	\$83.079	
Wage Rate Index¹	515.1	515.2	519.1	0.8%
Supplements Index²	849.7	832.0	828.8	-2.5%
Total labor Index, 2021 Weights ³	614.1			
Total labor Index, 2022 Weights ⁴	609.1	604.2	606.1	
Labor Index (linked)⁵	584.1		581.2	-0.5%

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2021 weights: wages, supplements 70.4% 29.6%

⁴ 2022 weights: wages, supplements 71.9% 28.1%

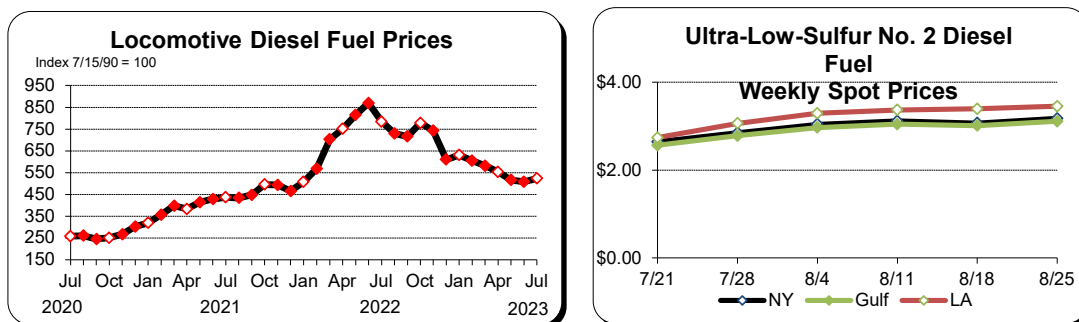
⁵ 2023Q4 linked Index = $2023Q3_{\text{linked}} \times (2023Q4_{\text{WT2022}} / 2023Q3_{\text{WT2022}})$
= 584.1 x 606.1 / 609.1

Fuel

Fourth Quarter 2023

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

The average locomotive diesel fuel price hit a peak point in June 2022, but has declined since then. While average prices for locomotive diesel fuel are available only through July 2023, data through four weeks of August are available for related fuel types. According to the Energy Information Administration, the daily spot price as of August 28 for Ultra-Low-Sulfur Diesel Fuel* is an average of 23.3 percent higher than the average for July. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index through July 2023. The second chart (on right) shows recent spot prices for Ultra-Low-Sulfur No. 2 Diesel Fuel as reported by the Energy Information Administration.



Using information from the EIA, prices towards the end of August are lower than prices that actually occurred in July. Railroads that responded to the AAR's forecast survey expect prices to increase by October (Q4) compared to prices that actually occurred for July (Q3). The fourth quarter 2023 forecast is 17.4 percent higher than the previous quarter forecast, and 19.9 percent higher than the prior quarter actual.

Forecast Fuel Index (1980 = 100)	387.9
Change from previous quarter forecast	17.4%
Change from previous quarter actual	19.9%

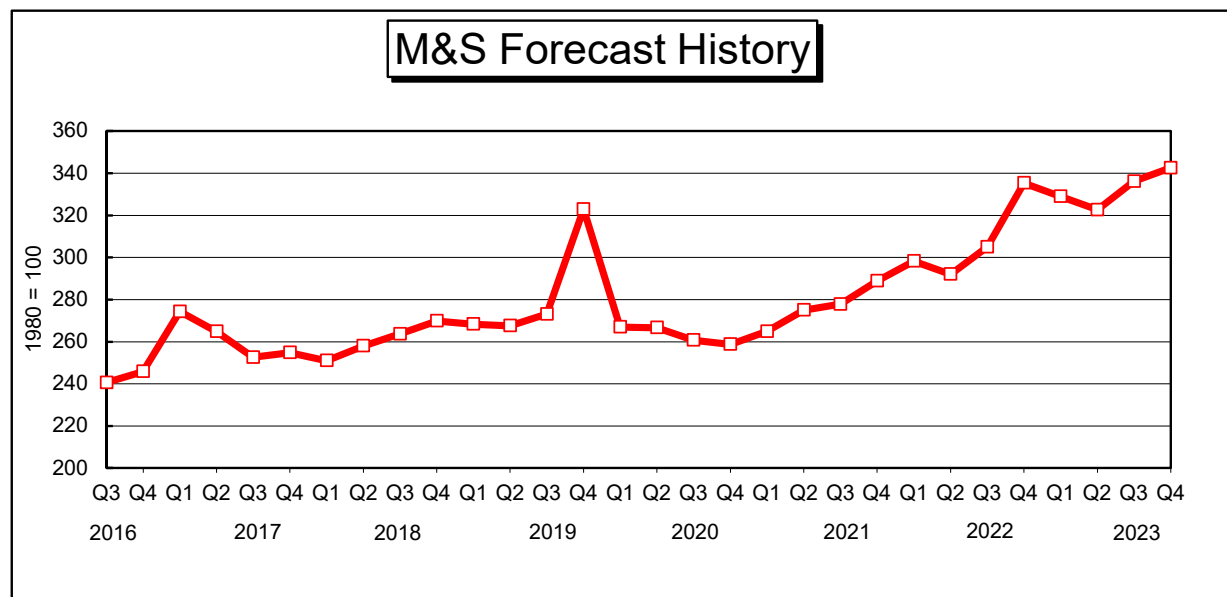
* Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

Fourth Quarter 2023

The fourth quarter 2023 Materials & Supplies Index increased 1.9 percent from the previous quarter. Prices decreased for Miscellaneous Products, but increased for Metal and Forest Products.

2023Q4	Materials & Supplies Index =	342.5
2023Q3	Materials & Supplies Index =	336.2
Difference		6.3 basis points or 1.9 %



Equipment Rents

Fourth Quarter 2023

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 Rent Index, and features new weights based on 2022. To eliminate any changes caused by the new weights, the third quarter weighted average (but not the linked value) has been recalculated using the new weights. The original third quarter weighted average using 2021 weights is 261.0, which remained unchanged. The fourth quarter Car Hire portion of the Index increased by 2.4 percent because of higher rates for privately owned cars and auto racks. A 1.3 percent decrease for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 2.4 percent increase for Car Hire, caused the Equipment Rent Index to increase 1 percent.

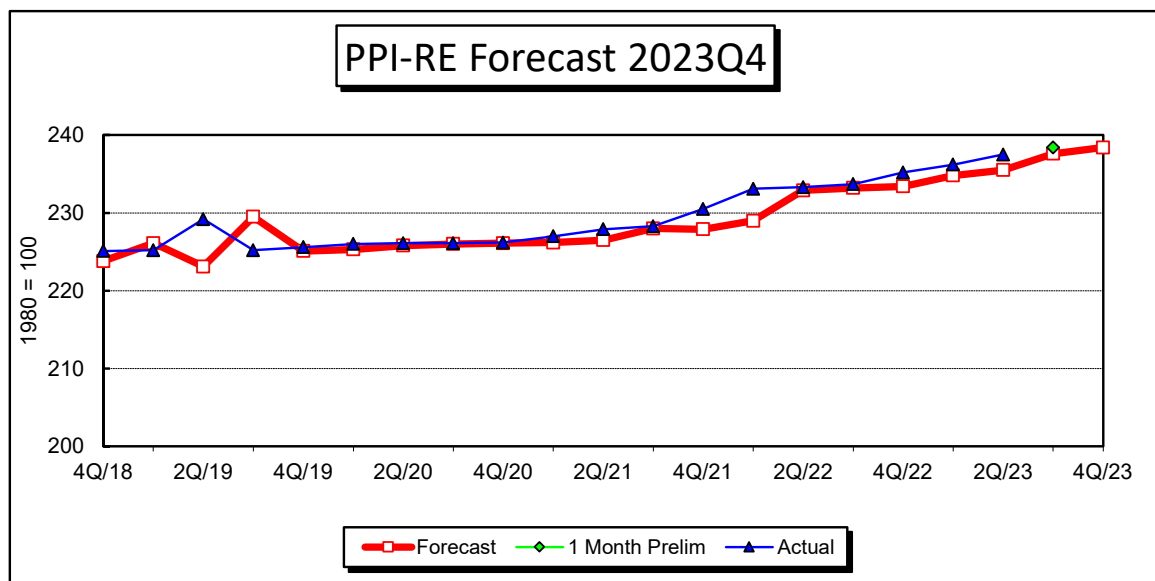
	2022			Percent
	Weight	2023Q3	2023Q4	Change
Car Hire	68.1%	220.8	226.1	2.4 %
Lease Rentals	31.9%	287.7	283.9	-1.3
Weighted Average		242.1	244.5	1.0
Weighted Average (Linked)		261.0	263.6	1.0

Depreciation

Fourth Quarter 2023

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 .34% (rounds to 0.3) higher than the previous quarter's forecast.

Forecast of Depreciation Index (1982=100)	215.5
Forecast of Depreciation Index (1980=100)	238.4
Change from previous quarter forecast	0.3% = 0.34%
Change from actual first month of previous quarter	0.0% = 0.00%
Change from same quarter of prior year (actual)	1.4%



Depreciation

Fourth Quarter 2023

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 1.64 and for Box-Jenkins was 1.59.
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	206.29	Std. deviation	4.15
R-square	0.96	Adj. R-square	0.96
Durbin-Watson	2.02	Ljung-Box(18)	15.1 P=0.35
Forecast error	0.83	BIC	0.83
MAPE	0.2	SMAPE	0.2
RMSE	0.83	MAD	0.41
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-Feb	213
2023-Mar	214.7
2023-Apr	214.7
2023-May	214.7
2023-Jun	214.7
2023-Jul	215.5

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	213.868	215.500	217.132
2023-Sep	213.192	215.500	217.808
2023-Oct	212.673	215.500	218.327
2023-Nov	212.236	215.500	218.764
2023-Dec	211.85	215.500	219.150
QTR AVG	212.253	215.500	218.747

Interest

Fourth Quarter 2023

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 2022 data, and was updated in the Q4 filing submitted on September 5, 2023. The Interest Index based on 2022 increased from 50.1 in 2021 to 51.0 in 2022.

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

2022	Interest Rate	4.00%
1980	Interest Rate	7.85%
2023Q4	Interest Index	51.0
2023Q3	Interest Index	50.1
	Percent Change	1.8%

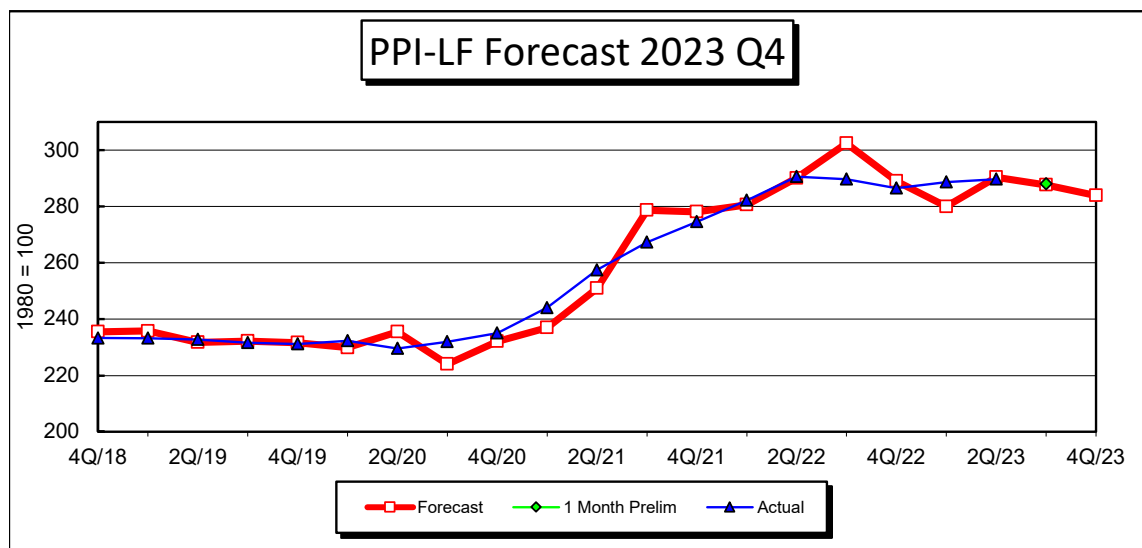
Other Expenses

Fourth Quarter 2023

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 1.3 percent lower than the prior quarter forecast.

Forecast of Other Expense Index (1982=100)	253.3
Forecast of Other Expense Index (1980=100)	283.9
Change from previous quarter forecast	-1.3%
Change from actual first month of previous quarter	-1.4%
Change from same quarter of prior year (actual)	-0.9%



Other Expenses

Fourth Quarter 2023

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 4.61 and for Box-Jenkins was 4.33.
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, 2, 0)*(1, 0, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
A[12]	0.4392	0.1161	3.783	0.9997

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	224.02	Std. deviation	22.56
R-square	1	Adj. R-square	1
Durbin-Watson	2.16	Ljung-Box(18)	20.5 P=0.70
Forecast error	0.84	BIC	0.85
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.61
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-Feb	257.8
2023-Mar	258.1
2023-Apr	258.6
2023-May	258.7
2023-Jun	257.8
2023-Jul	256.9

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	254.417	256.065	257.714
2023-Sep	251.193	254.88	258.566
2023-Oct	247.701	253.869	260.038
2023-Nov	244.268	253.298	262.328
2023-Dec	240.369	252.595	264.822
QTR AVG	244.113	253.254	262.396

Railroad and Union Abbreviations

Fourth Quarter 2023

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 2023 Q4 RCAF

September 5, 2023

- 1 . Index Calculation Spreadsheet (index_calc.xlsx, 2 pages)
- 2 . Summary of ST and PFTNW Hourly Rates (Summary.xlsx)
- 3 . National Contracts spreadsheet, 2 sections (2 and 5 pages)
- 4 . U.S. 2022 Benchmark spreadsheet
- 5 . Wall Street Journal - 13 week Treasury Bill Rate from recent auction (a.k.a. 3-Mo. T-Bill)
- 6 . 2023/Q4 RCAF Lump Sum Amortization summary, public version (1 page)
- 7 . 2023/Q4 RCAF Back Pay Amortization summary, public version (1 page)
- 8 . Health & Welfare worksheet (1 page)
- 9 . RCAF Taxable Wages adjustment calculation (TaxableRate.xlsx)
- 10 . Railroad Retirement spreadsheet (5 pages)
- 11 . Unemployment Insurance Tax worksheet (1 page)
- 12 . 2-page SAS run for 2023Q4 Unemployment Insurance Tax & 2-page run for restated 2023 Q3
- 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 . Interest Index calculation (1 page) using AAR's R-1 summary (4 pages)
- 17 . 6 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
- 18 . Forecast Error calc. and workpapers (calc, fuel, 3 car hire, 2 deprec, 2 other)
- 19 . 3 pages from EIA spot prices

Benchmarking Data

1. 2022 Wage Statistics Summary
2. RCAF Weights based on 2022 data (2 pages)
3. Railroad Retirement & Medicare 2022 Payroll Tax Calculation (2 pages)
4. Railroad Retirement & Medicare 2021 Earnings Distribution (3 pages, latest available from RRB)
5. 2022 and 2021 wage benchmarks for Railroad Retirement and Unemployment Insurance
6. Restated hourly rates for 2023Q1, Q2, and Q3 for wage rate benchmark.

RCAF All-Inclusive Index's Labor Index Based on 2022 Benchmarks

	22 Wts.	3Q/23	3Q/23 Rebenchd As Info Only	% Chg	4Q/23	% Chg	1Q/24	% Chg	2Q/24	% Chg	3Q/24	% Chg
Straight Time		\$44.251	\$43.997	-0.6%	\$43.997	-0.6%		--		--		--
PFTNW		\$8.495	\$8.819	3.8%	\$8.819	3.8%		--		--		--
Total		\$52.746	\$52.816	0.1%	\$52.816	0.1%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Lump Sum		\$0.161	\$0.160		\$0.622							
Back Pay		\$7.057	\$7.002		\$6.993							
Other		\$0.222	\$0.220		\$0.220							
Total Wages		\$60.186	\$60.198	0.0%	\$60.651	0.8%	\$0.000	--	\$0.000	--	\$0.000	--
Pre-Tax Reduction		(\$1.444)	(\$1.092)		(\$1.092)							
Taxable Wages		\$58.742	\$59.106		\$59.559		\$0.000		\$0.000		\$0.000	
H & W		\$9.530	\$9.532	0.0%	\$9.532	0.0%		--		--		--
RR Ret & Medicare		\$12.253	\$12.216	-0.3%	\$12.282	0.2%		--		--		--
Unemp. Insurance		\$0.876	\$0.432	-50.7%	\$0.432	-50.7%		--		--		--
Other		\$0.335	\$0.333	-0.6%	\$0.182	-45.7%		--		--		--
Total		\$22.994	\$22.513	-2.1%	\$22.428	-2.5%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Total Supplements		\$22.994	\$22.513	-2.1%	\$22.428	-2.5%	\$0.000	--	\$0.000	--	\$0.000	--
Total Labor		\$83.180	\$82.711	-0.6%	\$83.079	-0.1%	\$0.000	--	\$0.000	--	\$0.000	--
Wage Rate Index	0.7190	515.1	515.2	0.0%	519.1	0.8%	0.0	--	0.0	--	0.0	--
Supplements Index	0.2810	849.7	832.0	-2.1%	828.8	-2.5%	0.0	--	0.0	--	0.0	--
Total Labor Index '21 Wts.		614.1										
Total Labor Index '22 Wts.		609.1	604.2	-0.8%	606.1	-0.5%	0.0	--	0.0	--	0.0	--
Labor Index (Linked)		584.1			581.2	-0.5%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--

All Inclusive Index and RCAF using 2022 Benchmarks and Weights

	22 Wts.	3Q/23	22 Wts. 3Q/23	% Chg	4Q/23	% Chg	1Q/24	% Chg	2Q/24	% Chg	3Q/24	% Chg
Labor	0.294	584.10	584.1	0.0%	581.2	-0.5%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Fuel	0.204	330.30	330.3	0.0%	387.9	17.4%		--		--		--
M&S	0.047	336.20	336.2	0.0%	342.5	1.9%		--		--		--
Equip. Rents	0.044	261.00	261.0	0.0%	263.6	1.0%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Depreciation	0.152	237.60	237.6	0.0%	238.4	0.3%		--		--		--
Interest	0.021	50.10	50.1	0.0%	51.0	1.8%	51.0	0.0%	51.0	0.0%	51.0	0.0%
Other	0.238	287.70	287.7	0.0%	283.9	-1.3%		--		--		--
Weighted Avg.	1.000	373.20	372.0	-0.3%	382.6	2.8%	1.1	-99.7%	#DIV/0!	--	#DIV/0!	--
Linked		342.90			352.7	2.9%	1.0	-99.7%	#DIV/0!	--	#DIV/0!	--
Basing Factor												
10/1/80 basis	102.7	333.9			343.4	2.8%	1.0	-99.7%	#DIV/0!	--	#DIV/0!	--
10/1/82	120.9	283.6			291.7	2.9%	0.8	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/87	132.2	259.4			266.8	2.9%	0.8	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/92	156.9	218.5			224.8	2.9%	0.6	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/97	173.2	198.0			203.6	2.8%	0.6	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/02	192.1	178.5			183.6	2.9%	0.5	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/07	245.9	139.4			143.4	2.9%	0.4	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/12	297.6	115.2			118.5	2.9%	0.3	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/17	264.5	129.6			133.3	2.9%	0.4	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/22 basis	342.3	100.2			103.0	2.8%	0.3	-99.7%	#DIV/0!	--	#DIV/0!	--
Car Hire	0.681	220.80	220.8	0.0%	226.1	2.4%		--		--		--
Lease Rents	0.319	287.70	287.7	0.0%	283.9	-1.3%	0.0	--	0.0	--	0.0	--
Weighted Avg Eq Rents		242.10	242.1	0.0%	244.5	1.0%	0.0	--	0.0	--	0.0	--
Linked Equipment Rents		261.00			263.6	1.0%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Preliminary RCAF		1.002			1.030	2.79%	0.003	-99.7%	#DIV/0!	--	#DIV/0!	--
Forecast Error Adj.		(0.027)			(0.018)							
RCAF Unadjusted		0.975			1.012	3.79%	0.003	-99.7%	#DIV/0!	--	#DIV/0!	--
PAF		2.5083			2.5256	0.69%		--		--		--
RCAF Adjusted		0.389			0.401	3.08%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--
PAF-5		2.6221			2.6384	0.62%		--		--		--
RCAF-5		0.372			0.384	3.23%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--

National Contracts U.S.

Straight Time Hourly Rate															Check
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Sum
	0.234585	0.02934	0.178029	0.004122	0.046441	0.15670	0.046558	0.011721	0.036378	0.00449	0.030637	0.015152	0.009434	0.196411	1.00000
2022 Avg.	33.787	35.166	36.339	37.153	36.257	31.383	37.022	32.023	37.798	33.854	37.768	47.093	46.175	58.700	540.518
12/31/22	33.787	35.166	36.339	37.153	36.257	31.383	37.022	32.023	37.798	33.854	37.768	47.093	46.175	58.700	540.518
1/1/23	37.056	38.585	39.849	40.831	39.775	34.402	40.613	35.154	41.496	37.009	41.443	50.324	49.525	58.700	
4/1/23	37.056	38.585	39.849	40.831	39.775	34.402	40.613	35.154	41.496	37.009	41.443	50.324	49.525	58.700	
7/1/23	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
10/1/23	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
1/1/24	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
4/1/24	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
7/1/24	40.198	41.874	43.222	44.375	43.157	37.303	44.064	38.168	45.054	40.030	44.976	53.331	52.657	63.796	

Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2022 Avg.	7.926	1.032	6.469	0.153	1.684	4.918	1.724	0.375	1.375	0.152	1.157	0.714	0.436	11.529	39.644
12/31/22	7.926	1.032	6.469	0.153	1.684	4.918	1.724	0.375	1.375	0.152	1.157	0.714	0.436	11.529	39.644
1/1/23	8.693	1.132	7.094	0.168	1.847	5.391	1.891	0.412	1.510	0.166	1.270	0.762	0.467	11.529	42.333
4/1/23	8.693	1.132	7.094	0.168	1.847	5.391	1.891	0.412	1.510	0.166	1.270	0.762	0.467	11.529	42.333
7/1/23	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
10/1/23	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
1/1/24	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
4/1/24	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
7/1/24	9.430	1.229	7.695	0.183	2.004	5.845	2.052	0.447	1.639	0.180	1.378	0.808	0.497	12.530	45.916

Note: The 2022 Average and 12/31/22 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/23 through 7/1/24 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 2022 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
2022 Avg.	0.234585	0.02934	0.178029	0.004122	0.046441	0.15670	0.046558	0.011721	0.036378	0.00449	0.030637	0.015152	0.009434	0.196411	93.593
12/31/22	12.292	4.441	13.329	5.720	8.537	5.314	4.694	3.860	5.191	4.717	6.027	10.331	7.933	1.205	
1/1/23	13.481	4.873	14.616	6.286	9.365	5.825	5.150	4.237	5.699	5.157	6.614	11.040	8.509	1.205	
4/1/23	13.481	4.873	14.616	6.286	9.365	5.825	5.150	4.237	5.699	5.157	6.614	11.040	8.509	1.205	
7/1/23	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
10/1/23	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
1/1/24	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
4/1/24	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
7/1/24	14.624	5.289	15.854	6.832	10.162	6.316	5.587	4.600	6.188	5.578	7.178	11.700	9.047	1.310	

Pay For Time Not Worked Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2022 Avg.	2.883	0.130	2.373	0.024	0.396	0.833	0.219	0.045	0.189	0.021	0.185	0.157	0.075	0.237	7.766
12/31/22	2.883	0.130	2.373	0.024	0.396	0.833	0.219	0.045	0.189	0.021	0.185	0.157	0.075	0.237	7.766
1/1/23	3.162	0.143	2.602	0.026	0.435	0.913	0.240	0.050	0.207	0.023	0.203	0.167	0.080	0.237	8.488
4/1/23	3.162	0.143	2.602	0.026	0.435	0.913	0.240	0.050	0.207	0.023	0.203	0.167	0.080	0.237	8.488
7/1/23	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
10/1/23	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
1/1/24	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
4/1/24	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
7/1/24	3.431	0.155	2.822	0.028	0.472	0.990	0.260	0.054	0.225	0.025	0.220	0.177	0.085	0.257	9.202

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				33.78694	12.29156
12/31/22 Industry Rate				33.78694	12.29156
1/1/23	9.90%		97.738%	37.05620	13.48091
4/1/23			97.738%	37.05620	13.48091
7/1/23	4.00%		97.738%	38.50493	14.00795
10/1/23			97.738%	38.50493	14.00795
1/1/24			97.738%	38.50493	14.00795
4/1/24			97.738%	38.50493	14.00795
7/1/24	4.50%		97.738%	40.19846	14.62405

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				35.16556	4.44148
12/31/22 Industry Rate				35.16556	4.44148
1/1/23	9.90%		98.224%	38.58511	4.87338
4/1/23			98.224%	38.58511	4.87338
7/1/23	4.00%		98.224%	40.10111	5.06486
10/1/23			98.224%	40.10111	5.06486
1/1/24			98.224%	40.10111	5.06486
4/1/24			98.224%	40.10111	5.06486
7/1/24	4.50%		98.224%	41.87361	5.28873

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				36.33885	13.32886
12/31/22 Industry Rate				36.33885	13.32886
1/1/23	9.90%		97.573%	39.84909	14.61640
4/1/23			97.573%	39.84909	14.61640
7/1/23	4.00%		97.573%	41.40437	15.18686
10/1/23			97.573%	41.40437	15.18686
1/1/24			97.573%	41.40437	15.18686
4/1/24			97.573%	41.40437	15.18686
7/1/24	4.50%		97.573%	43.22235	15.85369

U.S. National Contract

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.15286	5.72015
12/31/22 Industry Rate				37.15286	5.72015
1/1/23	9.90%		100.000%	40.83099	6.28645
4/1/23			100.000%	40.83099	6.28645
7/1/23	4.00%		100.000%	42.46423	6.53790
10/1/23			100.000%	42.46423	6.53790
1/1/24			100.000%	42.46423	6.53790
4/1/24			100.000%	42.46423	6.53790
7/1/24	4.50%		100.000%	44.37512	6.83211

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				36.25671	8.53716
12/31/22 Industry Rate				36.25671	8.53716
1/1/23	9.90%		98.007%	39.77460	9.36550
4/1/23			98.007%	39.77460	9.36550
7/1/23	4.00%		98.007%	41.33388	9.73265
10/1/23			98.007%	41.33388	9.73265
1/1/24			98.007%	41.33388	9.73265
4/1/24			98.007%	41.33388	9.73265
7/1/24	4.50%		98.007%	43.15684	10.16190

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				31.38295	5.31386
12/31/22 Industry Rate				31.38295	5.31386
1/1/23	9.90%		97.181%	34.40228	5.82511
4/1/23			97.181%	34.40228	5.82511
7/1/23	4.00%		97.181%	35.73958	6.05154
10/1/23			97.181%	35.73958	6.05154
1/1/24			97.181%	35.73958	6.05154
4/1/24			97.181%	35.73958	6.05154
7/1/24	4.50%		97.181%	37.30252	6.31618

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.02232	4.69445
12/31/22 Industry Rate				37.02232	4.69445
1/1/23	9.90%		97.957%	40.61265	5.14971
4/1/23			97.957%	40.61265	5.14971
7/1/23	4.00%		97.957%	42.20396	5.35149
10/1/23			97.957%	42.20396	5.35149
1/1/24			97.957%	42.20396	5.35149
4/1/24			97.957%	42.20396	5.35149
7/1/24	4.50%		97.957%	44.06434	5.58738

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				32.02288	3.85981
12/31/22 Industry Rate				32.02288	3.85981
1/1/23	9.90%		98.781%	35.15449	4.23728
4/1/23			98.781%	35.15449	4.23728
7/1/23	4.00%		98.781%	36.54353	4.40470
10/1/23			98.781%	36.54353	4.40470
1/1/24			98.781%	36.54353	4.40470
4/1/24			98.781%	36.54353	4.40470
7/1/24	4.50%		98.781%	38.16794	4.60050

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.79823	5.19144
12/31/22 Industry Rate				37.79823	5.19144
1/1/23	9.90%		98.817%	41.49599	5.69932
4/1/23			98.817%	41.49599	5.69932
7/1/23	4.00%		98.817%	43.13619	5.92459
10/1/23			98.817%	43.13619	5.92459
1/1/24			98.817%	43.13619	5.92459
4/1/24			98.817%	43.13619	5.92459
7/1/24	4.50%		98.817%	45.05435	6.18804

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				33.85380	4.71701
12/31/22 Industry Rate				33.85380	4.71701
1/1/23	9.90%		94.144%	37.00908	5.15665
4/1/23			94.144%	37.00908	5.15665
7/1/23	4.00%		94.144%	38.40275	5.35084
10/1/23			94.144%	38.40275	5.35084
1/1/24			94.144%	38.40275	5.35084
4/1/24			94.144%	38.40275	5.35084
7/1/24	4.50%		94.144%	40.02969	5.57753

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.76845	6.02731
12/31/22 Industry Rate				37.76845	6.02731
1/1/23	9.90%		98.263%	41.44259	6.61365
4/1/23			98.263%	41.44259	6.61365
7/1/23	4.00%		98.263%	43.07150	6.87360
10/1/23			98.263%	43.07150	6.87360
1/1/24			98.263%	43.07150	6.87360
4/1/24			98.263%	43.07150	6.87360
7/1/24	4.50%		98.263%	44.97606	7.17754

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				47.09313	10.33127
12/31/22 Industry Rate				47.09313	10.33127
1/1/23	9.90%		69.291%	50.32364	11.03998
4/1/23			69.291%	50.32364	11.03998
7/1/23	4.00%		69.291%	51.71843	11.34597
10/1/23			69.291%	51.71843	11.34597
1/1/24			69.291%	51.71843	11.34597
4/1/24			69.291%	51.71843	11.34597
7/1/24	4.50%		69.291%	53.33106	11.69975

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				46.17529	7.93340
12/31/22 Industry Rate				46.17529	7.93340
1/1/23	9.90%		73.271%	49.52478	8.50887
4/1/23			73.271%	49.52478	8.50887
7/1/23	4.00%		73.271%	50.97628	8.75826
10/1/23			73.271%	50.97628	8.75826
1/1/24			73.271%	50.97628	8.75826
4/1/24			73.271%	50.97628	8.75826
7/1/24	4.50%		73.271%	52.65708	9.04703

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				58.70050	1.20501
12/31/22 Industry Rate				58.70050	1.20501
1/1/23			100.000%	58.70050	1.20501
4/1/23			100.000%	58.70050	1.20501
7/1/23	4.00%		100.000%	61.04852	1.25321
10/1/23			100.000%	61.04852	1.25321
1/1/24			100.000%	61.04852	1.25321
4/1/24			100.000%	61.04852	1.25321
7/1/24	4.50%		100.000%	63.79570	1.30960

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2022 AVG			540.51845	93.59280
12/31/22			540.51845	
		1319.249%		
		ok matches	ok matches	ok matches
			ok matches	

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

1319.249%

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

U.S. 2022 Benchmark

	From AAR 112-Class Wage Statistics & Survey				ST \$ Adjusted to Exclude Lump Sums	2022 Average Hourly Rates		12/31/2022 ST HR	ST Hrs. 2022 Weights
	ST Hrs.	ST \$	PFTNW \$	Union L. Sum		ST wo LS	PFTNW		
UTU	52,729,484	\$1,794,303,177	\$648,127,729	\$12,735,258	\$1,781,567,919	\$33.787	\$12.292	\$33.78694	0.23458
TCU	6,595,063	245,725,718	29,291,873	13,806,662	231,919,056	35.166	4.441	\$35.16556	0.02934
BLET	40,017,056	1,548,165,562	533,381,825	93,991,738	1,454,173,824	36.339	13.329	\$36.33885	0.17803
SMWIA	926,521	34,985,186	5,299,841	562,285	34,422,901	37.153	5.720	\$37.15286	0.00412
BRS	10,438,897	378,985,940	89,118,536	505,889	378,480,051	36.257	8.537	\$36.25671	0.04644
BMWE	35,223,739	1,107,200,276	187,174,135	1,775,541	1,105,424,735	31.383	5.314	\$31.38295	0.15670
TCU-CAR	10,465,285	395,859,737	49,128,787	8,410,584	387,449,153	37.022	4.694	\$37.02232	0.04656
NCFO	2,634,681	86,429,567	10,169,379	2,059,498	84,370,069	32.023	3.860	\$32.02288	0.01172
IAM	8,176,955	315,378,700	42,450,198	6,304,266	309,074,434	37.798	5.191	\$37.79823	0.03638
IBBM	1,008,643	34,685,741	4,757,783	539,342	34,146,399	33.854	4.717	\$33.85380	0.00449
IBEW	6,886,569	265,223,812	41,507,479	5,128,799	260,095,013	37.768	6.027	\$37.76845	0.03064
ATDA	3,405,803	167,889,086	35,186,286	7,499,157	160,389,929	47.093	10.331	\$47.09313	0.01515
UTU-YMD	2,120,629	99,922,332	16,823,788	2,001,680	97,920,652	46.175	7.933	\$46.17529	0.00943
OTHER	44,148,873	2,591,560,716	53,199,761		2,591,560,716	58.700	1.205	\$58.70050	0.19641
AAR 112 Total	224,778,198	9,066,315,550	1,745,617,400	155,320,699	8,910,994,851	39.644	7.766	39.644	1.00000
Sum (for proofing)						540.51845	93.59280	540.51845	

Year-End Figures are calculated, based on 2022 WS-112 and union contracts, in YearEnd2022.xlsx exhibited in document titled "Year-End 2022 ST Hourly Rates for U.S."
The ST Hours Weights and the Hourly Rates are full float.

DJIA ▲ 34786.96 0.66%

S&P 500 ▲ 4490.76 1.30%

Nasdaq ▲ 13936.28 1.69%

U.S. 10 Yr ▲ 6/32 Yield 4.125%

Crude Oil ▲ 81.21 1.39%

Euro ▲ 1.087

MarketData > Bonds > Money Rates

Quotes & Companies	View All Companies
--------------------	--------------------

Inflation

Monday, August 28, 2023

U.S. Consumer Price Index

	JULY INDEX	% CHG FROM	
		JUNE '23	JULY '22
All items	305.691	0.19	3.2
Core	309.402	0.2	4.7

International Rates

Monday, August 28, 2023

Prime Rates [U.S. Effective Date: 7/27/23]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
U.S.	8.50	8.50	8.50	5.50
Canada	7.20	7.20	7.20	4.70
Japan	1.48	1.48	1.48	1.48

Policy Rates

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Euro zone	4.25	4.25	4.25	0.50
Switzerland	2.25	2.25	2.25	0.25
Britain	5.25	5.25	5.25	1.75
Australia	4.10	4.10	4.10	1.85

Overnight Repurchase

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
U.S.	5.34	5.31	5.35	2.25

Other Short Term Rates

Monday, August 28, 2023

Call Money [Effective Date: 7/27/23]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	7.25	7.25	7.25	4.25

WSJ

MARKETS

Limited Offer: 50¢/Week

S

World

Business

U.S.

Politics

Economy

Tech

Finance

Opinion

Arts & Culture

Lifestyle

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Personal Finance

Health

Science

Style

Sports

90 days

5.40

5.43

5.54

2.64

Secured Overnight Financing Rate (SOFR) [As of 8/25/23]

LATEST

WK AGO

52-WEEK

HIGH

LOW

5.30

5.31

2.25

DTCC GCF Repo Index

LATEST

VALUE TRADED (BILLIONS)

52-WEEK

HIGH

LOW

Treasury

5.353

21.016

5.365

2.221

MBS

5.383

57.150

5.407

2.319

Secondary Market

Monday, August 28, 2023

Fannie Mae 30-year Mortgage Yields

LATEST

WK AGO

52-WEEK

HIGH

LOW

30 days

6.743

6.864

6.881

5.138

60 days

6.767

6.894

6.988

5.180

U.S. Government Rates

Monday, August 28, 2023

Discount Rates [Effective Date: 7/27/23]

LATEST

WK AGO

52-WEEK

HIGH

LOW

5.50

5.50

5.50

2.50

Federal Funds [Effective Date: 7/27/23]

LATEST

WK AGO

52-WEEK

HIGH

LOW

Effective rate

5.34

5.34

5.34

2.33

Target rate

5.25-5.50

5.25-5.50

5.25-5.50

2.25-2.50

High

5.6500

5.6500

5.6500

2.4500

Low

5.3100

5.3100

5.3100

2.3000

Bid

5.3300

5.3300

5.3300

2.3000

Offer

5.3600

5.3600

5.3700

2.3200

Treasury Bill Auction

LATEST

WK AGO

52-WEEK

HIGH

LOW

4 weeks

5.285

5.280

5.840

2.310

13 weeks

5.340

5.300

5.340

2.880

26 weeks

5.350

5.295

5.350

3.235

Weekly Survey

Thursday, August 24, 2023

Freddie Mac

LATEST

WK AGO

52-WEEK

YEAR AGO

15-year fixed	6.55	6.46	4.85
---------------	------	------	------

U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks, and is effective 7/27/23. **Other prime rates** aren't directly comparable; lending practices vary widely by location; **Discount rate** is the charge on loans to depository institutions by the New York Federal Reserve Banks, and is effective 7/27/23; **Federal-funds rate** are Tullett Prebon rates as of 5:30 p.m. on reserves traded among commercial banks for overnight use; **Call money rate** is the charge on loans to brokers on stock-exchange collateral; **Commercial Paper (AA financial)** is from the Federal Reserve and is presented with a one-day lag. **Secured Overnight Financing Rate** is the average rate at which institutions can borrow US dollars overnight while posting US Treasury bonds as collateral. **DTCC GCF Repo Index** is Depository Trust & Clearing Corp.'s weighted average for overnight trades in applicable CUSIPs. Value traded is in billions of U.S. dollars.

Sources: Federal Reserve, Bureau of Labor Statistics, [DTCC](#), [FactSet](#), Tullett Prebon

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**RCAF Lump Sum Amortization
2023/Q4**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2022Q3 PPI	2022Q4	2023Q1				224,778,198
NS - BLET 2022Q4 PPI	2023Q1	2023Q2				224,778,198
NS - BLET 2023 Ave PPI	2023Q1	2023Q2				224,778,198
NS - BLET 2023 TPB	2023Q1	2023Q2				224,778,198
NS - BLET 2023Q2 PPI	2023Q2	2023Q3				224,778,198
NS - BLET 2023Q1 PPI	2023Q3	2023Q4				224,778,198
National Neg. Lump Sum	2023Q4	2023Q4				224,778,198
Total			\$31,507,599	0.14017		

Should be slightly less
than amortized amount.

Fell out

NS - BLET 2022Q2 PPI	2022Q3	2022Q4				224,778,198
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Interest Rate

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	2.740
2023/Q1	4.285
2023/Q2	4.750
2023/Q3	5.250
2023/Q4	5.340
2024/Q1	

Lump Sum Adjustment for 2023/Q4	→	0.621673
		or
		0.622

**RCAF Back Pay Amortization
2023/Q4**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
DME - BLET 2022Q4	2022Q3	2022Q4				224,778,199	2022
National Contract (All)	2022Q4	2023Q1				224,778,199	2022
DH and Soo Indep	2023Q1	2023Q2				224,778,199	2022
Total			\$1,526,330,763	6.79038613			

Should be slightly less
than amortized amount.

Fell out

CMQ - all unions 2022	2022Q1	2022Q2				224,055,761	2021
DME - all unions 2022	2022Q1	2022Q2				224,055,761	2021
CSX - ATDA 2022Q3	2022Q2	2022Q3				223,038,929	2021

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

New National Contracts 2023Q1 = (All Unions) except CP Railroads

Interest Rate

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	2.740
2023/Q1	4.285
2023/Q2	4.750
2023/Q3	5.250
2023/Q4	5.340

Back Pay Adjustment for 2023/Q4	→ 6.99259
	or
	6.993

Health and Welfare 2023Q4

	Employees Receiving				
	Pay	Monthly Contribution		Total	Total
	2022	2022	2023	2022	2023
1. All Employees					
a. Group health	122,362	\$1,856.96	\$1,972.43	\$227,221,339.52	\$241,350,479.66
b. Group dental	122,362	75.01	69.10	9,178,373.62	8,455,214.20
c. Early retirement major medical	122,362	84.14	65.94	10,295,538.68	8,068,550.28
d. Group vision	122,362	8.51	8.51	1,041,300.62	1,041,300.62
2. Supplemental Sickness					
a. Signalmen	5,700	62.17	62.17	354,369.00	354,369.00
b. Shopcrafts	15,459	98.52	98.52	1,523,020.68	1,523,020.68
c. MOW	19,695	48.22	48.22	949,692.90	949,692.90
d. Yardmasters	1,333	74.61	76.77	99,455.13	102,334.41
3. Short-Term Disability					
a. Engineers (CSX, KCS, SOO, UP)	9,062	40.00	40.00	362,480.00	362,480.00
4. Monthly Total Premiums				251,025,570.15	262,207,441.75
5. Monthly Employee Contributions To H&W					
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,439	(\$228.89)	(\$309.21)	(\$329,372.71)	(444,953.19)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	19,976	(\$228.89)	(\$309.21)	(\$4,572,306.64)	(6,176,778.96)
c. National BMW (All except SOO, DME, DH)	18,935	(\$228.89)	(\$309.21)	(\$4,334,032.15)	(5,854,891.35)
d. National BRS (All except DME)	5,575	(\$228.89)	(\$309.21)	(\$1,276,061.75)	(1,723,845.75)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,553	(\$228.89)	(\$309.21)	(\$1,042,136.17)	(1,407,833.13)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	585	(\$228.89)	(\$309.21)	(\$133,900.65)	(180,887.85)
g. National IBEW (All except DME)	3,796	(\$228.89)	(\$309.21)	(\$868,866.44)	(1,173,761.16)
h. National NCFO (All except DME and WC)	1,484	(\$228.89)	(\$309.21)	(\$339,672.76)	(458,867.64)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	529	(\$228.89)	(\$309.21)	(\$121,082.81)	(163,572.09)
j. National TCU (All except DME and DH)	3,660	(\$228.89)	(\$309.21)	(\$837,737.40)	(1,131,708.60)
k. National TCU-CAR (All except DME)	5,777	(\$228.89)	(\$309.21)	(\$1,322,297.53)	(1,786,306.17)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	29,529	(\$228.89)	(\$309.21)	(\$6,758,892.81)	(9,130,662.09)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,262	(\$228.89)	(\$309.21)	(\$288,859.18)	(\$390,223.02)
n. Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	4,451	(\$232.23)	(\$289.43)	(\$1,033,669.00)	(1,288,239.61)
Total Major Union	101,551			(\$23,258,888.00)	(\$31,312,530.61)
All Other Employee Contributions*				(\$3,207,823.72)	(\$3,207,823.72)
6. Net Employer Monthly Payments				\$224,558,858.43	\$227,687,087.42
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments					1.01393
8. H&W hourly rate for base year 2021				\$9.401	
9. H&W hourly rate for projected quarter					\$9.532

* Non-union employee contributions net of opt-outs. The \$23,258,888.00 in major union contributions, plus \$3,207,823.72 in all other employee contributions, totals to the 12-month average of the total employee contributions reported to the AAR in its WF survey.

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 4Q/2023

U.S. ST Hours = 224,778,198
Wage Statistics are for 2022

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,439	(\$309.21)	(\$5,339,438.28)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	19,976	(\$309.21)	(\$74,121,347.52)
National BMWE (All except SOO, DME, DH)	18,935	(\$309.21)	(\$70,258,696.20)
National BRS (All except DME)	5,575	(\$309.21)	(\$20,686,149.00)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,553	(\$309.21)	(\$16,893,997.56)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	585	(\$309.21)	(\$2,170,654.20)
National IBEW (All except DME)	3,796	(\$309.21)	(\$14,085,133.92)
National NCFO (All except DME and WC)	1,484	(\$309.21)	(\$5,506,411.68)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	529	(\$309.21)	(\$1,962,865.08)
National TCU (All except DME and DH)	3,660	(\$309.21)	(\$13,580,503.20)
National TCU-CAR (All except DME)	5,777	(\$309.21)	(\$21,435,674.04)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	29,529	(\$309.21)	(\$109,567,945.08)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,262	(\$309.21)	(\$4,682,676.24)
Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	4,451	(\$299.75)	(\$16,010,247.00)
Total Union	101,551		(\$376,301,739.00)
All Other @ -\$10,896,344.69 total per month			\$130,756,136.28
Total			(\$245,545,602.72)

Reduction in Wage Rate Per ST Hour	-\$1.09239065
Deduct this amount from the Wage Rate	-\$1.092

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year	2021	Tier I Maximum Taxable Earnings for 2023	160,200
Wage Statistics Year	2022	Tier II Maximum Taxable Earnings for 2023	118,800
Current Year	2023	Medicare Maximum Taxable Earnings for 2023	no limit
Employees Receiving Pay*	122,378	Tier I Employer Tax Rate for 2023	6.20%
* from 2022 final wage statistics		Tier II Employer Tax Rate for 2023	13.10%
		Medicare Employer Tax Rate for 2023	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2021	\$43.459			
2022	\$47.010	1.08172	\$622,793,723	\$10.490
1Q/2023	\$43.482	1.00054	\$583,395,536	\$9.826
2Q/2023	\$56.781	1.30655	\$720,029,956	\$12.128
3Q/2023	\$58.742	1.35167	\$725,287,027	\$12.216
4Q/2023	\$59.559	1.37047	\$729,192,335	\$12.282

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			1Q/2023 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	\$22,243	0.622 %	761	\$22,255	\$5,564	\$5,564	\$5,564	\$5,564	\$4,235,059	\$4,235,059	\$4,235,059
41,700 - 43,699	\$42,478	0.124	152	42,501	10,625	10,625	10,625	10,625	1,612,358	1,612,358	1,612,358
43,700 - 45,699	\$44,415	0.373	456	44,439	11,110	11,110	11,110	11,110	5,071,240	5,071,240	5,071,240
45,700 - 47,699	\$46,908	0.249	305	46,933	11,733	11,733	11,733	11,733	3,575,378	3,575,378	3,575,378
47,700 - 49,699	\$48,823	0.560	685	48,849	12,212	12,212	12,212	12,212	8,369,282	8,369,282	8,369,282
49,700 - 51,699	\$50,237	0.311	381	50,264	12,566	12,566	12,566	12,566	4,782,553	4,782,553	4,782,553
51,700 - 53,699	\$52,410	0.747	914	52,438	13,110	13,110	13,110	13,110	11,984,239	11,984,239	11,984,239
53,700 - 55,699	\$54,607	1.182	1,447	54,636	13,659	13,659	13,659	13,659	19,757,932	19,757,932	19,757,932
55,700 - 57,699	\$56,673	0.809	990	56,703	14,176	14,176	14,176	14,176	14,034,613	14,034,613	14,034,613
57,700 - 59,699	\$58,725	0.809	990	58,756	14,689	14,689	14,689	14,689	14,542,774	14,542,774	14,542,774
59,700 - 61,699	\$60,533	1.742	2,132	60,565	15,141	15,141	15,141	15,141	32,278,701	32,278,701	32,278,701
61,700 - 63,699	\$62,652	2.116	2,590	62,686	15,671	15,671	15,671	15,671	40,581,333	40,581,333	40,581,333
63,700 - 65,699	\$64,843	2.800	3,427	64,878	16,219	16,219	16,219	16,219	55,577,222	55,577,222	55,577,222
65,700 - 67,699	\$66,856	2.987	3,655	66,892	16,723	16,723	16,723	16,723	61,129,566	61,129,566	61,129,566
67,700 - 69,699	\$68,686	3.485	4,265	68,723	17,181	17,181	17,181	17,181	73,273,462	73,273,462	73,273,462
69,700 - 71,699	\$70,691	2.987	3,655	70,729	17,682	17,682	17,682	17,682	64,636,086	64,636,086	64,636,086
71,700 - 73,699	\$72,600	3.111	3,807	72,639	18,160	18,160	18,160	18,160	69,137,287	69,137,287	69,137,287
73,700 - 75,699	\$74,607	4.543	5,560	74,647	18,662	18,662	18,662	18,662	103,752,368	103,752,368	103,752,368
75,700 - 77,699	\$76,750	2.551	3,122	76,791	19,198	19,198	19,198	19,198	59,932,797	59,932,797	59,932,797
77,700 - 79,699	\$78,516	3.111	3,807	78,558	19,640	19,640	19,640	19,640	74,771,119	74,771,119	74,771,119
79,700 - 81,699	\$80,643	3.298	4,036	80,686	20,172	20,172	20,172	20,172	81,412,863	81,412,863	81,412,863
81,700 - 83,699	\$82,766	3.671	4,492	82,810	20,703	20,703	20,703	20,703	93,006,233	93,006,233	93,006,233
83,700 - 85,699	\$84,684	3.485	4,265	84,729	21,182	21,182	21,182	21,182	90,339,950	90,339,950	90,339,950
85,700 - 87,699	\$86,692	3.298	4,036	86,738	21,685	21,685	21,685	21,685	87,519,610	87,519,610	87,519,610
87,700 - 89,699	\$88,531	2.987	3,655	88,578	22,145	22,145	22,145	22,145	80,948,032	80,948,032	80,948,032
89,700 - 91,699	\$90,700	2.925	3,580	90,749	22,687	22,687	22,687	22,687	81,209,878	81,209,878	81,209,878
91,700 - 93,699	\$92,531	2.551	3,122	92,581	23,145	23,145	23,145	23,145	72,255,917	72,255,917	72,255,917
93,700 - 95,699	\$94,733	1.867	2,285	94,784	23,696	23,696	23,696	23,696	54,140,381	54,140,381	54,140,381
95,700 - 97,699	\$96,844	2.676	3,275	96,896	24,224	24,224	24,224	24,224	79,329,466	79,329,466	79,329,466
97,700 - 99,699	\$98,712	2.302	2,817	98,765	24,691	24,691	24,691	24,691	69,558,622	69,558,622	69,558,622
99,700 - 101,699	\$100,684	2.489	3,046	100,738	25,184	25,184	25,184	25,184	76,711,603	76,711,603	76,711,603
101,700 - 103,699	\$102,743	2.614	3,199	102,798	25,699	25,699	25,699	25,699	82,211,681	82,211,681	82,211,681
103,700 - 105,699	\$104,673	2.116	2,590	104,729	26,182	26,182	26,182	26,182	67,799,429	67,799,429	67,799,429
105,700 - 107,699	\$106,752	2.489	3,046	106,809	26,702	26,702	26,702	26,702	81,334,840	81,334,840	81,334,840
107,700 - 109,699	\$108,699	2.240	2,741	108,757	27,189	27,189	27,189	27,189	74,533,114	74,533,114	74,533,114
109,700 - 111,699	\$110,473	1.742	2,132	110,532	27,633	27,633	27,633	27,633	58,908,776	58,908,776	58,908,776
111,700 - 113,699	\$112,554	1.556	1,904	112,614	28,154	28,154	28,154	28,154	53,610,052	53,610,052	53,610,052
113,700 - 115,699	\$114,625	1.991	2,437	114,686	28,672	28,672	28,672	28,672	69,859,635	69,859,635	69,859,635
\$115,700 - over	\$148,494	18.482	22,618	148,573	37,143	37,143	29,700	37,143	840,105,009	671,751,688	840,105,009
TOTAL	\$95,320	99.998	122,376				Total Taxable Earnings		2,917,830,460	2,749,477,140	2,917,830,460
							Employer Tax Rate		6.20%	13.10%	1.45%
							Quarterly Payment		\$180,905,489	\$360,181,505	\$42,308,542
Total Tier I, Tier II, and Medicare Paid this Quarter											\$583,395,536

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			2Q/2023 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	\$22,243	0.622 %	761	\$29,062	\$7,265	\$7,265	\$7,265	\$7,265	\$5,530,355	\$5,530,355	\$5,530,355
41,700 - 43,699	\$42,478	0.124	152	55,500	13,875	13,875	13,875	13,875	2,105,499	2,105,499	2,105,499
43,700 - 45,699	\$44,415	0.373	456	58,030	14,508	14,508	14,508	14,508	6,622,283	6,622,283	6,622,283
45,700 - 47,699	\$46,908	0.249	305	61,288	15,322	15,322	15,322	15,322	4,668,910	4,668,910	4,668,910
47,700 - 49,699	\$48,823	0.560	685	63,790	15,947	15,947	15,947	15,947	10,929,032	10,929,032	10,929,032
49,700 - 51,699	\$50,237	0.311	381	65,637	16,409	16,409	16,409	16,409	6,245,300	6,245,300	6,245,300
51,700 - 53,699	\$52,410	0.747	914	68,476	17,119	17,119	17,119	17,119	15,649,627	15,649,627	15,649,627
53,700 - 55,699	\$54,607	1.182	1,447	71,347	17,837	17,837	17,837	17,837	25,800,910	25,800,910	25,800,910
55,700 - 57,699	\$56,673	0.809	990	74,046	18,512	18,512	18,512	18,512	18,327,109	18,327,109	18,327,109
57,700 - 59,699	\$58,725	0.809	990	76,727	19,182	19,182	19,182	19,182	18,990,691	18,990,691	18,990,691
59,700 - 61,699	\$60,533	1.742	2,132	79,089	19,772	19,772	19,772	19,772	42,151,164	42,151,164	42,151,164
61,700 - 63,699	\$62,652	2.116	2,590	81,858	20,464	20,464	20,464	20,464	52,993,162	52,993,162	52,993,162
63,700 - 65,699	\$64,843	2.800	3,427	84,721	21,180	21,180	21,180	21,180	72,575,554	72,575,554	72,575,554
65,700 - 67,699	\$66,856	2.987	3,655	87,351	21,838	21,838	21,838	21,838	79,826,087	79,826,087	79,826,087
67,700 - 69,699	\$68,686	3.485	4,265	89,742	22,435	22,435	22,435	22,435	95,684,201	95,684,201	95,684,201
69,700 - 71,699	\$70,691	2.987	3,655	92,361	23,090	23,090	23,090	23,090	84,405,078	84,405,078	84,405,078
71,700 - 73,699	\$72,600	3.111	3,807	94,855	23,714	23,714	23,714	23,714	90,282,974	90,282,974	90,282,974
73,700 - 75,699	\$74,607	4.543	5,560	97,478	24,369	24,369	24,369	24,369	135,485,101	135,485,101	135,485,101
75,700 - 77,699	\$76,750	2.551	3,122	100,278	25,069	25,069	25,069	25,069	78,263,284	78,263,284	78,263,284
77,700 - 79,699	\$78,516	3.111	3,807	102,585	25,646	25,646	25,646	25,646	97,639,918	97,639,918	97,639,918
79,700 - 81,699	\$80,643	3.298	4,036	105,364	26,341	26,341	26,341	26,341	106,313,044	106,313,044	106,313,044
81,700 - 83,699	\$82,766	3.671	4,492	108,138	27,034	27,034	27,034	27,034	121,452,254	121,452,254	121,452,254
83,700 - 85,699	\$84,684	3.485	4,265	110,644	27,661	27,661	27,661	27,661	117,970,487	117,970,487	117,970,487
85,700 - 87,699	\$86,692	3.298	4,036	113,267	28,317	28,317	28,317	28,317	114,287,544	114,287,544	114,287,544
87,700 - 89,699	\$88,531	2.987	3,655	115,670	28,918	28,918	28,918	28,918	105,706,044	105,706,044	105,706,044
89,700 - 91,699	\$90,700	2.925	3,580	118,504	29,626	29,626	29,626	29,626	106,047,976	106,047,976	106,047,976
91,700 - 93,699	\$92,531	2.551	3,122	120,896	30,224	30,224	30,224	30,224	94,355,439	94,355,439	94,355,439
93,700 - 95,699	\$94,733	1.867	2,285	123,773	30,943	30,943	30,943	30,943	70,699,255	70,699,255	70,699,255
95,700 - 97,699	\$96,844	2.676	3,275	126,531	31,633	31,633	31,633	31,633	103,592,438	103,592,438	103,592,438
97,700 - 99,699	\$98,712	2.302	2,817	128,972	32,243	32,243	32,243	32,243	90,833,176	90,833,176	90,833,176
99,700 - 101,699	\$100,684	2.489	3,046	131,549	32,887	32,887	32,887	32,887	100,173,901	100,173,901	100,173,901
101,700 - 103,699	\$102,743	2.614	3,199	134,239	33,560	33,560	33,560	33,560	107,356,181	107,356,181	107,356,181
103,700 - 105,699	\$104,673	2.116	2,590	136,760	34,190	34,190	33,218	34,190	88,535,932	86,017,969	88,535,932
105,700 - 107,699	\$106,752	2.489	3,046	139,477	34,869	34,869	32,698	34,869	106,211,158	99,596,872	106,211,158
107,700 - 109,699	\$108,699	2.240	2,741	142,021	35,505	35,505	32,211	35,505	97,329,119	88,298,157	97,329,119
109,700 - 111,699	\$110,473	1.742	2,132	144,338	36,085	36,085	31,767	36,085	76,926,066	67,721,615	76,926,066
111,700 - 113,699	\$112,554	1.556	1,904	147,057	36,764	36,764	31,246	36,764	70,006,724	59,499,528	70,006,724
113,700 - 115,699	\$114,625	1.991	2,437	149,763	37,441	37,441	30,728	37,441	91,226,253	74,871,196	91,226,253
\$115,700 - over	\$148,494	18.482	22,618	194,015	48,504	42,957	29,700	48,504	<u>971,588,938</u>	<u>671,751,688</u>	<u>1,097,051,711</u>
TOTAL		99.998	122,376						3,684,788,167	3,330,721,002	3,810,250,940
									Employer Tax Rate	6.20%	13.10%
									Quarterly Payment	\$228,456,866	\$436,324,451
											\$55,248,639
									Total Tier I, Tier II, and Medicare Paid this Quarter		\$720,029,956

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			3Q/2023 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	\$22,243	0.622 %	761	\$30,065	\$7,516	\$7,516	\$7,516	\$7,516	\$5,721,352	\$5,721,352	\$5,721,352	
41,700 - 43,699	\$42,478	0.124	152	57,416	14,354	14,354	14,354	14,354	2,178,215	2,178,215	2,178,215	
43,700 - 45,699	\$44,415	0.373	456	60,035	15,009	15,009	15,009	15,009	6,850,991	6,850,991	6,850,991	
45,700 - 47,699	\$46,908	0.249	305	63,404	15,851	15,851	15,851	15,851	4,830,156	4,830,156	4,830,156	
47,700 - 49,699	\$48,823	0.560	685	65,993	16,498	16,498	16,498	16,498	11,306,480	11,306,480	11,306,480	
49,700 - 51,699	\$50,237	0.311	381	67,904	16,976	16,976	16,976	16,976	6,460,989	6,460,989	6,460,989	
51,700 - 53,699	\$52,410	0.747	914	70,841	17,710	17,710	17,710	17,710	16,190,106	16,190,106	16,190,106	
53,700 - 55,699	\$54,607	1.182	1,447	73,811	18,453	18,453	18,453	18,453	26,691,975	26,691,975	26,691,975	
55,700 - 57,699	\$56,673	0.809	990	76,603	19,151	19,151	19,151	19,151	18,960,057	18,960,057	18,960,057	
57,700 - 59,699	\$58,725	0.809	990	79,377	19,844	19,844	19,844	19,844	19,646,558	19,646,558	19,646,558	
59,700 - 61,699	\$60,533	1.742	2,132	81,821	20,455	20,455	20,455	20,455	43,606,905	43,606,905	43,606,905	
61,700 - 63,699	\$62,652	2.116	2,590	84,685	21,171	21,171	21,171	21,171	54,823,344	54,823,344	54,823,344	
63,700 - 65,699	\$64,843	2.800	3,427	87,647	21,912	21,912	21,912	21,912	75,082,038	75,082,038	75,082,038	
65,700 - 67,699	\$66,856	2.987	3,655	90,367	22,592	22,592	22,592	22,592	82,582,976	82,582,976	82,582,976	
67,700 - 69,699	\$68,686	3.485	4,265	92,841	23,210	23,210	23,210	23,210	98,988,770	98,988,770	98,988,770	
69,700 - 71,699	\$70,691	2.987	3,655	95,551	23,888	23,888	23,888	23,888	87,320,109	87,320,109	87,320,109	
71,700 - 73,699	\$72,600	3.111	3,807	98,131	24,533	24,533	24,533	24,533	93,401,005	93,401,005	93,401,005	
73,700 - 75,699	\$74,607	4.543	5,560	100,844	25,211	25,211	25,211	25,211	140,164,242	140,164,242	140,164,242	
75,700 - 77,699	\$76,750	2.551	3,122	103,741	25,935	25,935	25,935	25,935	80,966,201	80,966,201	80,966,201	
77,700 - 79,699	\$78,516	3.111	3,807	106,128	26,532	26,532	26,532	26,532	101,012,029	101,012,029	101,012,029	
79,700 - 81,699	\$80,643	3.298	4,036	109,003	27,251	27,251	27,251	27,251	109,984,693	109,984,693	109,984,693	
81,700 - 83,699	\$82,766	3.671	4,492	111,873	27,968	27,968	27,968	27,968	125,646,753	125,646,753	125,646,753	
83,700 - 85,699	\$84,684	3.485	4,265	114,465	28,616	28,616	28,616	28,616	122,044,740	122,044,740	122,044,740	
85,700 - 87,699	\$86,692	3.298	4,036	117,179	29,295	29,295	29,295	29,295	118,234,602	118,234,602	118,234,602	
87,700 - 89,699	\$88,531	2.987	3,655	119,665	29,916	29,916	29,916	29,916	109,356,729	109,356,729	109,356,729	
89,700 - 91,699	\$90,700	2.925	3,580	122,597	30,649	30,649	30,649	30,649	109,710,470	109,710,470	109,710,470	
91,700 - 93,699	\$92,531	2.551	3,122	125,072	31,268	31,268	31,268	31,268	97,614,118	97,614,118	97,614,118	
93,700 - 95,699	\$94,733	1.867	2,285	128,048	32,012	32,012	32,012	32,012	73,140,938	73,140,938	73,140,938	
95,700 - 97,699	\$96,844	2.676	3,275	130,901	32,725	32,725	32,725	32,725	107,170,127	107,170,127	107,170,127	
97,700 - 99,699	\$98,712	2.302	2,817	133,426	33,357	33,357	32,166	33,357	93,970,208	90,615,515	93,970,208	
99,700 - 101,699	\$100,684	2.489	3,046	136,092	34,023	34,023	31,028	34,023	103,633,526	94,512,064	103,633,526	
101,700 - 103,699	\$102,743	2.614	3,199	138,875	34,719	34,719	29,841	34,719	111,063,855	95,459,556	111,063,855	
103,700 - 105,699	\$104,673	2.116	2,590	141,484	35,371	35,371	29,700	35,371	91,593,626	76,908,699	91,593,626	
105,700 - 107,699	\$106,752	2.489	3,046	144,294	36,073	36,073	29,700	36,073	109,879,288	90,465,856	109,879,288	
107,700 - 109,699	\$108,699	2.240	2,741	146,925	36,731	36,731	29,700	36,731	100,690,497	81,415,636	100,690,497	
109,700 - 111,699	\$110,473	1.742	2,132	149,323	37,331	37,331	29,700	37,331	79,582,800	63,315,195	79,582,800	
111,700 - 113,699	\$112,554	1.556	1,904	152,136	38,034	38,034	29,700	38,034	72,424,490	56,554,790	72,424,490	
113,700 - 115,699	\$114,625	1.991	2,437	154,935	38,734	38,734	29,700	38,734	94,376,861	72,365,416	94,376,861	
\$115,700 - over	\$148,494	18.482	22,618	200,715	50,179	40,050	29,700	50,179	<u>905,846,973</u>	<u>671,751,688</u>	<u>1,134,939,709</u>	
TOTAL		99.998	122,376				Total Taxable Earnings			3,712,749,795	3,343,052,084	3,941,842,530
							Employer Tax Rate			6.20%	13.10%	1.45%
							Quarterly Payment			\$230,190,487	\$437,939,823	\$57,156,717

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

\$725,287,027

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			4Q/2023 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	Tier II	Medicare	Total Taxable Earnings (Taxable x Employees)		
						Taxable	Taxable	Taxable	Tier I	Tier II	Medicare
\$0 - 41,699	\$22,243	0.622 %	761	\$30,483	\$7,621	\$7,621	\$7,621	\$7,621	\$5,800,926	\$5,800,926	\$5,800,926
41,700 - 43,699	\$42,478	0.124	152	58,215	14,554	14,554	14,554	14,554	2,208,510	2,208,510	2,208,510
43,700 - 45,699	\$44,415	0.373	456	60,870	15,217	15,217	15,217	15,217	6,946,277	6,946,277	6,946,277
45,700 - 47,699	\$46,908	0.249	305	64,286	16,072	16,072	16,072	16,072	4,897,335	4,897,335	4,897,335
47,700 - 49,699	\$48,823	0.560	685	66,911	16,728	16,728	16,728	16,728	11,463,733	11,463,733	11,463,733
49,700 - 51,699	\$50,237	0.311	381	68,848	17,212	17,212	17,212	17,212	6,550,850	6,550,850	6,550,850
51,700 - 53,699	\$52,410	0.747	914	71,826	17,957	17,957	17,957	17,957	16,415,282	16,415,282	16,415,282
53,700 - 55,699	\$54,607	1.182	1,447	74,837	18,709	18,709	18,709	18,709	27,063,215	27,063,215	27,063,215
55,700 - 57,699	\$56,673	0.809	990	77,669	19,417	19,417	19,417	19,417	19,223,759	19,223,759	19,223,759
57,700 - 59,699	\$58,725	0.809	990	80,481	20,120	20,120	20,120	20,120	19,919,807	19,919,807	19,919,807
59,700 - 61,699	\$60,533	1.742	2,132	82,959	20,740	20,740	20,740	20,740	44,213,402	44,213,402	44,213,402
61,700 - 63,699	\$62,652	2.116	2,590	85,863	21,466	21,466	21,466	21,466	55,585,842	55,585,842	55,585,842
63,700 - 65,699	\$64,843	2.800	3,427	88,866	22,216	22,216	22,216	22,216	76,126,299	76,126,299	76,126,299
65,700 - 67,699	\$66,856	2.987	3,655	91,624	22,906	22,906	22,906	22,906	83,731,563	83,731,563	83,731,563
67,700 - 69,699	\$68,686	3.485	4,265	94,132	23,533	23,533	23,533	23,533	100,365,533	100,365,533	100,365,533
69,700 - 71,699	\$70,691	2.987	3,655	96,880	24,220	24,220	24,220	24,220	88,534,581	88,534,581	88,534,581
71,700 - 73,699	\$72,600	3.111	3,807	99,496	24,874	24,874	24,874	24,874	94,700,052	94,700,052	94,700,052
73,700 - 75,699	\$74,607	4.543	5,560	102,247	25,562	25,562	25,562	25,562	142,113,685	142,113,685	142,113,685
75,700 - 77,699	\$76,750	2.551	3,122	105,184	26,296	26,296	26,296	26,296	82,092,301	82,092,301	82,092,301
77,700 - 79,699	\$78,516	3.111	3,807	107,604	26,901	26,901	26,901	26,901	102,416,933	102,416,933	102,416,933
79,700 - 81,699	\$80,643	3.298	4,036	110,519	27,630	27,630	27,630	27,630	111,514,390	111,514,390	111,514,390
81,700 - 83,699	\$82,766	3.671	4,492	113,429	28,357	28,357	28,357	28,357	127,394,283	127,394,283	127,394,283
83,700 - 85,699	\$84,684	3.485	4,265	116,057	29,014	29,014	29,014	29,014	123,742,172	123,742,172	123,742,172
85,700 - 87,699	\$86,692	3.298	4,036	118,809	29,702	29,702	29,702	29,702	119,879,041	119,879,041	119,879,041
87,700 - 89,699	\$88,531	2.987	3,655	121,329	30,332	30,332	30,332	30,332	110,877,693	110,877,693	110,877,693
89,700 - 91,699	\$90,700	2.925	3,580	124,302	31,075	31,075	31,075	31,075	111,236,354	111,236,354	111,236,354
91,700 - 93,699	\$92,531	2.551	3,122	126,811	31,703	31,703	31,703	31,703	98,971,762	98,971,762	98,971,762
93,700 - 95,699	\$94,733	1.867	2,285	129,829	32,457	32,457	32,149	32,457	74,158,203	73,453,340	74,158,203
95,700 - 97,699	\$96,844	2.676	3,275	132,722	33,181	33,181	30,218	33,181	108,660,679	98,958,400	108,660,679
97,700 - 99,699	\$98,712	2.302	2,817	135,282	33,821	33,821	29,700	33,821	95,277,172	83,669,104	95,277,172
99,700 - 101,699	\$100,684	2.489	3,046	137,985	34,496	34,496	29,700	34,496	105,074,890	90,465,856	105,074,890
101,700 - 103,699	\$102,743	2.614	3,199	140,806	35,202	35,202	29,700	35,202	112,608,562	95,009,139	112,608,562
103,700 - 105,699	\$104,673	2.116	2,590	143,451	35,863	35,863	29,700	35,863	92,867,536	76,908,699	92,867,536
105,700 - 107,699	\$106,752	2.489	3,046	146,301	36,575	36,575	29,700	36,575	111,407,519	90,465,856	111,407,519
107,700 - 109,699	\$108,699	2.240	2,741	148,969	37,242	37,242	29,700	37,242	102,090,929	81,415,636	102,090,929
109,700 - 111,699	\$110,473	1.742	2,132	151,400	37,850	37,850	29,700	37,850	80,689,660	63,315,195	80,689,660
111,700 - 113,699	\$112,554	1.556	1,904	154,252	38,563	38,563	29,700	38,563	73,431,790	56,554,790	73,431,790
113,700 - 115,699	\$114,625	1.991	2,437	157,090	39,273	39,273	29,700	39,273	95,689,480	72,365,416	95,689,480
\$115,700 - over	\$148,494	18.482	22,618	203,507	50,877	40,050	29,700	50,877	905,846,973	671,751,688	1,150,724,764
TOTAL		99.998	122,376					Total Taxable Earnings	3,751,788,977	3,348,318,701	3,996,666,767
								Employer Tax Rate	6.20%	13.10%	1.45%
								Quarterly Payment	\$232,610,917	\$438,629,750	\$57,951,668

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

\$729,192,335

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
			\$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
		\$1,755	\$43.981	(2020)			
2021 Avg.	5.69%	\$20,520	\$43.459		0.988125	\$19,350.22	\$0.574
3Q/22 reb.	11.23%	\$21,060	\$43.725		0.994174	\$19,846.09	\$1.162
4Q/22	11.23%	\$21,060	\$43.758		0.994933	\$19,846.60	\$1.162
1Q/23	7.79%	\$22,740	\$56.875		1.293172	\$21,601.54	\$0.877
2Q/23	7.79%	\$22,740	\$56.781		1.291035	\$21,549.68	\$0.875
3Q/23	7.79%	\$22,740	\$58.742		1.335622	\$21,570.87	\$0.876
		\$1,895	\$43.459	(2021)			
2022 Avg.	11.23%	\$20,520	\$47.010		1.081709	\$19,772.63	\$0.574
3Q/23 reb.	7.79%	\$22,740	\$59.106		1.343899	\$21,466.50	\$0.432
4Q/23	7.79%	\$22,740	\$59.559		1.354198	\$21,472.86	\$0.432
1Q/24					0.000000		\$0.000
2Q/24					0.000000		\$0.000
3Q/24					0.000000		\$0.000

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

The SAS System
TOTAL GROSS EARNINGS AND AVERAGE GROSS EARNINGS-2021 RRB File

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2108	41680706.09	19772.63
QTRLY_US	2108	45264789.86	21472.86

The SAS System
Factors and Caps 2022 and 2023Q4

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2108	2280.24	1.0817090
FactorQ	2108	2854.65	1.3541980
Capa	2108	44394480.00	21060.00
Capq	2108	47935920.00	22740.00

U.S.

Summary by Composition Category

	MS-2022		Prev. Idx	2023Q3		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	800,288,707	0.1412	415.78	440.98		58.71	62.27	
Metal Products	3,377,322,405	0.5961	211.56	222.33		126.11	132.53	
Misc. Products	1,488,461,740	0.2627	510.69	495.57		134.16	130.19	
Total	5,666,072,852	1.0000	318.98	324.99				1.0188
Total Linked			316.82	322.78				
'77 = 100 Link Fact.= 1.423			450.83	459.32				
'80 = 100 Link Fact.= 1.061			336.15	342.47				

As info only	Change
Forest Products	6.06%
Metal Products	5.09%
Misc. Products	<u>-2.96%</u>
Total ('80=100)	1.88%
Rounded 80 Indices	1.9%
Rounded 77 Indices	1.9%

Car Hire for RCAF - 2022 Weights

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

		1980	June 3Q/23	Sept. 4Q/23	Dec. 1Q/24	Mar. 2Q/24	June 3Q/24
RATE							
RR-OWNED TIME		31.00	65.00	65.00	--	--	--
RR-OWNED MILEAGE		4.69	6.50	6.50	--	--	--
PRIVATELY-OWNED CARS		25.47	58.62	60.19	--	--	--
AUTORACKS		47.00	90.83	94.51	--	--	--
INDEX							
RR-OWNED TIME		100.0	209.7	209.7	--	--	--
RR-OWNED MILEAGE		100.0	138.6	138.6	--	--	--
PRIVATELY-OWNED CARS		100.0	230.1	236.3	--	--	--
AUTORACKS		100.0	193.3	201.1	--	--	--
CAR HIRE INDEX (old wts)	2021	100.0	223.8	--	--	--	--
CAR HIRE INDEX (new wts)	2022	100.0	223.2	228.6	--	--	--
CAR HIRE INDEX (LINKED)		100.0	220.8	226.1	--	--	--

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 for RCAF - 2022 Weights

RCAF (Forecast) Analysis of Change

	1980	June 3Q/23	Sept. 4Q/23	Dec. 1Q/24	Mar. 2Q/24	June 3Q/24
INDEX						
RR-OWNED TIME	100.0	209.7	209.7	--	--	--
RR-OWNED MILEAGE	100.0	138.6	138.6	--	--	--
PRIVATELY-OWNED CARS	100.0	230.1	236.3	--	--	--
AUTORACKS	100.0	193.3	201.1	--	--	--
UNLINKED CAR HIRE INDEX (new wts)		223.2	228.6	--	--	--

Weighted Change	Weight					
RR-OWNED TIME	0.091	0.000	#VALUE!	#VALUE!	#####	
RR-OWNED MILEAGE	0.041	0.000	#VALUE!	#VALUE!	#####	
PRIVATELY-OWNED CARS*	0.832	5.158	#VALUE!	#VALUE!	#####	
AUTORACKS	0.036	0.281	#VALUE!	#VALUE!	#####	
* see other tab for details	1.000	5.439	#VALUE!	#VALUE!	#####	
UNLINKED CAR HIRE INDEX (new wts)		5.400	#VALUE!	#VALUE!	#####	

Check of weights	3Q/23	2021		2022	
RR-owned Time	209.7	0.065	13.6305	0.091	19.083
RR-owned Mileage	138.6	0.038	5.2668	0.041	5.6826
Privately-owned Cars	230.1	0.857	197.196	0.832	191.44
Autoracks	193.3	0.040	7.732	0.036	6.9588
		1.000	223.825	1.000	223.17

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 09/23

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,754	110	0.060	92
Railroad	Number of Zero-Rated Vehicular Flats	209			
Railroad	All Other Cars	362,029	65	0.065	
Railroad	Number of Zero-Rated Other Cars	11,602			
Railroad	Total Railroad Equipment	384,594			
Private	Vehicular Flats	55,671	85	0.016	95
Private	Number of Zero-Rated Vehicular Flats	184			
Private	Covered Hoppers	436,760	0	0.454	
Private	Number of Zero-Rated Covered Hoppers	15,036			
Private	Tanks	423,896	0	1.005	
Private	Number of Zero-Rated Tanks	14,808			
Private	All Other Cars	300,882	105	0.087	
Private	Number of Zero-Rated Other Cars	22,164			
Private	Total Private Equipment	1,269,406			

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.

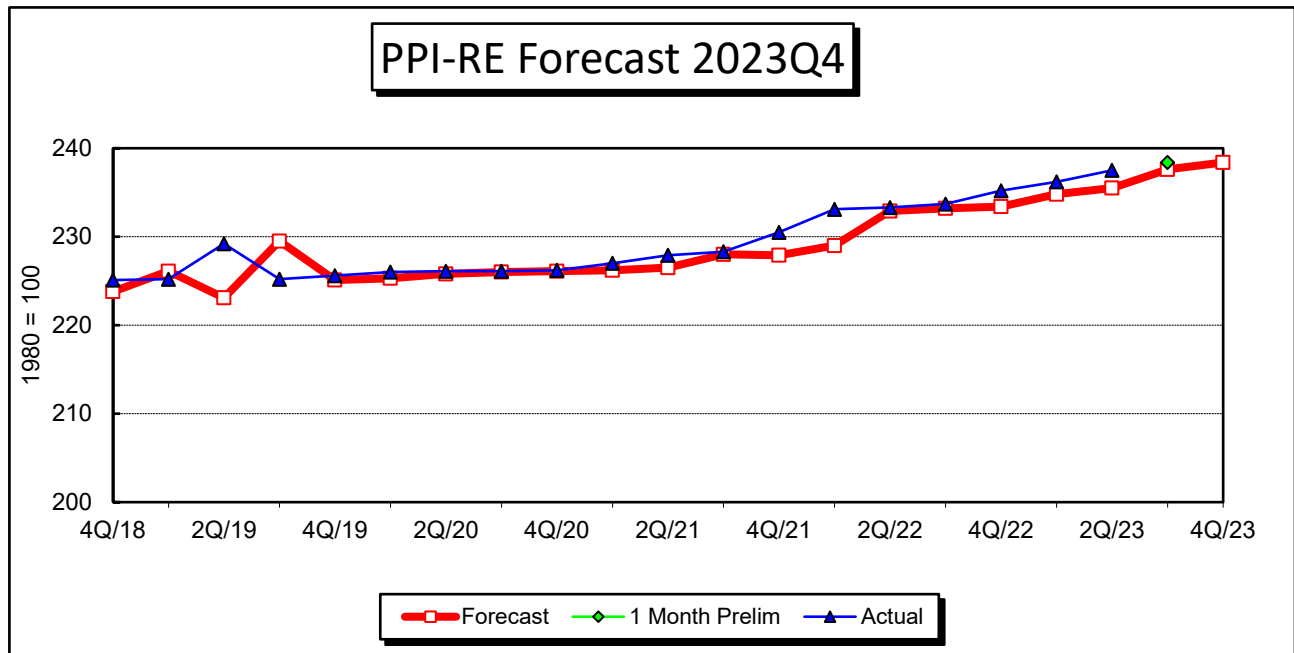
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
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	
2Q/20	225.8	226.1	
3Q/20	226.0	226.1	
4Q/20	226.1	226.2	
1Q/21	226.2	227	
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	233.3	
3Q/22	233.2	233.7	
4Q/22	233.4	235.2	
1Q/23	234.8	236.2	
2Q/23	235.5	237.5	
3Q/23	237.6		238.4
4Q/23	238.4		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2023Q4						
Low	212.3	234.8	-0.2%			
Midpoint	215.5	238.4	1.4%	0.0%	0.4%	0.3%
High	218.7	241.9	2.8%			



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 1.64 and for Box-Jenkins was 1.59.
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	206.29	Std. deviation	4.15
R-square	0.96	Adj. R-square	0.96
Durbin-Watson	2.02	Ljung-Box(18)	15.1 P=0.35
Forecast error	0.83	BIC	0.83
MAPE	20.00%	SMAPE	20.00%
RMSE	0.83	MAD	0.41
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-Feb	213
2023-Mar	214.7
2023-Apr	214.7
2023-May	214.7
2023-Jun	214.7
2023-Jul	215.5

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	213.868	215.500	217.132
2023-Sep	213.192	215.500	217.808
2023-Oct	212.673	215.500	218.327
2023-Nov	212.236	215.500	218.764
2023-Dec	211.85	215.500	219.150
QTR AVG	212.253	215.500	218.747

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 1.64 and for Box-Jenkins was 1.59.
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	206.29	Std. deviation	4.15
R-square	0.96	Adj. R-square	0.96
Durbin-Watson	2.02	Ljung-Box(18)	15.1 P=0.35
Forecast error	0.83	BIC	0.83
MAPE	0.2	SMAPE	0.2
RMSE	0.83	MAD	0.41
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2017-Aug	204.5
2017-Sep	203.8
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

Depreciation

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
2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8
2022-May	210.9
2022-Jun	211
2022-Jul	211.1
2022-Aug	211.7
2022-Sep	212.3
2022-Oct	212.4
2022-Nov	212.7
2022-Dec	212.7

Depreciation

2023-Jan	212.9
2023-Feb	213
2023-Mar	214.7
2023-Apr	214.7
2023-May	214.7
2023-Jun	214.7
2023-Jul	215.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	213.868	215.5	217.132
2023-Sep	213.192	215.5	217.808
2023-Oct	212.673	215.5	218.327
2023-Nov	212.236	215.5	218.764
2023-Dec	211.85	215.5	219.15
2024-Jan	211.502	215.5	219.498
2024-Feb	211.182	215.5	219.818
2024-Mar	210.883	215.5	220.117
2024-Apr	210.603	215.5	220.397
2024-May	210.338	215.5	220.662
2024-Jun	210.087	215.5	220.913
2024-Jul	209.846	215.5	221.154

Databases, Tables & Calculators by Subject

Change Output Options:

From: 2022

To: 2023

GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: August 30, 2023 (3:43:13 PM)

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
2022	210.629	210.710	210.731	210.761	210.942	210.986	211.080	211.724	212.338	212.425	212.664	212.744
2023	212.860	213.003	214.710	214.684(P)	214.684(P)	214.703(P)	215.474(P)					
P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.												

**Calculation of Interest Rate Index
for RCAF's All-Inclusive Index
(\$000)**

Schedule 210		2022
Line	Item	Col. (b)
42	Total Fixed Charges	\$1,171,706
44	Contingent interest on funded debt	0
22	Less: Release of Premiums on funded debt	410
Total Interest		\$1,171,296

Schedule 200		(close of year)	(beg. of year)
Line	Item	Col. (b)	Col. (c)
29	Current Liabilities, Loans and Notes Payable	\$100,000	\$0
38	Equip. Obs & Other LT Debt due Within One Yr	314,534	1,387,509
40	Funded Debt Unmatured	680,590	594,114
41	Equipment Obligations	1,127,880	1,328,509
42	Capitalized Lease Obligations	287,530	388,761
43	Debt in Default	0	0
44	Accounts Payable: Affiliated Companies	27,221,659	25,086,705
45	Unamortized Debt Premium	30,648	29,709
Total Debt		\$29,762,841	\$28,815,307

Total Interest for 2022	\$1,171,296
Average Debt for 2022	\$29,289,074
Embedded Interest Rate for 2022	4.00%
Embedded Interest Rate for 1980	7.85%
Interest Rate Index (1980 = 100)	51.0

Schedule 200 Comparative Statement of Financial Position (Balance Sheet) (\$000)
with new line numbering
Class I Railroad U.S. Total
b=close of year c=beginning of year

Obs	Year	Sched	LineNo	Label	colb	colc	LineNo
1	2022	200	1	Cash and Cash Equivalent	1,392,199	1,617,916	1
2	2022	200	2	Temporary Cash Investmnt	51,541	51,504	2
3	2022	200	3	Special Deposits	4,121	9,056	3
4	2022	200	4	a/r loan and notes	351	358	4
5	2022	200	5	a/r interline	288,089	280,325	5
6	2022	200	6	a/r customers	4,164,025	3,676,185	6
7	2022	200	7	a/r other	796,133	781,025	7
8	2022	200	8	a/r accrued	1,053,245	906,805	8
9	2022	200	9	a/r from affiliates	48,136,564	40,260,625	9
10	2022	200	10	a/r less allow uncollect	97,609	96,197	10
11	2022	200	11	Wkg Funds Prepmnt DIT dr	508,825	396,616	11
12	2022	200	12	Materials and Supplies	2,613,262	2,327,680	12
13	2022	200	13	Other Current Assets	209,860	106,447	13
14	2022	200	14	Total Current Assets	59,120,606	50,318,345	14
15	2022	200	15	OA Special Funds	500,020	462,176	15
16	2022	200	16	Invest Advan Affiliates	7,274,403	6,900,399	16
17	2022	200	17	Other inv and advances	5,284	6,634	17
18	2022	200	18	Prop Used in non Carrier19	1,348,974	1,562,340	18
19	2022	200	19	Other Assets 20	23,233,931	23,455,233	19
20	2022	200	20	Other Deferred Debits 21	1,945,047	2,096,668	20
21	2022	200	21	Accum Def Income Tax Dr 22	0	0	21
22	2022	200	22	Total Other Assets 23	34,307,659	34,483,450	22
23	2022	200	23	R&E Road 24	223,861,233	218,659,000	23
24	2022	200	24	R&E Equipment 25	56,382,620	53,479,123	24
25	2022	200	25	R&E Unallocated items 26	4,172,636	3,226,104	25
26	2022	200	26	R&E Accum Depreciation 27	(76,418,833)	(71,361,903)	26
27	2022	200	27	Net Road and Equipment 28	207,997,656	204,002,324	27
28	2022	200	28	Total Assets 29	301,425,921	288,804,119	28
29	2022	200	29	CL loan & notes payable 30	100,000	0	29
30	2022	200	30	CL a/p interline 31	146,295	160,470	30

31	2022	200	31	CL audited accts & wages32	557,384	511,404	31
32	2022	200	32	CL other accounts payable33	755,140	760,136	32
33	2022	200	33	CL int and dividends pbl34	22,933	43,851	33
34	2022	200	34	CL payable to affil. 35	3,651,641	3,202,922	34
35	2022	200	35	CL accrued a/p 36	8,083,352	6,761,615	35
36	2022	200	36	CL taxes accrued 37	2,723,867	2,907,921	36
37	2022	200	37	CL other current liabil.38	1,047,023	958,521	37
38	2022	200	38	CL Eq Obs & LTD due w1yr39	314,534	1,387,509	38
39	2022	200	39	Total Current Liabilit. 40	17,402,169	16,694,349	39
40	2022	200	40	NC Funded debt unmatured41	680,590	594,114	40
41	2022	200	41	NC Equipment obligations42	1,127,880	1,328,509	41
42	2022	200	42	NC Capitalized lease obs43	287,530	388,761	42
43	2022	200	43	NC Debt in Default 44	0	0	43
44	2022	200	44	NC a/p Affiliates 45	27,221,659	25,086,705	44
45	2022	200	45	NC Unamortized debt prem46	30,648	29,709	45
46	2022	200	46	NC Interest in Default 47	0	0	46
47	2022	200	47	NC Deferr rev - xfr gov 48	326,209	324,464	47
48	2022	200	48	NC Accum Def Inc Tax Cr 49	46,493,635	45,915,979	48
49	2022	200	49	NC Otr LT Liab & Def Cr 50	11,054,976	11,781,649	49
50	2022	200	50	Total Non Current Liab. 51	87,223,127	85,449,890	50
51	2022	200	51	Sh Eq Total Capital Stk52	405,488	405,488	51
52	2022	200	52	Sh Eq Common Stock 53	384,488	384,488	52
53	2022	200	53	Sh Eq Preferred Stock 54	21,000	21,000	53
54	2022	200	54	Sh Eq Discnt on Cap Stk55	0	0	54
55	2022	200	55	Sh Eq Additnl Capital 56	63,177,342	62,410,932	55
56	2022	200	56	Sh Eq Ret Earn Appropri57	0	0	56
57	2022	200	57	Sh Eq Ret Earn Unapprop58	133,545,047	124,446,522	57
58	2022	200	58	Sh Eq Less Treasury Stk60	3,787	3,787	58
59	2022	200	59	Accum Otr Comp Income NU	(656,817)	(929,878)	59
60	2022	200	60	Total Stockhldr Equity61	196,467,273	186,329,277	60
61	2022	200	61	Non-controlling interestNU	333,352	330,603	61
62	2022	200	62	Total Equity (L.61+62)NU	196,800,625	186,659,880	62
63	2022	200	63	Total Liab. and Equity 62	301,425,921	288,804,119	63

Schedule 210 Results of Operations (Income Statement) (\$000) with renumbered lines
Class I Railroad U.S. Total
b=current year c=preceding year d=freight-related e=passenger related

Obs	Year	Sched	LineNo	label	colb	colc	cold	cole	LineNo
1	2022	210	1	Freight	80,009,738	70,332,889	80,009,738	0	1
2	2022	210	2	Passenger	43,721	24,109	0	43,721	2
3	2022	210	3	Passenger related	314	44	0	314	3
4	2022	210	4	Switiching	252,387	252,784	252,387	0	4
5	2022	210	5	Water Transfers	133,476	131,102	133,476	0	5
6	2022	210	6	Demurrage	1,991,991	1,688,042	1,991,991	0	6
7	2022	210	7	Incidental	1,886,986	1,677,931	1,886,986	0	7
8	2022	210	8	Joint Facility - Credit	31,268	33,889	31,268	0	8
9	2022	210	9	Joint Facility - Debit	0	0	0	0	9
10	2022	210	10	Rwy Op Rev excl xfrs	84,349,881	74,140,790	84,305,846	44,035	10
11	2022	210	11	Transfers from Gov Auth	181,765	178,443	6,240	175,525	11
12	2022	210	12	Amort of Def Xfers f Gov	12,856	12,264	12,856	0	12
13	2022	210	13	Total Operating Revenue	84,544,502	74,331,497	84,324,942	219,560	13
14	2022	210	14	Total Operating Expense	54,697,057	46,084,687	54,486,233	210,824	14
15	2022	210	15	Net Revenue from Ops	29,847,445	28,246,810	29,838,709	8,736	15
16	2022	210	16	Rev from prop otc ops	38,975	30,638	0	0	16
17	2022	210	17	Misc rent income	337,422	339,037	0	0	17
18	2022	210	18	Sep Operated Properties	0	0	0	0	18
19	2022	210	19	Dividend Income (cost)	30,135	28,220	0	0	19
20	2022	210	20	Interest Income	2,163,700	498,786	0	0	20
21	2022	210	21	Sinking and Other Funds	0	0	0	0	21
22	2022	210	22	Release of prem on debt	410	410	0	0	22
23	2022	210	23	Reimbursements	0	0	0	0	23

				received					
24	2022	210	24	Misc income	741,943	1,005,421	0	0	24
25	2022	210	25	Aff Dividends (eq meth)	312,944	192,647	0	0	25
26	2022	210	26	Aff Eq In Undist Earns	(5,011)	155,515	0	0	26
27	2022	210	27	Total Other Income	3,620,518	2,250,674	0	0	27
28	2022	210	28	Total Income (L. 15, 27)	33,467,963	30,497,484	0	0	28
29	2022	210	29	Exp of prop otc ops	37,843	38,678	0	0	29
30	2022	210	30	Misc taxes	0	0	0	0	30
31	2022	210	31	Sep op properties - loss	0	0	0	0	31
32	2022	210	32	Maint of invest organiz	0	0	0	0	32
33	2022	210	33	Income xfrd contracts	0	0	0	0	33
34	2022	210	34	Misc Income Charges	(54,712)	(7,557)	0	0	34
35	2022	210	35	Uncollectible accounts	0	0	0	0	35
36	2022	210	36	Total Misc Deductions	(16,869)	31,121	0	0	36
37	2022	210	37	Income avail for fix chg	33,484,832	30,466,363	0	0	37
38	2022	210	38	Fixed int not in default	1,102,049	1,070,087	0	0	38
39	2022	210	39	Interest in default	0	0	0	0	39
40	2022	210	40	Interest on unfund debt	66,992	53,647	0	0	40
41	2022	210	41	Amort of disc on f debt	2,665	2,910	0	0	41
42	2022	210	42	Total Fixed Charges	1,171,706	1,126,644	0	0	42
43	2022	210	43	Income aft fixed charges	32,313,126	29,339,719	0	0	43
44	2022	210	44	Contingent Interest	0	0	0	0	44
45	2022	210	45	Unusual item (dr) cr	0	0	0	0	45
46	2022	210	46	Income from Cont	32,313,126	29,339,719	0	0	46

				Op BT					
47	2022	210	47	Fed Income taxes on ord	5,748,500	4,854,691	0	0	47
48	2022	210	48	State Inc taxes on ord	1,141,417	1,048,332	0	0	48
49	2022	210	49	Other Inc taxes on ord	7,192	(25,383)	0	0	49
50	2022	210	50	Prov for deferred taxes	399,653	970,101	0	0	50
51	2022	210	51	Total Prov for Inc Taxes	7,296,762	6,847,741	0	0	51
52	2022	210	52	Income from Contin Ops	25,016,364	22,491,978	0	0	52
53	2022	210	53	Inc from discount ops	0	0	0	0	53
54	2022	210	54	Gain on disposal dis ops	0	0	0	0	54
55	2022	210	55	Income before Extraord	25,016,364	22,491,978	0	0	55
56	2022	210	56	Extraordinary Items	0	0	0	0	56
57	2022	210	57	Inc Tax on Extraord Item	0	0	0	0	57
58	2022	210	58	Def Taxes Extraord Item	0	0	0	0	58
59	2022	210	59	Total Extraordinary Item	0	0	0	0	59
60	2022	210	60	Rent for lease rd n eq 66	0	0	0	0	60
61	2022	210	61	Net Income (L.55,59,60)	25,016,364	22,491,978	0	0	61
62	2022	210	62	Less NI to Non Ctl Int NU	1,647	1,469	0	0	62
63	2022	210	63	Net Income to Rep RR NU	25,014,717	22,490,509	0	0	63
64	2022	210	66	Net Rev from Rwy Ops 62	29,847,445	28,246,810	0	0	66
65	2022	210	67	Inc taxes on ord inc 63	6,897,109	5,877,640	0	0	67
66	2022	210	68	Prov for deferred tax 64	399,653	970,101	0	0	68
67	2022	210	69	Inc fr lease rd and eq 65	106,833	53,710	0	0	69
68	2022	210	70		67,627	64,653	0	0	70

69	2022	210	71	Net Railway Op Income 67	22,511,477	21,410,012	0	0	71
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Schedule 200 Comparative Statement of Financial Position (Balance Sheet) (\$000)
with new line numbering
Class I Railroad U.S. Total
b=close of year c=beginning of year

Obs	Year	Sched	LineNo	Label	colb	colc	LineNo
1	2022	200	1	Cash and Cash Equivalent	1,392,199	1,617,916	1
2	2022	200	2	Temporary Cash Investmnt	51,541	51,504	2
3	2022	200	3	Special Deposits	4,121	9,056	3
4	2022	200	4	a/r loan and notes	351	358	4
5	2022	200	5	a/r interline	288,089	280,325	5
6	2022	200	6	a/r customers	4,164,025	3,676,185	6
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9	2022	200	9	a/r from affiliates	48,136,564	40,260,625	9
10	2022	200	10	a/r less allow uncollect	97,609	96,197	10
11	2022	200	11	Wkg Funds Prepmnt DIT dr	508,825	396,616	11
12	2022	200	12	Materials and Supplies	2,613,262	2,327,680	12
13	2022	200	13	Other Current Assets	209,860	106,447	13
14	2022	200	14	Total Current Assets	59,120,606	50,318,345	14
15	2022	200	15	OA Special Funds	500,020	462,176	15
16	2022	200	16	Invest Advan Affiliates	7,274,403	6,900,399	16
17	2022	200	17	Other inv and advances	5,284	6,634	17
18	2022	200	18	Prop Used in non Carrier19	1,348,974	1,562,340	18
19	2022	200	19	Other Assets 20	23,233,931	23,455,233	19
20	2022	200	20	Other Deferred Debits 21	1,945,047	2,096,668	20
21	2022	200	21	Accum Def Income Tax Dr 22	0	0	21
22	2022	200	22	Total Other Assets 23	34,307,659	34,483,450	22
23	2022	200	23	R&E Road 24	223,861,233	218,659,000	23
24	2022	200	24	R&E Equipment 25	56,382,620	53,479,123	24
25	2022	200	25	R&E Unallocated items 26	4,172,636	3,226,104	25
26	2022	200	26	R&E Accum Depreciation 27	(76,418,833)	(71,361,903)	26
27	2022	200	27	Net Road and Equipment 28	207,997,656	204,002,324	27
28	2022	200	28	Total Assets 29	301,425,921	288,804,119	28
29	2022	200	29	CL loan & notes payable 30	100,000	0	29

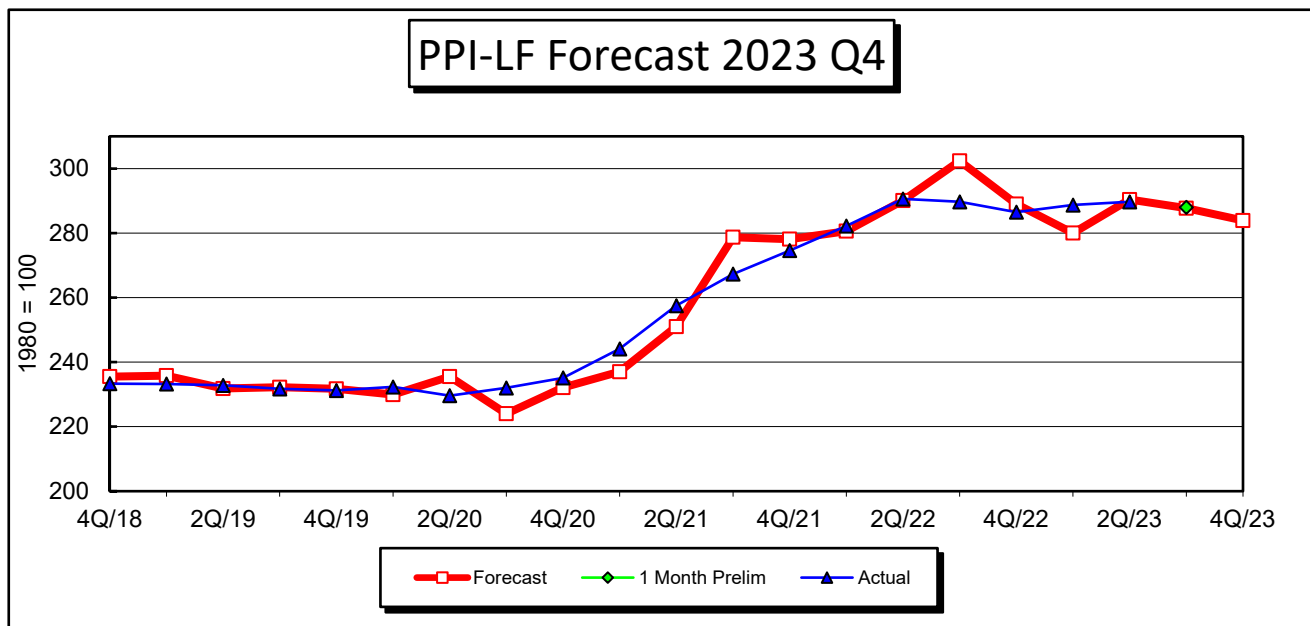
30	2022	200	30	CL a/p interline 31	146,295	160,470	30
31	2022	200	31	CL audited accts & wages32	557,384	511,404	31
32	2022	200	32	CL other accounts payable33	755,140	760,136	32
33	2022	200	33	CL int and dividends pbl34	22,933	43,851	33
34	2022	200	34	CL payable to affil. 35	3,651,641	3,202,922	34
35	2022	200	35	CL accrued a/p 36	8,083,352	6,761,615	35
36	2022	200	36	CL taxes accrued 37	2,723,867	2,907,921	36
37	2022	200	37	CL other current liabil.38	1,047,023	958,521	37
38	2022	200	38	CL Eq Obs & LTD due w1yr39	314,534	1,387,509	38
39	2022	200	39	Total Current Liabilit. 40	17,402,169	16,694,349	39
40	2022	200	40	NC Funded debt unmatured41	680,590	594,114	40
41	2022	200	41	NC Equipment obligations42	1,127,880	1,328,509	41
42	2022	200	42	NC Capitalized lease obs43	287,530	388,761	42
43	2022	200	43	NC Debt in Default 44	0	0	43
44	2022	200	44	NC a/p Affiliates 45	27,221,659	25,086,705	44
45	2022	200	45	NC Unamortized debt prem46	30,648	29,709	45
46	2022	200	46	NC Interest in Default 47	0	0	46
47	2022	200	47	NC Deferr rev - xfr gov 48	326,209	324,464	47
48	2022	200	48	NC Accum Def Inc Tax Cr 49	46,493,635	45,915,979	48
49	2022	200	49	NC Otr LT Liab & Def Cr 50	11,054,976	11,781,649	49
50	2022	200	50	Total Non Current Liab. 51	87,223,127	85,449,890	50
51	2022	200	51	Sh Eq Total Capital Stk52	405,488	405,488	51
52	2022	200	52	Sh Eq Common Stock 53	384,488	384,488	52
53	2022	200	53	Sh Eq Preferred Stock 54	21,000	21,000	53
54	2022	200	54	Sh Eq Discnt on Cap Stk55	0	0	54
55	2022	200	55	Sh Eq Additnl Capital 56	63,177,342	62,410,932	55
56	2022	200	56	Sh Eq Ret Earn Appropri57	0	0	56
57	2022	200	57	Sh Eq Ret Earn Unapprop58	133,545,047	124,446,522	57
58	2022	200	58	Sh Eq Less Treasury Stk60	3,787	3,787	58
59	2022	200	59	Accum Otr Comp Income NU	(656,817)	(929,878)	59
60	2022	200	60	Total Stockhldr Equity61	196,467,273	186,329,277	60
61	2022	200	61	Non-controlling interestNU	333,352	330,603	61
62	2022	200	62	Total Equity (L.61+62)NU	196,800,625	186,659,880	62
63	2022	200	63	Total Liab. and Equity 62	301,425,921	288,804,119	63

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

	Forecast	Actual	1 Month Prelim
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	290.6	
3Q/22	302.4	289.7	
4Q/22	289.0	286.5	
1Q/23	280.0	288.7	
2Q/23	290.4	289.7	
3Q/23	287.7		288.0
4Q/23	283.9		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2023Q1						
Low	244.1	273.7	-4.5%			
Midpoint	253.3	283.9	-0.9%	-1.4%	-2.0%	-1.3%
High	262.4	294.2	2.7%			



**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 4.61 and for Box-Jenkins was 4.33.
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, 2, 0)*(1, 0, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
A[12]	0.4392	0.1161	3.783	0.9997

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	224.02	Std. deviation	22.56
R-square	1	Adj. R-square	1
Durbin-Watson	2.16	Ljung-Box(18)	20.5 P=0.70
Forecast error	0.84	BIC	0.85
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.61
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-Feb	257.8
2023-Mar	258.1
2023-Apr	258.6
2023-May	258.7
2023-Jun	257.8
2023-Jul	256.9

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	254.417	256.065	257.714
2023-Sep	251.193	254.88	258.566
2023-Oct	247.701	253.869	260.038
2023-Nov	244.268	253.298	262.328
2023-Dec	240.369	252.595	264.822
QTR AVG	244.113	253.254	262.396

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 4.61 and for Box-Jenkins was 4.33.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each meth

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

Model Details

Expert selection

Box-Jenkins

ARIMA(0, 2, 0)*(1, 0, 0)

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Forecast error	0.84	BIC	0.85
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.61
MAD/Mean Ratio	0		

Historic Data

Date	Historic
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

Other

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
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	249.774
2022-Feb	251.33
2022-Mar	254.556
2022-Apr	257.425
2022-May	260.128
2022-Jun	260.449
2022-Jul	259.5
2022-Aug	258.7
2022-Sep	257.1
2022-Oct	255.9
2022-Nov	255.7
2022-Dec	255.2
2023-Jan	257

8/31/2023

Other

2023-Feb	257.8
2023-Mar	258.1
2023-Apr	258.6
2023-May	258.7
2023-Jun	257.8
2023-Jul	256.9

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2023-Aug	254.417	256.065	257.714
2023-Sep	251.193	254.88	258.566
2023-Oct	247.701	253.869	260.038
2023-Nov	244.268	253.298	262.328
2023-Dec	240.369	252.595	264.822
2024-Jan	237.176	252.903	268.629
2024-Feb	233.264	252.771	272.278
2024-Mar	228.873	252.419	275.966
2024-Apr	224.324	252.156	279.988
2024-May	219.369	251.717	284.065
2024-Jun	213.754	250.838	287.923
2024-Jul	207.928	249.96	291.991

Databases, Tables & Calculators by Subject

Change Output Options:

From: 2022

To: 2023

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☐ include graphs ☐ include annual averages

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Data extracted on: August 31, 2023 (1:42:43 PM)

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
2022	249.774	251.330	254.556	257.425	260.128	260.449	259.519	258.706	257.140	255.891	255.703	255.204
2023	257.029	257.806	258.065	258.600(P)	258.711(P)	257.802(P)	256.587(P)					
P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.												

Forecast Error Calculation

	2021 Weight	Second Quarter 2023		Difference		Notes
		2023Q2 Forecast	2023Q2 Actual	Pt.	Pct.	
Labor	31.4%	570.2	570.2	0.0	0%	* actual=forecast
Fuel	14.2%	378.2	341.9	-36.3	-10%	from 1st month of quarter
M&S	4.5%	322.6	322.6	0.0	0%	* actual=forecast
Equip Rents	4.9%	261.4	258.3	-3.1	-1%	
Depreciation	17.5%	235.5	237.5	2.0	1%	
Interest	2.4%	50.1	50.1	0.0	0%	
Other	25.1%	290.4	289.7	-0.7	0%	
Weighted Avg	100.0%					
1980 = 100		375.4	370.2			calculated
1980 = 100 (linked)		344.9	338.9			calculated
4Q22 = 100	3.423	100.8	99.0			calculated
4Q17 = 100	2.645	130.4	128.1			calculated
4Q12 = 100	2.976	115.9	113.9			calculated
4Q07 = 100	2.459	140.3	137.8			calculated
4Q02 = 100	1.921	179.5	176.4			calculated
4Q97 = 100	1.732	199.1	195.7			calculated
Forecast Error		-1.8				calculated -0.018 = RCAF adj.
Prior Quarter						
1980 = 100		377.4	368.8 **			
1980 = 100 (linked)		346.7	337.6			
4Q17 = 100		131.1	127.6			calculated
4Q12 = 100		116.5	113.4			calculated
4Q07 = 100		141.0	137.3			calculated
4Q02 = 100		180.5	175.7			calculated
4Q97 = 100		200.2	194.9			calculated
Equipment Rents						
Car Hire	68.1%	220.1	220.9			from Equipment Rents/CHARM
Lease Rentals	31.9%	290.4	289.7			(equals PPI-LF from above)
Weighted Average		242.5	242.8			calculated
Linked		261.2	258.3			calculated
Prior Quarter						
Weighted Average		232.0	234.3 **			
Linked		249.9	249.3			
Sum of Weights	ok					** if fourth quarter (2nd quarter filing), only weighted avg for prior needs
Sum of ER Wt.	ok					weights, linked is ok (found in 3Q index calc)

Factors to change from
1982=100 to 1980 = 100

PPI-RE	214.70	214.70	214.70	0.9040
* actual=forecast				
PPI-LF	258.60	258.70	257.80	0.8920

RCAF Fuel (Actual All-Inclusive Index)

April 2023

Monthly Report

	April 2023 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	April 2023 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	April 2023 1980=100 Current Index (6)
U.S.	279.76	89.34	99.415	311.31	1.096	341.19

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

(6) = (4) x (5)

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

	April 2023 1980=100 Current Index	Adjustment Factor	April 2023 1980=100 Linked Index
U.S.	341.19	1.00192	341.85 ←

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

Car Hire for RCAF - 2021 Weights

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

		1980	Aug 3Q/22	Nov 4Q/22	Feb 1Q/23	May 2Q/23	Aug 3Q/23
RATE							
RR-OWNED TIME		31.00	66.00	65.00	65.00	65.00	65.00
RR-OWNED MILEAGE		4.69	6.60	6.50	6.50	6.50	6.50
PRIVATELY-OWNED CARS		25.47	54.49	55.31	55.08	58.61	58.63
AUTORACKS		47.00	85.28	85.74	85.71	90.00	93.16
INDEX							
RR-OWNED TIME		100.0	212.9	209.7	209.7	209.7	209.7
RR-OWNED MILEAGE		100.0	140.7	138.6	138.6	138.6	138.6
PRIVATELY-OWNED CARS		100.0	214.0	217.2	216.2	230.1	230.2
AUTORACKS		100.0	181.4	182.4	182.4	191.5	198.2
CAR HIRE INDEX (old wts)	2020	100.0	209.9	--	--	--	--
CAR HIRE INDEX (new wts)	2021	100.0	209.8	212.3	211.5	223.8	224.1
CAR HIRE INDEX (LINKED)		100.0	207.1	209.6	208.8	220.9	221.2

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

Car Hire Data From CHARM		2023 (first day of month)						2024 (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)		10,806	10,781	10,754														
Rate (in cents)																		
Superstructures #3 - Auto Rack		94.0	94.0	92.0														
All other #1 - Time		65.0	65.0	65.0														
All other #2 - Mileage		6.5	6.5	6.5														
Private Equipment																		
No. of Cars (cars with rates only)																		
Superstructures (Vehicular Flats)		1	54,982	55,341	55,671													
Covered Hoppers		2	436,434	436,409	436,760													
Tank Cars		3	424,449	423,688	423,896													
Others		4	300,679	300,801	300,882													
Rate (in cents)																		
Superstructures #1 - Time			85.0	85.0	85.0													
Superstructures #2 - Mileage			1.6	1.6	1.6													
Superstructures #3 - Auto Rack			92.0	93.0	95.0													
Covered Hoppers #2 - Mileage		2	45.3	45.3	45.4													
Tank Cars #2 - Mileage		3	96.1	96.1	100.5													
Others #1 -Time			105.0	105.0	105.0													
Others #2 - Mileage			8.7	8.7	8.7													
AVERAGE RATES																		
Private Superstructures		1	21.58	21.58	21.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Private Others		4	32.01	32.01	32.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Private Total			58.67	58.63	60.19	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		
Autoracks			92.33	93.16	94.51	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		

Car Hire Weights	"Old Wts" "New Wts"	
	2021	2022
For RCAF & RCR		
RR-owned Time	0.065	0.091
RR-owned Mileage	0.038	0.041
Privately-owned Cars	0.857	0.832
Autoracks	0.040	0.036
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2021	2022
Car Hire - U.S.	0.681	0.681
Lease Rentals - U.S.	0.319	0.319
----- 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 is the Car Hire Accounting Rate Master
The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.
[The purpose of this page is to provide more insight on the calculation of the **private total rate.**] Beginning with 2012 data, only active cars are used.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 05/23

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,860	110	0.060	95
Railroad	Number of Zero-Rated Vehicular Flats	171			
Railroad	All Other Cars	363,057	65	0.065	
Railroad	Number of Zero-Rated Other Cars	10,767			
Railroad	Total Railroad Equipment	384,855			
Private	Vehicular Flats	54,340	85	0.016	89
Private	Number of Zero-Rated Vehicular Flats	138			
Private	Covered Hoppers	435,450	0	0.452	
Private	Number of Zero-Rated Covered Hoppers	14,179			
Private	Tanks	424,315	0	0.959	
Private	Number of Zero-Rated Tanks	15,296			
Private	All Other Cars	299,530	105	0.087	
Private	Number of Zero-Rated Other Cars	21,778			
Private	Total Private Equipment	1,265,030			

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 2023			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	23Q1	23Q2	23Q3	23Q4
For Actual	→	22Q3	22Q4	22Q1	22Q2
January	2022	210.6	210.6	210.6	210.6
February	2022	210.7	210.7	210.7	210.7
March	2022	210.7	210.7	210.7	210.7
April	2022	210.8	210.8	210.8	210.8
May	2022	210.9	210.9	210.9	210.9
June	2022	211.0	211.0	211.0	211.0
July	2022	211.0	211.1	211.1	211.1
August	2022	211.7	211.7	211.7	211.7
September	2022	211.2	212.3	212.3	212.3
October	2022	211.3	212.4	212.4	212.4
November	2022		212.7	212.7	212.7
December	2022		212.8	212.7	212.7
January	2023		212.9	212.9	212.9
February	2023			213.0	213.0
March	2023			214.7	214.7
April	2023			214.7	214.7
May	2023				214.7
June	2023				214.7
July	2023				215.5
Actual Qtr.		211.3	212.6	213.5	214.7

1980=100

Actual Qtr.	233.7	235.2	236.2	237.5
First Mo. next qtr.	233.7	235.5	237.5	238.4

0.904 =1980

RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2023			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	23Q1	23Q2	23Q3	23Q4
For Actual	→	22Q3	22Q4	23Q1	23Q2
January	2022	249.8	249.8	249.8	249.8
February	2022	251.3	251.3	251.3	251.3
March	2022	254.6	254.6	254.6	254.6
April	2022	257.4	257.4	257.4	257.4
May	2022	260.1	260.1	260.1	260.1
June	2022	260.4	260.4	260.4	260.4
July	2022	259.5	259.5	259.5	259.5
August	2022	258.6	258.7	258.7	258.7
September	2022	257.2	257.1	257.1	257.1
October	2022	255.9	255.8	255.9	255.9
November	2022		255.7	255.7	255.7
December	2022		255.4	255.2	255.2
January	2023		256.7	256.9	257.0
February	2023			257.5	257.8
March	2023			258.1	258.1
April	2023			258.7	258.6
May	2023				258.7
June	2023				257.8
July	2023				256.9
Actual Qtr.		258.4	255.6	257.5	258.4

1980=100

Actual Qtr.	289.7	286.5	288.7	289.7
First Mo. next qtr.	286.9	287.8	290.0	288.0

0.892 =1980

PETROLEUM & OTHER LIQUIDS

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Spot Prices

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

Period: ▾

Product by Area	Graph Clear	08/21/23	08/22/23	08/23/23	08/24/23	08/25/23	08/28/23	View History
Crude Oil								
WTI - Cushing, Oklahoma	Key ☐	80.71	80.25	78.91	79.52	80.47	80.65	1986-2023
Brent - Europe	Key ☐	85.44	84.70	83.94	84.07	85.42		1987-2023
Conventional Gasoline								
New York Harbor, Regular	Key ☐	2.840	2.845	2.830	2.824	2.923	2.841	1986-2023
U.S. Gulf Coast, Regular	Key ☐	2.835	3.038	3.025	3.047	2.924	2.851	1986-2023
RBOB Regular Gasoline								
Los Angeles	Key ☐	3.235	3.253	3.235	3.559	3.658	3.441	2003-2023
No. 2 Heating Oil								
New York Harbor	Key ☐	2.939	2.963	2.935	2.972	3.134	3.008	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	Key ☐	3.139	3.140	3.125	3.150	3.314	3.181	2006-2023
U.S. Gulf Coast	Key ☐	3.056	3.103	3.067	3.098	3.221	3.108	2006-2023
Los Angeles	Key ☐	3.321	3.343	3.315	3.565	3.734	3.693	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	Key ☐	3.084	3.055	3.017	3.047	3.188	3.075	1990-2023
Propane								
Mont Belvieu, Texas	Key ☐	0.643	0.645	0.650	0.668	0.659	0.678	1992-2023

[Key](#) 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: 8/30/2023

Next Release Date: 9/7/2023

PETROLEUM & OTHER LIQUIDS

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Spot Prices

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

Period: ▾

Product by Area	Graph Clear	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	76.83	73.28	79.45	71.58	70.25	76.07	1986-2023
Brent - Europe	☐	82.59	78.43	84.64	75.47	74.84	80.11	1987-2023
Conventional Gasoline								
New York Harbor, Regular	☐	2.532	2.515	2.765	2.570	2.659	2.700	1986-2023
U.S. Gulf Coast, Regular	☐	2.416	2.536	2.616	2.447	2.427	2.674	1986-2023
RBOB Regular Gasoline								
Los Angeles	☐	2.907	2.756	2.799	2.672	2.802	2.970	2003-2023
No. 2 Heating Oil								
New York Harbor	☐	2.645	2.571	2.424	2.181	2.278	2.498	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	2.832	2.747	2.593	2.346	2.432	2.671	2006-2023
U.S. Gulf Coast	☐	2.771	2.690	2.518	2.302	2.351	2.597	2006-2023
Los Angeles	☐	2.942	2.643	2.418	2.386	2.415	2.817	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.790	2.679	2.374	2.173	2.250	2.488	1990-2023
Propane								
Mont Belvieu, Texas	☐	0.828	0.794	0.811	0.666	0.574	0.629	1992-2023

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

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Spot Prices

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

Period: ▾

Product by Area	Graph Clear	07/21/23	07/28/23	08/04/23	08/11/23	08/18/23	08/25/23	View History
Crude Oil								
WTI - Cushing, Oklahoma	Key ☐	75.61	79.68	81.40	83.04	80.93	79.97	1986-2023
Brent - Europe	Key ☐	79.48	83.55	85.63	87.83	85.87	84.71	1987-2023
Conventional Gasoline								
New York Harbor, Regular	Key ☐	2.677	2.856	2.838	2.931	2.901	2.852	1986-2023
U.S. Gulf Coast, Regular	Key ☐	2.672	2.921	2.854	2.931	2.904	2.974	1986-2023
RBOB Regular Gasoline								
Los Angeles	Key ☐	2.878	3.143	3.126	3.195	3.237	3.388	2003-2023
No. 2 Heating Oil								
New York Harbor	Key ☐	2.463	2.665	2.868	2.943	2.899	2.989	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	Key ☐	2.642	2.849	3.044	3.119	3.072	3.174	2006-2023
U.S. Gulf Coast	Key ☐	2.565	2.785	2.972	3.049	3.016	3.109	2006-2023
Los Angeles	Key ☐	2.743	3.067	3.293	3.370	3.396	3.456	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	Key ☐	2.455	2.683	2.891	2.966	2.958	3.078	1990-2023
Propane								
Mont Belvieu, Texas	Key ☐	0.640	0.685	0.723	0.719	0.629	0.653	1992-2023

[Key](#) Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

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Release Date: 8/30/2023

Next Release Date: 9/7/2023

AAR 2022 8/12/2023
U.S.

Union	Employees	Straight Time		PFTNW	Union Lump
	Paid	Hours	Comp.	Comp.	Sums
UTU	31,690	52,729,484	1,794,303,177	648,127,729	12,735,258
TCU	3,679	6,595,063	245,725,718	29,291,873	13,806,662
BLET	21,552	40,017,056	1,548,165,562	533,381,825	93,991,738
SMW	529	926,521	34,985,186	5,299,841	562,285
BRS	5,607	10,438,897	378,985,940	89,118,536	505,889
BMWE	19,502	35,223,739	1,107,200,276	187,174,135	1,775,541
TCU-CAR	5,810	10,465,285	395,859,737	49,128,787	8,410,584
NCFO	1,489	2,634,681	86,429,567	10,169,379	2,059,498
IAM	4,570	8,176,955	315,378,700	42,450,198	6,304,266
IBBM	588	1,008,643	34,685,741	4,757,783	539,342
IBEW	3,816	6,886,569	265,223,812	41,507,479	5,128,799
ATDA	1,846	3,405,803	167,889,086	35,186,286	7,499,157
UTU-YMD	1,348	2,120,629	99,922,332	16,823,788	2,001,680
OTHER	20,360	44,148,873	2,591,560,716	53,199,761	
Total	122,386	224,778,198	\$9,066,315,550	\$1,745,617,400	\$155,320,699
ST Comp less Union Lump Sums			\$8,910,994,851		

Checks

OK Match	OK Match	OK Match	OK Match
Total including non-union			\$666,361,252

US less E+W s.b. 0

0 0 0 0 0

RCAF Weights

	U.S.	2022	2021	Amt Chg	2020	2018	2017 Revised
Labor	\$16,367,274	29.4%	31.4%	-2.0%	32.4%	33.0%	34.8%
Fuel	11,353,148	20.4%	14.2%	6.2%	9.7%	15.9%	12.9%
Mat & Sup.	2,598,551	4.7%	4.5%	0.2%	4.5%	5.1%	4.9%
Equip. Rents	2,461,599	4.4%	4.9%	-0.5%	5.2%	5.3%	5.7%
Depreciation	8,464,718	15.2%	17.5%	-2.3%	18.5%	15.0%	15.7%
Interest	1,169,465	2.1%	2.4%	-0.3%	2.7%	2.1%	2.1%
Other	13,240,943	23.8%	25.1%	-1.3%	27.0%	23.6%	23.9%
Total	\$55,655,698	100.0%	100.0%		100.0%	100.0%	100.0%

Check

410 620f	54,486,233	key this cell only
Interest	1,169,465	
Total	55,655,698	
	ok	

Bolded number was adjusted to force rounded numbers to add to 100.0%.

Analysis of Other -- as info only

Other	U.S.	2022	2021	Amt Chg.
Purch Service	\$9,054,876	16.3%	17.7%	-1.4%
Taxes	1,697,757	3.1%	3.5%	-0.5%
Cas & Insuran	744,643	1.3%	1.3%	0.1%
Loss & Dam	202,142	0.4%	0.3%	0.1%
Gen & Admn	1,541,525	2.8%	2.3%	0.4%
Total	\$13,240,943	23.8%	25.2%	-1.4%

RCAF Internal Weights

	U.S.	2022	2021	Amt Diff
Labor				
Wages	11,772,445	71.9%	70.4%	1.5%
Wage Supplem	4,594,829	28.1%	29.6%	-1.5%
Total	16,367,274	100.0%	100.0%	
Check	ok			

Equip. Rents				
Car Hire	1,676,260	68.1%	68.1%	0.0%
Lease Rents	785,339	31.9%	31.9%	0.0%
Total	2,461,599	100.0%	100.0%	
Check	ok			

Car Hire				
RR Time excl Autork	153,364	9.1%	6.5%	2.6%
RR Mileage excl Auto	70,970	4.1%	3.8%	0.3%
Private excl Autorack	1,408,679	83.2%	85.7%	-2.5%
Autorack	60,809	3.6%	4.0%	-0.4%
Total	1,693,822	100.0%	100.0%	
from Sch. 414	ok			

Car Hire, Adjusted to eliminate negative numbers				
RR Time excl Autork	153,364	9.1%	6.5%	2.6%
RR Mileage excl Auto	70,970	4.1%	3.8%	0.3%
Private excl Autorack	1,408,679	83.2%	85.7%	-2.5%
Autorack	60,809	3.6%	4.0%	-0.4%
Total	1,693,822	100.0%	100.0%	

Note: These numbers are all rounded to 3 digits after the decimal or 1 digit after the decimal for a percentage. In the event that the rounded percentages do not sum to 100.0%, the number that is closest to rounding in the other direction will be changed to force a 100.0% total. The number is identified by a **bold** font.

Railroad Retirement and Medicare Benchmark for U.S.

Inputs:

RRB Earnings Distribution Year	2021	RR Retirement Tier I Maximum Taxable Earnings for 2022	\$160,200
Wage Statistics Year	2022	RR Retirement Tier II Maximum Taxable Earnings for 2022	\$118,800
Employees Receiving Pay	122,378	Medicare Maximum Taxable Earnings for 2022	no limit
		Tier I Employer Tax Rate for 2022	6.20%
		Tier II Employer Tax Rate for 2022	13.10%
		Medicare Employer Tax Rate for 2022	1.45%

(Info Only)(Info Only)

USA	Taxable Rate	Update Factor	RR Ret. Tax Paid	Hourly Rate	
2021	\$43.459				
2022	\$47.010	1.08172	\$622,793,723	\$10.490	Hourly rate from Supplements spreadsheet

Railroad Retirement and Medicare Benchmark for U.S.

From 2021 RRB Earnings Distribution			Quarterly Average for Benchmark Year 2022 (using updated 2021 Earnings Distribution with data for 2022)								
Earnings Groups	Avg Annual Earnings	% of Total Employees	Employees Receivg. Pay	Avg. Annual Earnings	Avg. Qtrly. Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$22,243	0.622	761	\$24,061	\$6,015	6,015	\$6,015	\$6,015	\$4,578,685	\$4,578,685	\$4,578,685
41,700 - 43,699	\$42,478	0.124	152	\$45,949	11,487	11,487	11,487	11,487	1,743,182	1,743,182	1,743,182
43,700 - 45,699	\$44,415	0.373	456	\$48,044	12,011	12,011	12,011	12,011	5,482,713	5,482,713	5,482,713
45,700 - 47,699	\$46,908	0.249	305	\$50,741	12,685	12,685	12,685	12,685	3,865,479	3,865,479	3,865,479
47,700 - 49,699	\$48,823	0.560	685	\$52,813	13,203	13,203	13,203	13,203	9,048,352	9,048,352	9,048,352
49,700 - 51,699	\$50,237	0.311	381	\$54,342	13,586	13,586	13,586	13,586	5,170,602	5,170,602	5,170,602
51,700 - 53,699	\$52,410	0.747	914	\$56,693	14,173	14,173	14,173	14,173	12,956,622	12,956,622	12,956,622
53,700 - 55,699	\$54,607	1.182	1,447	\$59,069	14,767	14,767	14,767	14,767	21,361,061	21,361,061	21,361,061
55,700 - 57,699	\$56,673	0.809	990	\$61,304	15,326	15,326	15,326	15,326	15,173,359	15,173,359	15,173,359
57,700 - 59,699	\$58,725	0.809	990	\$63,524	15,881	15,881	15,881	15,881	15,722,752	15,722,752	15,722,752
59,700 - 61,699	\$60,533	1.742	2,132	\$65,480	16,370	16,370	16,370	16,370	34,897,745	34,897,745	34,897,745
61,700 - 63,699	\$62,652	2.116	2,590	\$67,772	16,943	16,943	16,943	16,943	43,874,039	43,874,039	43,874,039
63,700 - 65,699	\$64,843	2.800	3,427	\$70,142	17,535	17,535	17,535	17,535	60,086,672	60,086,672	60,086,672
65,700 - 67,699	\$66,856	2.987	3,655	\$72,319	18,080	18,080	18,080	18,080	66,089,525	66,089,525	66,089,525
67,700 - 69,699	\$68,686	3.485	4,265	\$74,299	18,575	18,575	18,575	18,575	79,218,757	79,218,757	79,218,757
69,700 - 71,699	\$70,691	2.987	3,655	\$76,468	19,117	19,117	19,117	19,117	69,880,558	69,880,558	69,880,558
71,700 - 73,699	\$72,600	3.111	3,807	\$78,533	19,633	19,633	19,633	19,633	74,746,980	74,746,980	74,746,980
73,700 - 75,699	\$74,607	4.543	5,560	\$80,704	20,176	20,176	20,176	20,176	112,170,674	112,170,674	112,170,674
75,700 - 77,699	\$76,750	2.551	3,122	\$83,022	20,755	20,755	20,755	20,755	64,795,651	64,795,651	64,795,651
77,700 - 79,699	\$78,516	3.111	3,807	\$84,932	21,233	21,233	21,233	21,233	80,837,932	80,837,932	80,837,932
79,700 - 81,699	\$80,643	3.298	4,036	\$87,233	21,808	21,808	21,808	21,808	88,018,577	88,018,577	88,018,577
81,700 - 83,699	\$82,766	3.671	4,492	\$89,529	22,382	22,382	22,382	22,382	100,552,615	100,552,615	100,552,615
83,700 - 85,699	\$84,684	3.485	4,265	\$91,604	22,901	22,901	22,901	22,901	97,669,994	97,669,994	97,669,994
85,700 - 87,699	\$86,692	3.298	4,036	\$93,776	23,444	23,444	23,444	23,444	94,620,816	94,620,816	94,620,816
87,700 - 89,699	\$88,531	2.987	3,655	\$95,765	23,941	23,941	23,941	23,941	87,516,030	87,516,030	87,516,030
89,700 - 91,699	\$90,700	2.925	3,580	\$98,112	24,528	24,528	24,528	24,528	87,799,122	87,799,122	87,799,122
91,700 - 93,699	\$92,531	2.551	3,122	\$100,092	25,023	25,023	25,023	25,023	78,118,650	78,118,650	78,118,650
93,700 - 95,699	\$94,733	1.867	2,285	\$102,474	25,619	25,619	25,619	25,619	58,533,248	58,533,248	58,533,248
95,700 - 97,699	\$96,844	2.676	3,275	\$104,758	26,189	26,189	26,189	26,189	85,766,136	85,766,136	85,766,136
97,700 - 99,699	\$98,712	2.302	2,817	\$106,778	26,695	26,695	26,695	26,695	75,202,502	75,202,502	75,202,502
99,700 - 101,699	\$100,684	2.489	3,046	\$108,912	27,228	27,228	27,228	27,228	82,935,864	82,935,864	82,935,864
101,700 - 103,699	\$102,743	2.614	3,199	\$111,139	27,785	27,785	27,785	27,785	88,882,210	88,882,210	88,882,210
103,700 - 105,699	\$104,673	2.116	2,590	\$113,227	28,307	28,307	28,307	28,307	73,300,570	73,300,570	73,300,570
105,700 - 107,699	\$106,752	2.489	3,046	\$115,475	28,869	28,869	28,869	28,869	87,934,224	87,934,224	87,934,224
107,700 - 109,699	\$108,699	2.240	2,741	\$117,582	29,395	29,395	29,395	29,395	80,580,616	80,580,616	80,580,616
109,700 - 111,699	\$110,473	1.742	2,132	\$119,501	29,875	29,875	29,700	29,875	63,688,543	63,315,195	63,688,543
111,700 - 113,699	\$112,554	1.556	1,904	\$121,752	30,438	30,438	29,700	30,438	57,959,889	56,554,790	57,959,889
113,700 - 115,699	\$114,625	1.991	2,437	\$123,992	30,998	30,998	29,700	30,998	75,527,938	72,365,416	75,527,938
\$115,700 - over	\$148,494	18.482	22,618	\$160,628	40,157	40,050	29,700	40,157	905,846,973	671,751,688	908,269,831
TOTAL			99.998	122,376				Total Taxable Earn'gs.	\$3,152,155,859	\$2,913,119,604	\$3,154,578,716
								Employer Tax Rate	6.20%	13.10%	1.45%
								Employer Payment	\$195,433,663	\$381,618,668	\$45,741,391
								Total Tier I & II & Medicare			\$622,793,723

The SAS System

RRB 2021 EARNINGS DATA

Annual Salary Range	Number of Employees	Gross Salary	Average Salary (Group)	Group Employment % Total Employment	Cumulative Employees	Cumulative Salary	Average Salary (Cumulative)	Cumulative % Total Employment
\$ 0 TO \$41,699	10	\$222,432	\$22,243	0.622	10	\$222,432	\$22,243	0.622
\$41,700 TO \$43,699	2	\$84,955	\$42,478	0.124	12	\$307,387	\$25,616	0.747
\$43,700 TO \$45,699	6	\$266,492	\$44,415	0.373	18	\$573,879	\$31,882	1.120
\$45,700 TO \$47,699	4	\$187,630	\$46,908	0.249	22	\$761,509	\$34,614	1.369
\$47,700 TO \$49,699	9	\$439,406	\$48,823	0.560	31	\$1,200,915	\$38,739	1.929
\$49,700 TO \$51,699	5	\$251,183	\$50,237	0.311	36	\$1,452,098	\$40,336	2.240
\$51,700 TO \$53,699	12	\$628,915	\$52,410	0.747	48	\$2,081,013	\$43,354	2.987
\$53,700 TO \$55,699	19	\$1,037,531	\$54,607	1.182	67	\$3,118,544	\$46,545	4.169
\$55,700 TO \$57,699	13	\$736,752	\$56,673	0.809	80	\$3,855,296	\$48,191	4.978
\$57,700 TO \$59,699	13	\$763,421	\$58,725	0.809	93	\$4,618,717	\$49,664	5.787
\$59,700 TO \$61,699	28	\$1,694,920	\$60,533	1.742	121	\$6,313,637	\$52,179	7.530
\$61,700 TO \$63,699	34	\$2,130,167	\$62,652	2.116	155	\$8,443,804	\$54,476	9.645
\$63,700 TO \$65,699	45	\$2,917,949	\$64,843	2.800	200	\$11,361,753	\$56,809	12.446
\$65,700 TO \$67,699	48	\$3,209,081	\$66,856	2.987	248	\$14,570,834	\$58,753	15.432
\$67,700 TO \$69,699	56	\$3,846,425	\$68,686	3.485	304	\$18,417,259	\$60,583	18.917
\$69,700 TO \$71,699	48	\$3,393,173	\$70,691	2.987	352	\$21,810,432	\$61,961	21.904

\$71,700 TO \$73,699	50	\$3,629,975	\$72,600	3.111	402	\$25,440,407	\$63,285	25.016
\$73,700 TO \$75,699	73	\$5,446,310	\$74,607	4.543	475	\$30,886,717	\$65,025	29.558
\$75,700 TO \$77,699	41	\$3,146,757	\$76,750	2.551	516	\$34,033,474	\$65,956	32.110
\$77,700 TO \$79,699	50	\$3,925,817	\$78,516	3.111	566	\$37,959,291	\$67,066	35.221
\$79,700 TO \$81,699	53	\$4,274,076	\$80,643	3.298	619	\$42,233,367	\$68,228	38.519
\$81,700 TO \$83,699	59	\$4,883,213	\$82,766	3.671	678	\$47,116,580	\$69,493	42.190
\$83,700 TO \$85,699	56	\$4,742,317	\$84,684	3.485	734	\$51,858,897	\$70,652	45.675
\$85,700 TO \$87,699	53	\$4,594,698	\$86,692	3.298	787	\$56,453,595	\$71,733	48.973
\$87,700 TO \$89,699	48	\$4,249,472	\$88,531	2.987	835	\$60,703,067	\$72,698	51.960
\$89,700 TO \$91,699	47	\$4,262,878	\$90,700	2.925	882	\$64,965,945	\$73,658	54.885
\$91,700 TO \$93,699	41	\$3,793,780	\$92,531	2.551	923	\$68,759,725	\$74,496	57.436
\$93,700 TO \$95,699	30	\$2,842,001	\$94,733	1.867	953	\$71,601,726	\$75,133	59.303
\$95,700 TO \$97,699	43	\$4,164,307	\$96,844	2.676	996	\$75,766,033	\$76,070	61.979
\$97,700 TO \$99,699	37	\$3,652,328	\$98,712	2.302	1,033	\$79,418,361	\$76,881	64.281
\$99,700 TO \$101,699	40	\$4,027,363	\$100684	2.489	1,073	\$83,445,724	\$77,769	66.770
\$101,700 TO \$103,699	42	\$4,315,200	\$102743	2.614	1,115	\$87,760,924	\$78,709	69.384
\$103,700 TO \$105,699	34	\$3,558,887	\$104673	2.116	1,149	\$91,319,811	\$79,478	71.500
\$105,700 TO \$107,699	40	\$4,270,080	\$106752	2.489	1,189	\$95,589,891	\$80,395	73.989
\$107,700 TO	36	\$3,913,181	\$108699	2.240	1,225	\$99,503,072	\$81,227	76.229

\$109,699								
\$109,700 TO \$111,699	28	\$3,093,231	\$110473	1.742	1,253	\$102,596,303	\$81,881	77.971
\$111,700 TO \$113,699	25	\$2,813,842	\$112554	1.556	1,278	\$105,410,145	\$82,481	79.527
\$113,700 TO \$115,699	32	\$3,668,013	\$114625	1.991	1,310	\$109,078,158	\$83,266	81.518
\$115,700 AND OVER	297	\$44,102,675	\$148494	18.482	1,607	\$153,180,833	\$95,321	100.000
TOTAL	1,607	\$153,180,833	\$95,321	100.000	1,607	\$153,180,833	\$95,321	100.000

The SAS System

RRB 2021 EARNINGS DATA

Annual Salary Range	Number of Employees	Gross Salary	Average Salary (Group)	Group Employment % Total Employment	Cumulative Employees	Cumulative Salary	Average Salary (Cumulative)	Cumulative % Total Employment
\$ 0 TO \$41,699	10	\$222,432	\$22,243	0.622	10	\$222,432	\$22,243	0.622
\$41,700 TO \$43,699	2	\$84,955	\$42,478	0.124	12	\$307,387	\$25,616	0.747
\$43,700 TO \$45,699	6	\$266,492	\$44,415	0.373	18	\$573,879	\$31,882	1.120
\$45,700 TO \$47,699	4	\$187,630	\$46,908	0.249	22	\$761,509	\$34,614	1.369
\$47,700 TO \$49,699	9	\$439,406	\$48,823	0.560	31	\$1,200,915	\$38,739	1.929
\$49,700 TO \$51,699	5	\$251,183	\$50,237	0.311	36	\$1,452,098	\$40,336	2.240
\$51,700 TO \$53,699	12	\$628,915	\$52,410	0.747	48	\$2,081,013	\$43,354	2.987
\$53,700 TO \$55,699	19	\$1,037,531	\$54,607	1.182	67	\$3,118,544	\$46,545	4.169
\$55,700 TO \$57,699	13	\$736,752	\$56,673	0.809	80	\$3,855,296	\$48,191	4.978
\$57,700 TO \$59,699	13	\$763,421	\$58,725	0.809	93	\$4,618,717	\$49,664	5.787
\$59,700 TO \$61,699	28	\$1,694,920	\$60,533	1.742	121	\$6,313,637	\$52,179	7.530
\$61,700 TO \$63,699	34	\$2,130,167	\$62,652	2.116	155	\$8,443,804	\$54,476	9.645
\$63,700 TO \$65,699	45	\$2,917,949	\$64,843	2.800	200	\$11,361,753	\$56,809	12.446
\$65,700 TO \$67,699	48	\$3,209,081	\$66,856	2.987	248	\$14,570,834	\$58,753	15.432
\$67,700 TO \$69,699	56	\$3,846,425	\$68,686	3.485	304	\$18,417,259	\$60,583	18.917
\$69,700	48	\$3,393,173	\$70,691	2.987	352	\$21,810,432	\$61,961	21.904

TO \$71,699								
\$71,700 TO \$73,699	50	\$3,629,975	\$72,600	3.111	402	\$25,440,407	\$63,285	25.016
\$73,700 TO \$75,699	73	\$5,446,310	\$74,607	4.543	475	\$30,886,717	\$65,025	29.558
\$75,700 TO \$77,699	41	\$3,146,757	\$76,750	2.551	516	\$34,033,474	\$65,956	32.110
\$77,700 TO \$79,699	50	\$3,925,817	\$78,516	3.111	566	\$37,959,291	\$67,066	35.221
\$79,700 TO \$81,699	53	\$4,274,076	\$80,643	3.298	619	\$42,233,367	\$68,228	38.519
\$81,700 TO \$83,699	59	\$4,883,213	\$82,766	3.671	678	\$47,116,580	\$69,493	42.190
\$83,700 TO \$85,699	56	\$4,742,317	\$84,684	3.485	734	\$51,858,897	\$70,652	45.675
\$85,700 TO \$87,699	53	\$4,594,698	\$86,692	3.298	787	\$56,453,595	\$71,733	48.973
\$87,700 TO \$89,699	48	\$4,249,472	\$88,531	2.987	835	\$60,703,067	\$72,698	51.960
\$89,700 TO \$91,699	47	\$4,262,878	\$90,700	2.925	882	\$64,965,945	\$73,658	54.885
\$91,700 TO \$93,699	41	\$3,793,780	\$92,531	2.551	923	\$68,759,725	\$74,496	57.436
\$93,700 TO \$95,699	30	\$2,842,001	\$94,733	1.867	953	\$71,601,726	\$75,133	59.303
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\$103,700 TO \$105,699	34	\$3,558,887	\$104673	2.116	1,149	\$91,319,811	\$79,478	71.500
\$105,700 TO \$107,699	40	\$4,270,080	\$106752	2.489	1,189	\$95,589,891	\$80,395	73.989

\$107,700 TO \$109,699	36	\$3,913,181	\$108699	2.240	1,225	\$99,503,072	\$81,227	76.229
\$109,700 TO \$111,699	28	\$3,093,231	\$110473	1.742	1,253	\$102,596,303	\$81,881	77.971
\$111,700 TO \$113,699	25	\$2,813,842	\$112554	1.556	1,278	\$105,410,145	\$82,481	79.527
\$113,700 TO \$115,699	32	\$3,668,013	\$114625	1.991	1,310	\$109,078,158	\$83,266	81.518
\$115,700 AND OVER	297	\$44,102,675	\$148494	18.482	1,607	\$153,180,833	\$95,321	100.000
TOTAL	1,607	\$153,180,833	\$95,321	100.000	1,607	\$153,180,833	\$95,321	100.000

2022 RR Retirement Benchmarking

From "Wage Statistics"

	U.S.
2022 ST Comp. Incl. Lump Sums	\$9,066,315,548
2022 PFTNW	\$1,745,617,400
TOTAL	\$10,811,932,948
Pre Tax Emp H&W Cost Sharing	\$244,994,231
ST Hours Paid For	224,778,198
ST Hourly Rate	\$40.334
PFTNW Hourly Rate	\$7.766
ST + PFTNW Hourly Rate	\$48.100
Pre-Tax Contributions	(\$1.090)
Taxable Rate	\$47.010

Figures are from Wage Statistics, Year 2020, and WF Form.

The hourly rate is used both in Railroad Retirement and Unemployment Insurance.

Pre-Tax Employee H&W Cost Sharing is from the railroads in the new WF.

2021 RR Retirement Benchmarking

From "Wage Statistics"

	U.S.
2021 ST Comp. Incl. Lump Sums	\$8,413,054,521
2021 PFTNW	\$1,602,097,867
TOTAL	\$10,015,152,388
Pre Tax Emp H&W Cost Sharing	\$322,125,331
ST Hours Paid For	223,038,929
ST Hourly Rate	\$37.720
PFTNW Hourly Rate	\$7.183
ST + PFTNW Hourly Rate	\$44.903
Pre-Tax Contributions	(\$1.444)
Taxable Rate	\$43.459

Figures are from Wage Statistics, Year 2020, and WF Form.

The hourly rate is used both in Railroad Retirement and Unemployment Insurance.

Pre-Tax Employee H&W Cost Sharing is from the railroads in the new WF.

Restated Hourly Rate to New Wage Rate Benchmark

U.S.	STHR	+ PFTNW	= Wages	Lump Sums	Back Pay	Other	Adjusted Wages	Pre-Tax Wages	Taxable Wages
1Q/23	\$42.336	\$8.489	\$50.825	\$0.269	\$6.966	\$0.257	\$58.317	-\$1.101	\$57.216
2Q/23	\$42.344	\$8.490	\$50.834	\$0.160	\$6.991	\$0.258	\$58.243	-\$1.101	\$57.142
3Q/23	\$43.997	\$8.819	\$52.816	\$0.160	\$7.002	\$0.220	\$60.198	-\$1.092	\$59.106

1Q, 2Q & 3Q STHR & PFTNW (adjustments included) are from the SUMMARY_restated.xlsx in the Labor Restatement folder.

Adjustments are the same ones that went into the filings but restated to use new Wage Statistics.

See RCAFlumpsum_restated.xlsx, RCAFbackpay_restated.xlsx, BNSFProfitSharing_restated.xlsx, and TaxableRate_restated.xlsx.

The Taxable Wages (hourly rate) is used both in Railroad Retirement and Unemployment Insurance.