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The Honorable Cynthia T. Brown
Chief, Section of Administration
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This submission is the AAR forecast of the fourth quarter 2022 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2022-4) *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 2022 results and compares to the previous quarter. Both quarters are shown on a 4Q\2017=100 base.

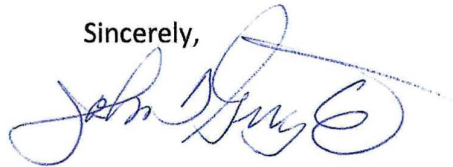
	<u>2022Q3</u>	<u>2022Q4</u>	<u>% Change</u>
All-Inclusive Index	124.3	125.0	0.6
Preliminary RCAF	1.243	1.250	0.6
Forecast Error Adjustment	0.007	0.042	
RCAF (Unadjusted)	1.250	1.292	3.4
Productivity Adjustment Factor	2.4436	2.4588	
RCAF (Adjusted)	0.512	0.525	2.5
PAF-5	2.5687	2.5738	
RCAF-5	0.487	0.502	3.1

September 2, 2022

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

Our quarterly non-proprietary work papers underlying this submission are e-filed herewith, in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, served February 8, 1990. We have notified Pedro Ramirez, in the STB office handling this proceeding, of our plan to e-file the submission and non-proprietary work papers. A second copy of the submission and non-proprietary work papers, plus selected highly confidential work papers, will be provided to Mr. Ramirez's Data Collection and Auditing Team. All work papers are available for STB inspection. Questions should be directed to me or Rapik Saat (202 639-2329) of this office.

Sincerely,

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

John T. Gray

Attachments

**Fourth Quarter 2022
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2022-4)

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

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

September 2, 2022

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Introduction

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

This quarter's projection of railroad costs is for the fourth quarter 2022. The All-Inclusive Index utilizes new weights (see page 2), which are based on 2021 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 2021 (current) and 2020 (previous) weights are shown below. Weights calculated from 2020 data were used for the fourth quarter of 2021 through the third quarter of 2022. Beginning with the fourth quarter of 2022, weights calculated using 2021 data are used. The component with the biggest change in weight was Fuel, which increased by 4.5 percentage points. Labor and Equipment Rents fell by 1 and 0.3 percentage points, respectively. Materials & Supplies was unchanged. The weight for Depreciation decreased 1 percentage point, and Other decreased by 1.9 percentage points.

Weights for RCAF's All-Inclusive Index		
	2021	2020
Labor	31.4 %	32.4 %
Fuel	14.2	9.7
Materials & Supplies	4.5	4.5
Equipment Rents	4.9	5.2
Depreciation	17.5	18.5
Interest	2.4	2.7
Other	25.1	27.0
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 2022

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

	2021 Weights	Forecast		Percent Change
		Previous 2022Q3	Current 2022Q4	
1. Labor	31.4%	472.4	479.6	1.5 %
2. Fuel	14.2%	459.6	475.2	3.4
3. M&S	4.5%	305.0	320.8	5.2
4. Equipment Rents	4.9%	256.0	253.8	-0.9
5. Depreciation	17.5%	233.2	233.3	0.0
6. Interest	2.4%	51.1	50.1	-2.0
7. Other	25.1%	302.4	290.6	-3.9
8. Weighted Average				
a. 1980 = 100		357.8	359.9	
b. 1980 = 100 (linked)		328.7	330.6 ¹	
c. 4Q17 = 100		124.3	125.0 ²	0.6

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

$$= (359.9 / 357.8) \times 328.7$$

$$= 330.6$$

² To calculate the 4Q17 = 100 index:
Index4Q17 = (Current Linked Index / 4Q17 Basing Factor) * 100

$$= 330.6 \text{ divided by } 264.5 \text{ times } 100$$

$$= 125.0$$

Indexes based on other periods:

- 4Q12 based index = $330.6 / 297.6 \times 100 = 111.1$
- 4Q07 based index = $330.6 / 245.9 \times 100 = 134.4$
- 4Q02 based index = $330.6 / 192.1 \times 100 = 172.1$
- 4Q97 based index = $330.6 / 173.2 \times 100 = 190.9$
- 4Q92 based index = $330.6 / 156.9 \times 100 = 210.7$

Forecast vs. Actual All-Inclusive Index Second Quarter 2022

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 122.8 is 4.2 index points above the forecast value of 118.6. Therefore, the forecast error adjustment for fourth quarter 2022 is 4.2 index points.

	2020	Second Quarter 2022		Amt
	Weights	Forecast	Actual	Difference
1. Labor	32.4%	470.4	470.4	
2. Fuel	9.7%	345.3	463.8	
3. M&S	4.5%	292.0	292.0	
4. Equipment Rents ¹	5.2%	251.1	251.6	
5. Depreciation	18.5%	232.9	233.3	
6. Interest	2.7%	51.1	51.1	
7. Other	27.0%	290.1	290.6	
8. Weighted Average				
a. 1980 = 100		334.9	346.6	
b. 1980 = 100 (linked)		313.8	324.8 ²	
c. 4Q17 = 100 ³		118.6	122.8	4.2

Forecast error → 4.2 index points

¹	2020	Second Quarter 2022	
	Weights	Forecast	Actual
Car-Hire	64.7%	206.5	207.0
Lease Rentals	35.3%	290.1	290.6
Weighted Average		236.0	236.5
Weighted Average (linked)		251.1	251.6

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

$$324.8 = 346.6 / 329.5 \times 308.8$$

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

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

Productivity

On February 3, 2022, the Surface Transportation Board served a decision which proposed to adopt 2.5 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2020 and removed the year 2015. The components of this average annual value are shown on the following table in ratio format – therefore, 1.025 is the same as an increase of 2.5 percent. Productivity changes are calculated by multiplying each of the five productivity changes together and taking the result to the one-fifth power. The productivity adjustment factors (PAF) for each quarter are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate, which are the fourth root of the geometric average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the five-year productivity trend.

Comparison of Output, Input, & Productivity			
2016 - 2020			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
2016	0.955	0.941	1.015
2017	1.045	0.992	1.053
2018	1.032	1.004	1.028
2019	0.968	0.961	1.007
2020	0.923	0.904	1.021
Average			1.025
Previous Average (2015-2019)			1.008

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

Rail Cost Adjustment Factor

Fourth Quarter 2022

Four RCAF values are presented in this filing. Two are not modified for productivity (Preliminary RCAF and RCAF Unadjusted), and two incorporate a productivity calculation (RCAF Adjusted and RCAF-5). The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below. Note that beginning with the 2018Q1 index, the All-Inclusive Index was rebased to a 2017Q4=100 basis as required in the applicable statute.

	Previous 2022Q3	Current 2022Q4	Percent Change
All-Inclusive Index ¹	124.3	125.0	0.6
Preliminary RCAF ²	1.243	1.250	0.6
Forecast Error Adjustment ³	0.007	0.042	
RCAF (Unadjusted) ⁴	1.250	1.292	3.4
Productivity Adjustment Factor ⁵	2.4436	2.4588	
RCAF (Adjusted) ⁶	0.512	0.525	2.5
PAF-5 ⁷	2.5687	2.5738	
RCAF-5 ⁸	0.487	0.502	3.1

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 2022

The fourth quarter 2022 Labor Index is 1.5 percent higher 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 2021, and this replaces data for 2020. 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 by 0.1%.

Wage Increases: There are no national wage increases currently scheduled for the fourth quarter. There was an increase for an independent group that increased the wage rate by 2 cents.

Lump Sums: The fourth quarter lump sum rate increased 4.2% (1.1 cents). One amount was fully amortized and removed, and it was replaced by one new similar amount. The change in the lump sum rate was caused mostly by rebenchmarking to newer wage statistics data.

Labor

Fourth Quarter 2022

Back Pay: The back pay rate increased 1.1 cents this due to a new labor agreement involving an independent group.

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 is 2.4 cents higher than last quarter.

Supplements Index

The Supplements Index increased 3.3 percent this quarter.

Health & Welfare: The Health & Welfare rate increased 5.9 percent, solely the result of rebenchmarking.

Railroad Retirement: The Railroad Retirement rate increased 2.9 percent, solely the result of rebenchmarking.

Unemployment Insurance: The Unemployment Insurance rate decreased 3.3 percent, also 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 11.7 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 0.1 percent increase in the Wage Rate Index and the 3.3 percent increase in the Supplements Index combined to cause the Labor Index to be 1.5 percent higher than the previous quarter. The linked fourth quarter 2022 Labor index is 479.6, which is 1.5 percent higher than one year ago. The linked fourth quarter 2021 index of 479.6 is determined by multiplying the third quarter linked index of 472.4 times the change between the fourth quarter Labor Index (504.3) and the original third quarter Labor Index recalculated using the original third quarter Wage Rate and Supplements indexes weighted with the new 2021 weights (496.7). This method eliminates changes caused by the new weights, but captures changes caused by rebenchmarking. The purpose of the "Updated the Reflect..." column in Table A-1 is only to enable the reader to discern the impact of rebenchmarking.

Labor
Fourth Quarter 2022
Table A-1 Labor Index

	2022Q3		2022Q4	
	Used in Previous Index Filing	Updated to Reflect New Benchmarks	Based on 2021 Data	Pct Chg From Prev. Filing
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$44.665	\$44.635	\$44.655	0.0%
Adjustments:				
Lump Sum	0.260	0.271	0.271	4.2%
Back Pay	0.002	0.002	0.013	535.9%
Other	0.244	0.254	0.257	5.2%
Total Wages	<u>45.171</u>	<u>\$45.162</u>	<u>45.195</u>	0.1%
Health & Welfare Benefits	9.623	10.193	10.193	5.9%
RR Retirement & Medicare	9.424	9.689	9.694	2.9%
Unemployment Insurance	1.201	1.162	1.162	-3.3%
Other	0.279	0.291	0.162	-41.8%
Total Supplements	<u>\$20.527</u>	<u>\$21.336</u>	<u>\$21.212</u>	3.3%
Total Labor (a check sum only)	\$65.698	\$66.497	\$66.407	
Wage Rate Index¹	386.6	386.5	386.8	0.1%
Supplements Index²	758.6	788.5	783.9	3.3%
Total labor Index, 2020 Weights ³	495.6			
Total labor Index, 2021 Weights ⁴	496.7	505.5	504.3	
Labor Index (linked)⁵	472.4		479.6	1.5%

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2020 weights: wages, supplements 70.7% 29.3%

⁴ 2021 weights: wages, supplements 70.4% 29.6%

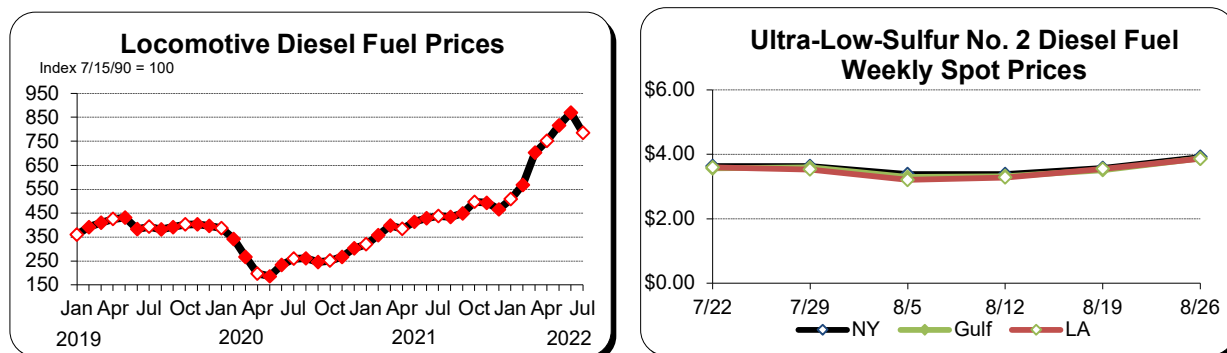
⁵ 2021Q4 linked Index = 2021Q3_{linked} x (2021Q4_{WT2020} / 2021Q3_{WT2020})
= 472.4 x 504.3 / 496.7

Fuel

Fourth Quarter 2022

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 low point in May 2020, but has been steadily rising since then. While average prices for locomotive diesel fuel are available only through July 2022, 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 23 for Ultra-Low-Sulfur Diesel Fuel* is an average of 2.9 percent lower than the average for July. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index through July 2022. 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 higher than prices that actually occurred in July. Railroads that responded to the AAR's forecast survey expect prices to decrease by October (Q4) compared to prices that actually occurred for July (Q3). The fourth quarter 2022 forecast is 3.4 percent higher than the previous quarter forecast, but 1.9 percent lower than the prior quarter actual.

Forecast Fuel Index (1980 = 100)	475.2
Change from previous quarter forecast	3.4%
Change from previous quarter actual	-1.9%

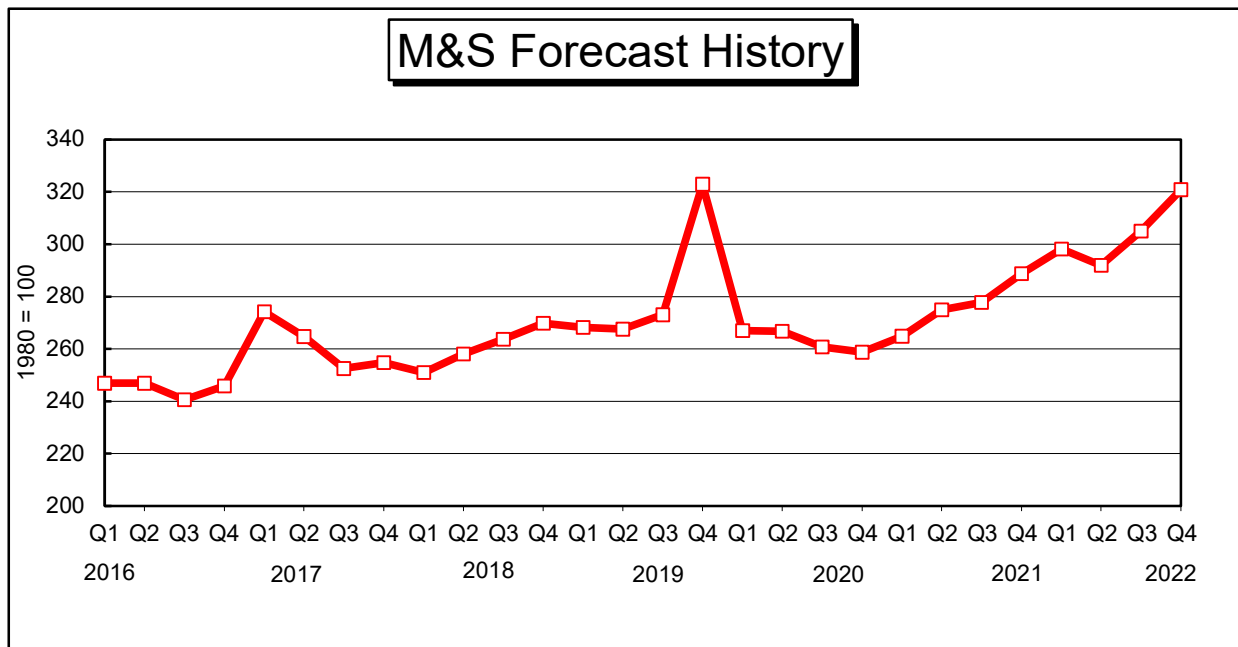
* Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

Fourth Quarter 2022

The fourth quarter 2022 Materials & Supplies Index increased 5.2 percent from the previous quarter. Prices increased for all three composition categories: Forest Products, Metal Products, and Miscellaneous Products.

2022Q4	Materials & Supplies Index =	320.8
2022Q3	Materials & Supplies Index =	305.0
Difference		15.8 basis points or 5.2 %



Equipment Rents

Fourth Quarter 2022

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

Car Hire

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

Lease Rentals

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

Equipment Rents Index Calculation

The table below calculates the Equipment Rents Index, and features new weights based on 2021. 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 2020 weights was 240.6. The fourth quarter Car Hire portion of the Index increased 1.3 percent because of higher rates for privately-owned cars. A 3.9 percent decrease for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 1.3 percent increase for

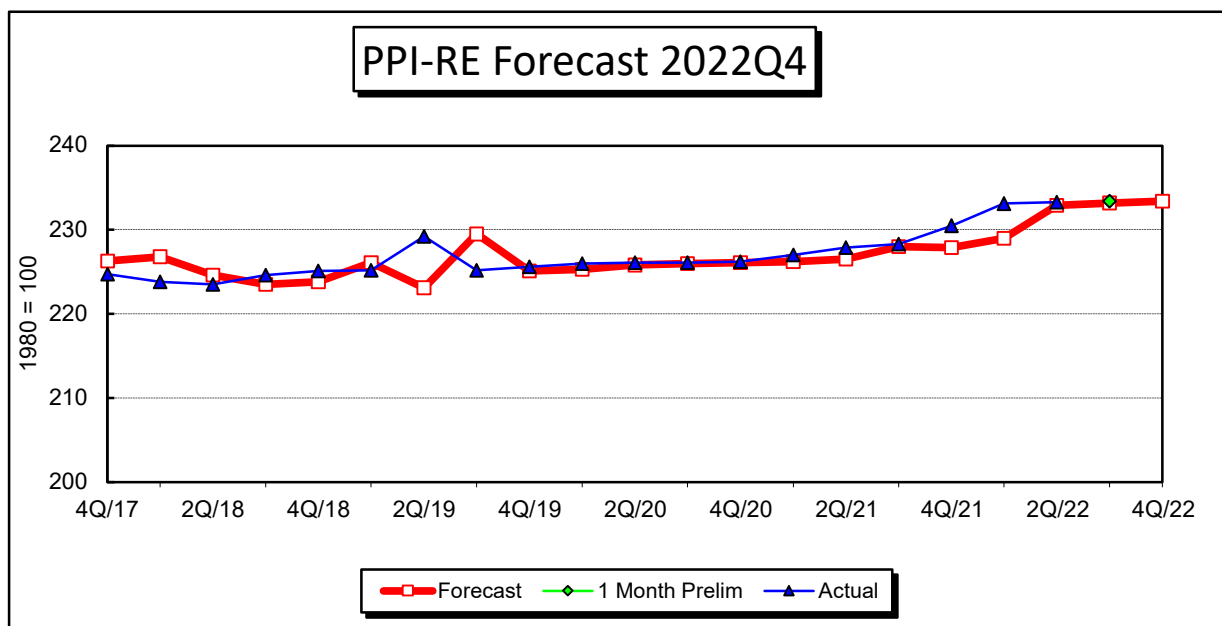
	2021 Weight	2022Q3	2022Q4	Percent Change
Car Hire	68.1%	206.9	209.5	1.3 %
Lease Rentals	31.9%	302.4	290.6	-3.9
Weighted Average		237.4	235.4	-0.8
Weighted Average (Linked)		256.0	253.8	-0.9

Depreciation

Fourth Quarter 2022

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE is forecast using an ARIMA (Auto-Regressive Integrated Moving Average) process where a statistical package picks the model that best fits the historical data set (see next page), and that model is then used for the forecast. The historical data set contains 6 years of monthly data (a sample size of 72), where the most recent available data point is the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent period available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix on a 1982=100 basis. The figure forecast by the model is 0.04% (rounds to 0.0) higher than the previous quarter's forecast.

Forecast of Depreciation Index (1982=100)	210.9
Forecast of Depreciation Index (1980=100)	233.3
Change from previous quarter forecast	0.0% = 0.04%
Change from actual first month of previous quarter	0.0% = -0.04%
Change from same quarter of prior year (actual)	1.2%



Depreciation

Fourth Quarter 2022

PPI RAILROAD EQUIPMENT

Expert Analysis

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

The cumulative MAD for Exponential smoothing was 2.66 and for Box-Jenkins was 2.16.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

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

Model Details

Expert selection

Box-Jenkins

ARIMA(0, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	204.59	Std. deviation	2.64
R-square	0.88	Adj. R-square	0.88
Durbin-Watson	2.22	Ljung-Box(18)	18.0 P=0.54
Forecast error	0.9	BIC	0.9
MAPE	0.23	SMAPE	0.23
RMSE	0.9	MAD	0.47
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8
2022-May	210.9
2022-Jun	211.0
2022-Jul	211.0

Forecasted Values

	2.5 Lower	Forecast	97.5 Upper
Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	209.217	211.000	212.783
2022-Sep	208.478	211.000	213.522
2022-Oct	207.911	211.000	214.089
2022-Nov	207.433	211.000	214.567
2022-Dec	207.012	211.000	214.988
QTR AVG	207.452	211.000	214.548

Interest

Fourth Quarter 2022

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt.

The interest rate is calculated for the most recent year and used until the next year's figures are finalized. The source data are from a summary of the annual reports (Form R-1) submitted by each of the Class I railroads. Although the data set is received at the end of March, it is not used until the September filing. This enables data to be entered into a database and reviewed – and any revisions made, if necessary, before the data are used in the Index. The current Interest Index is based on 2021 data, and was updated in the Q4 filing submitted on September 2, 2022. The Interest Index based on 2021 decreased from 51.1 in 2020 to 50.1 in 2021, and is the lowest in recent history.

The R-1 source for interest expense is Schedule 210, column b. The lines currently used are listed below. The source for average total debt is Schedule 200. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers listed below account for the line number changes effective beginning with the 2016 annual report.

Interest Expense (Schedule 210)

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

Average Total Debt (Schedule 200)

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

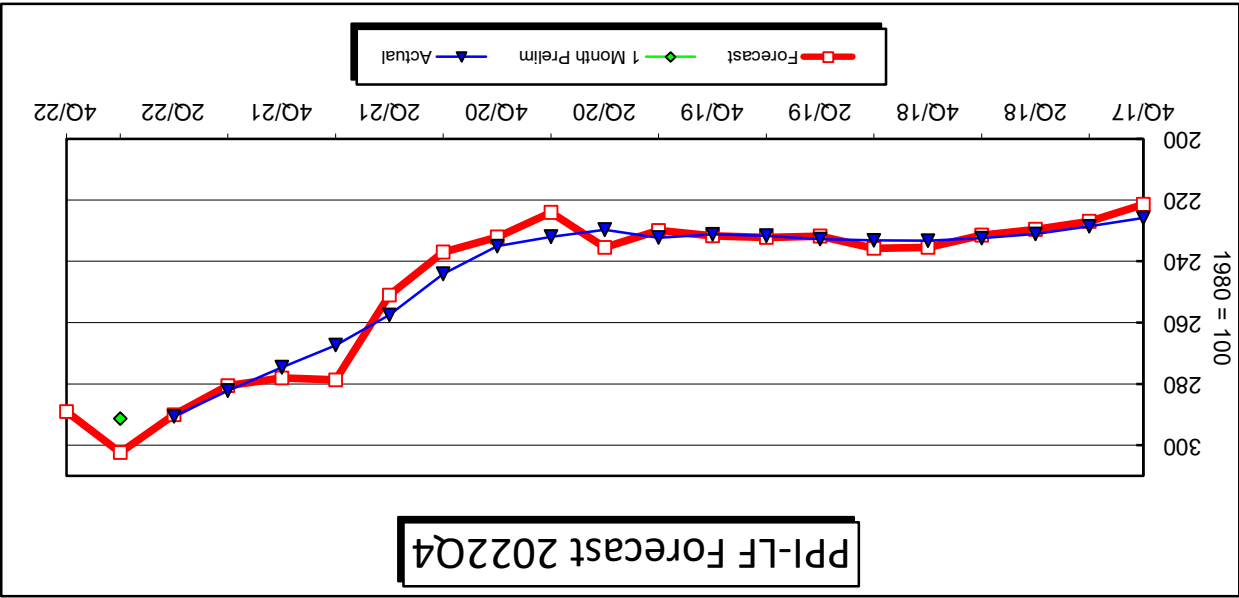
2020	Interest Rate	4.01%
1980	Interest Rate	7.85%
2022Q4	Interest Index	50.1
2022Q3	Interest Index	51.1
	Percent Change	-2.0%

Other Expenses
Fourth Quarter 2022

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

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent month available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The figure forecast by the model is 3.9 percent lower than the prior quarter forecast.

Forecast of Other Expense Index (1982=100)	259.2
Forecast of Other Expense Index (1980=100)	290.6
Change from previous quarter forecast	-3.9%
Change from actual first month of previous quarter	-0.2%
Change from same quarter of prior year (actual)	5.8%



Other Expenses

Fourth Quarter 2022

PPI INDUSTRIAL COMMODITIES LESS FUEL AND RELATED PRODUCTS AND POWER

Expert Analysis

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

The cumulative MAD for Exponential smoothing was 2.61 and for Box-Jenkins was 3.34.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality

LM(0.939, 0.998, 0.999)

Confidence limits proportional to indexes and level

Component	Smoothing Wgt		Final Value
Level	0.9388		259.9
Trend	0.998		-0.5595
Seasonal	0.9985		
Seasonal Indexes			
Jan - Mar	1.002	0.9991	1
Apr - Jun	0.9989	0.9994	0.9996
Jul - Sep	0.9998	1	0.9997
Oct - Dec	1.001	1.001	0.9998

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	213.96	Std. deviation	18.54
R-square	1	Adj. R-square	1
Durbin-Watson	1.78	Ljung-Box(18)	19.7 P=0.65
Forecast error	0.72	BIC	0.77
MAPE	0.23	SMAPE	0.23
RMSE	0.71	MAD	0.51
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2022-Feb	251.3
2022-Mar	254.6
2022-Apr	257.3
2022-May	259.9
2022-Jun	260.3
2022-Jul	259.8

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	257.635	259.384	261.133
2022-Sep	254.936	258.653	262.37
2022-Oct	253.437	258.394	263.35
2022-Nov	251.9	257.845	263.79
2022-Dec	250.225	257.015	263.805
QTR AVG	251.854	257.751	263.648

Railroad and Union Abbreviations

Fourth Quarter 2022

Railroads

BLE	Bessemer & Lake Erie Railroad (Part of CN's Grand Trunk Corp.)
BNSF	BNSF Railway Company
CC	Chicago, Central & Pacific (Part of CN's Grand Trunk Corp. Sometimes noted as CC&P.)
CN	Canadian National Railway (Commonly known as CN, owns Grand Trunk Corporation.)
CNGT	AAR's abbreviation for Grand Trunk Corporation (Almost all of CN's U.S. operations.)
CP	Canadian Pacific (Also noted as CPR. Owns the U.S. Class I railroad Soo Line.)
CPSL	AAR's abbreviation for Soo Line Corporation (CP's U.S. operations including SOO, D&H, and DME.)
CSX	CSX Transportation
D&H	Delaware & Hudson (Part of Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DME	Dakota, Minnesota & Eastern (Part of Canadian Pacific's U.S. operations, included beginning 2011Q4.)
CMQ	Central Maine & Quebec (Part of Canadian Pacific's U.S. operations, included beginning 2021Q4.)
GTW	Grand Trunk Western Railroad (Part of CN's Grand Trunk Corp.)
IC	Illinois Central Railroad (Part of CN's Grand Trunk Corp.)
KCS	Kansas City Southern Railway
NS	Norfolk Southern Combined Railroad Subsidiaries (a.k.a. Norfolk Southern Railway or NS Rail)
SOO	Soo Line Railroad (The largest part of Canadian Pacific's U.S. operations.)
UP	Union Pacific Railroad
WC	Wisconsin Central and subsidiaries (Part of CN's Grand Trunk Corp.)

Major Unions Involved with Railroads

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

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

BLE	Brotherhood of Locomotive Engineers (predecessor to BLET)
BMWE	Brotherhood of Maintenance of Way Employees (predecessor to BMWED)
BRC	Brotherhood of Railway Carmen (predecessor to TCU-Carmen)
IBFO	International Brotherhood of Firemen and Oilers (predecessor to NCFO)
SMW	Sheet Metal Workers' International Association (see SMART-MD)
UTU	United Transportation Union (merged into SMART)
UTU-YMD	United Transportation Union Yardmaster Department (see SMART-TD)

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

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

AAR Workpapers Sent to STB for 2022 Q4 RCAF

September 2, 2022

- 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. 2021 Benchmark spreadsheet
- 5 . Wall Street Journal - 13 week Treasury Bill Rate from recent auction (a.k.a. 3-Mo. T-Bill)
- 6 . 2022/Q4 RCAF Lump Sum Amortization summary, public version (1 page)
- 7 . 2022/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 2022 Q4 Unemployment Insurance Tax & 2-page run for restated 2022 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 (10 pages: calc, index actual, fuel, 3 car hire, 2 deprec, 2 other)
- 19 . 3 pages from EIA spot prices

Benchmarking Data

1. 2021 Wage Statistics Summary
2. RCAF Weights based on 2022 data (2 pages)
3. Railroad Retirement & Medicare 2021 Payroll Tax Calculation (2 pages)
4. Railroad Retirement & Medicare 2020 Earnings Distribution (3 pages, latest available from RRB)
5. 2021 and 2020 wage benchmarks for Railroad Retirement and Unemployment Insurance
6. Restated hourly rates for 2022Q1, Q2, and Q3 for wage rate benchmark.

RCAF All-Inclusive Index's Labor Index Based on 2021 Benchmarks

	21 Wts.	3Q/22	3Q/22 Rebenched As Info Only	% Chg	4Q/22	% Chg	1Q/23	% Chg	2Q/23	% Chg	3Q/23	% Chg
Straight Time		\$37.452	\$37.443	0.0%	\$37.460	0.0%		--		--		--
PFTNW		\$7.213	\$7.192	-0.3%	\$7.195	-0.2%		--		--		--
Total		\$44.665	\$44.635	-0.1%	\$44.655	0.0%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Lump Sum		\$0.260	\$0.271		\$0.271							
Back Pay		\$0.002	\$0.002		\$0.013							
Other		\$0.244	\$0.254		\$0.257							
Total Wages		\$45.171	\$45.162	0.0%	\$45.195	0.1%	\$0.000	--	\$0.000	--	\$0.000	--
Pre-Tax Reduction		(\$1.439)	(\$1.437)		(\$1.437)							
Taxable Wages		\$43.732	\$43.725		\$43.758		\$0.000		\$0.000		\$0.000	
H & W		\$9.623	\$10.193	5.9%	\$10.193	5.9%		--		--		--
RR Ret & Medicare		\$9.424	\$9.689	2.8%	\$9.694	2.9%		--		--		--
Unemp. Insurance		\$1.201	\$1.162	-3.3%	\$1.162	-3.3%		--		--		--
Other		\$0.279	\$0.291	4.3%	\$0.162	-41.8%		--		--		--
Total		\$20.527	\$21.336	3.9%	\$21.212	3.3%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Total Supplements		\$20.527	\$21.336	3.9%	\$21.212	3.3%	\$0.000	--	\$0.000	--	\$0.000	--
Total Labor		\$65.698	\$66.497	1.2%	\$66.407	1.1%	\$0.000	--	\$0.000	--	\$0.000	--
Wage Rate Index	0.7040	386.6	386.5	0.0%	386.8	0.1%	0.0	--	0.0	--	0.0	--
Supplements Index	0.2960	758.6	788.5	3.9%	783.9	3.3%	0.0	--	0.0	--	0.0	--
Total Labor Index '20 Wts.		495.6										
Total Labor Index '21 Wts.		496.7	505.5	1.8%	504.3	1.5%	0.0	--	0.0	--	0.0	--
Labor Index (Linked)		472.4			479.6	1.5%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--

All Inclusive Index and RCAF using 2021 Benchmarks and Weights

	21 Wts.	3Q/22	21 Wts. 3Q/22	% Chg	4Q/22	% Chg	1Q/23	% Chg	2Q/23	% Chg	3Q/23	% Chg
Labor	0.314	472.40	472.4	0.0%	479.6	1.5%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Fuel	0.142	459.60	459.6	0.0%	475.2	3.4%		--		--		--
M&S	0.045	305.00	305.0	0.0%	320.8	5.2%		--		--		--
Equip. Rents	0.049	256.00	256.0	0.0%	253.8	-0.9%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Depreciation	0.175	233.20	233.2	0.0%	233.3	0.0%		--		--		--
Interest	0.024	51.10	51.1	0.0%	50.1	-2.0%	50.1	0.0%	50.1	0.0%	50.1	0.0%
Other	0.251	302.40	302.4	0.0%	290.6	-3.9%		--		--		--
Weighted Avg.	1.000	350.80	357.8	2.0%	359.9	0.6%	1.2	-99.7%	#DIV/0!	--	#DIV/0!	--
Linked		328.70			330.6	0.6%	1.1	-99.7%	#DIV/0!	--	#DIV/0!	--
Basing Factor												
10/1/80 basis	102.7	320.1			321.9	0.6%	1.1	-99.7%	#DIV/0!	--	#DIV/0!	--
10/1/82	120.9	271.9			273.4	0.6%	0.9	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/87	132.2	248.6			250.1	0.6%	0.8	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/92	156.9	209.5			210.7	0.6%	0.7	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/97	173.2	189.8			190.9	0.6%	0.6	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/02	192.1	171.1			172.1	0.6%	0.6	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/07	245.9	133.7			134.4	0.5%	0.4	-99.7%	#DIV/0!	--	#DIV/0!	--
4Q/12	297.6	110.5			111.1	0.5%	0.4	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/17 basis	264.5	124.3			125.0	0.6%	0.4	-99.7%	#DIV/0!	--	#DIV/0!	--
Car Hire	0.681	206.90	206.9	0.0%	209.5	1.3%		--		--		--
Lease Rents	0.319	302.40	302.4	0.0%	290.6	-3.9%	0.0	--	0.0	--	0.0	--
Weighted Avg Eq Rents		240.60	237.4	-1.3%	235.4	-0.8%	0.0	--	0.0	--	0.0	--
Linked Equipment Rents		256.00			253.8	-0.9%	0.0	-100.0%	#DIV/0!	--	#DIV/0!	--
Preliminary RCAF		1.243			1.250	0.56%	0.004	-99.7%	#DIV/0!	--	#DIV/0!	--
Forecast Error Adj.		0.007			0.042							
RCAF Unadjusted		1.250			1.292	3.36%	0.004	-99.7%	#DIV/0!	--	#DIV/0!	--
PAF		2.4436			2.4588	0.62%		--		--		--
RCAF Adjusted		0.512			0.525	2.54%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--
PAF-5		2.5687			2.5738	0.20%		--		--		--
RCAF-5		0.487			0.502	3.08%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--

Hourly Rate for 2022 Q4

Straight Time and Time Paid For But Not Worked

2022Q4 Straight Time Hourly Rate (from national spreadsheet)	\$37.441
Rebenchmark	

Adjustments to 2021 base:

Added 2022 Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Added 2022 Q2

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Added 2022 Q3

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Added 2022 Q4

Miscellaneous Independents	Nothing	0.000
Soo Corp.	1 new agreement and a few GWIs	0.019

Adjusted STHR Total	\$37.460
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Pay For Time Not Worked

PFTNW (from national spreadsheet)		\$7.191
Ratio Adj STHR to Nat STHR	37.460 / 37.441 =	1.00051

Adjusted Pay For Time Not Worked	\$7.195
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Adjusted STHR + Adjusted Pay For Time Not Worked	\$44.655
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Notes:

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

National Contracts U.S.

Straight Time Hourly Rate															Check Sum
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	1.00000
2021 Avg.	0.229737	0.029861	0.179175	0.004302	0.047192	0.15796	0.047975	0.011716	0.036995	0.00285	0.031322	0.019988	0.009918	0.191002	508.406
12/31/21	32.747	32.360	35.312	33.481	35.546	30.812	33.489	29.154	34.140	33.504	34.064	46.279	44.124	53.393	508.426
1/1/22	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
4/1/22	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
7/1/22	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
10/1/22	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
1/1/23	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
4/1/23	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	
7/1/23	32.747	32.360	35.312	33.481	35.550	30.812	33.490	29.156	34.143	33.504	34.068	46.279	44.131	53.393	

Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2021 Avg.	7.523	0.966	6.327	0.144	1.677	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.440
12/31/21	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
1/1/22	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
4/1/22	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
7/1/22	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
10/1/22	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
1/1/23	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
4/1/23	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441
7/1/23	7.523	0.966	6.327	0.144	1.678	4.867	1.607	0.342	1.263	0.096	1.067	0.925	0.438	10.198	37.441

Note: The 2021 Average and 12/31/21 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/22 through 7/1/23 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 2021 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
2021 Avg.	0.229737	0.029861	0.179175	0.004302	0.047192	0.15796	0.047975	0.011716	0.036995	0.00285	0.031322	0.019988	0.009918	0.191002	89.687
12/31/21	10.447	4.755	12.391	5.449	8.282	5.528	4.718	4.027	5.235	5.182	6.086	7.867	8.531	1.189	
1/1/22	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
4/1/22	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
7/1/22	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
10/1/22	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
1/1/23	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
4/1/23	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	
7/1/23	10.447	4.755	12.391	5.449	8.283	5.528	4.718	4.027	5.236	5.182	6.087	7.867	8.533	1.189	

Pay For Time Not Worked Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2021 Avg.	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
12/31/21	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
1/1/22	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
4/1/22	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
7/1/22	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
10/1/22	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
1/1/23	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
4/1/23	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191
7/1/23	2.400	0.142	2.220	0.023	0.391	0.873	0.226	0.047	0.194	0.015	0.191	0.157	0.085	0.227	7.191

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				32.74742	10.44678
12/31/21 Industry Rate				32.74742	10.44678
1/1/22			93.661%	32.74742	10.44678
4/1/22			93.661%	32.74742	10.44678
7/1/22			93.661%	32.74742	10.44678
10/1/22			93.661%	32.74742	10.44678
1/1/23			93.661%	32.74742	10.44678
4/1/23			93.661%	32.74742	10.44678
7/1/23			93.661%	32.74742	10.44678

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				32.35968	4.75523
12/31/21 Industry Rate				32.35968	4.75523
1/1/22			97.624%	32.35968	4.75523
4/1/22			97.624%	32.35968	4.75523
7/1/22			97.624%	32.35968	4.75523
10/1/22			97.624%	32.35968	4.75523
1/1/23			97.624%	32.35968	4.75523
4/1/23			97.624%	32.35968	4.75523
7/1/23			97.624%	32.35968	4.75523

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				35.31235	12.39058
12/31/21 Industry Rate				35.31235	12.39058
1/1/22			64.504%	35.31235	12.39058
4/1/22			64.504%	35.31235	12.39058
7/1/22			64.504%	35.31235	12.39058
10/1/22			64.504%	35.31235	12.39058
1/1/23			64.504%	35.31235	12.39058
4/1/23			64.504%	35.31235	12.39058
7/1/23			64.504%	35.31235	12.39058

U.S. National Contract

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				33.48137	5.44919
12/31/21 Industry Rate				33.48137	5.44919
1/1/22			100.000%	33.48137	5.44919
4/1/22			100.000%	33.48137	5.44919
7/1/22			100.000%	33.48137	5.44919
10/1/22			100.000%	33.48137	5.44919
1/1/23			100.000%	33.48137	5.44919
4/1/23			100.000%	33.48137	5.44919
7/1/23			100.000%	33.48137	5.44919

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				35.54568	8.28220
12/31/21 Industry Rate				35.55011	8.28323
1/1/22			97.891%	35.55011	8.28323
4/1/22			97.891%	35.55011	8.28323
7/1/22			97.891%	35.55011	8.28323
10/1/22			97.891%	35.55011	8.28323
1/1/23			97.891%	35.55011	8.28323
4/1/23			97.891%	35.55011	8.28323
7/1/23			97.891%	35.55011	8.28323

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				30.81246	5.52833
12/31/21 Industry Rate				30.81246	5.52833
1/1/22			97.235%	30.81246	5.52833
4/1/22			97.235%	30.81246	5.52833
7/1/22			97.235%	30.81246	5.52833
10/1/22			97.235%	30.81246	5.52833
1/1/23			97.235%	30.81246	5.52833
4/1/23			97.235%	30.81246	5.52833
7/1/23			97.235%	30.81246	5.52833

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				33.48918	4.71775
12/31/21 Industry Rate				33.48958	4.71780
1/1/22			98.078%	33.48958	4.71780
4/1/22			98.078%	33.48958	4.71780
7/1/22			98.078%	33.48958	4.71780
10/1/22			98.078%	33.48958	4.71780
1/1/23			98.078%	33.48958	4.71780
4/1/23			98.078%	33.48958	4.71780
7/1/23			98.078%	33.48958	4.71780

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				29.15397	4.02653
12/31/21 Industry Rate				29.15645	4.02687
1/1/22			98.935%	29.15645	4.02687
4/1/22			98.935%	29.15645	4.02687
7/1/22			98.935%	29.15645	4.02687
10/1/22			98.935%	29.15645	4.02687
1/1/23			98.935%	29.15645	4.02687
4/1/23			98.935%	29.15645	4.02687
7/1/23			98.935%	29.15645	4.02687

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				34.13989	5.23514
12/31/21 Industry Rate				34.14250	5.23554
1/1/22			98.770%	34.14250	5.23554
4/1/22			98.770%	34.14250	5.23554
7/1/22			98.770%	34.14250	5.23554
10/1/22			98.770%	34.14250	5.23554
1/1/23			98.770%	34.14250	5.23554
4/1/23			98.770%	34.14250	5.23554
7/1/23			98.770%	34.14250	5.23554

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				33.50352	5.18166
12/31/21 Industry Rate				33.50352	5.18166
1/1/22			90.025%	33.50352	5.18166
4/1/22			90.025%	33.50352	5.18166
7/1/22			90.025%	33.50352	5.18166
10/1/22			90.025%	33.50352	5.18166
1/1/23			90.025%	33.50352	5.18166
4/1/23			90.025%	33.50352	5.18166
7/1/23			90.025%	33.50352	5.18166

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				34.06427	6.08633
12/31/21 Industry Rate				34.06779	6.08696
1/1/22			98.505%	34.06779	6.08696
4/1/22			98.505%	34.06779	6.08696
7/1/22			98.505%	34.06779	6.08696
10/1/22			98.505%	34.06779	6.08696
1/1/23			98.505%	34.06779	6.08696
4/1/23			98.505%	34.06779	6.08696
7/1/23			98.505%	34.06779	6.08696

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				46.27890	7.86697
12/31/21 Industry Rate				46.27890	7.86697
1/1/22			70.034%	46.27890	7.86697
4/1/22			70.034%	46.27890	7.86697
7/1/22			70.034%	46.27890	7.86697
10/1/22			70.034%	46.27890	7.86697
1/1/23			70.034%	46.27890	7.86697
4/1/23			70.034%	46.27890	7.86697
7/1/23			70.034%	46.27890	7.86697

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				44.12424	8.53135
12/31/21 Industry Rate				44.13085	8.53263
1/1/22			61.685%	44.13085	8.53263
4/1/22			61.685%	44.13085	8.53263
7/1/22			61.685%	44.13085	8.53263
10/1/22			61.685%	44.13085	8.53263
1/1/23			61.685%	44.13085	8.53263
4/1/23			61.685%	44.13085	8.53263
7/1/23			61.685%	44.13085	8.53263

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2021 Industry Avg.				53.39287	1.18871
12/31/21 Industry Rate				53.39287	1.18871
1/1/22			100.000%	53.39287	1.18871
4/1/22			100.000%	53.39287	1.18871
7/1/22			100.000%	53.39287	1.18871
10/1/22			100.000%	53.39287	1.18871
1/1/23			100.000%	53.39287	1.18871
4/1/23			100.000%	53.39287	1.18871
7/1/23			100.000%	53.39287	1.18871

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2021 AVG			508.40578	89.68675
12/31/21			508.42584	
		1266.946%		
		ok matches	ok matches	ok matches
			ok matches	

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

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

U.S. 2021 Benchmark

	From AAR 112-Class Wage Statistics & Survey				ST \$ Adjusted to Exclude Lump Sums	2021 Average Hourly Rates		12/31/2021 ST HR	ST Hrs. 2021 Weights
	ST Hrs.	ST \$	PFTNW \$	Union L. Sum		ST wo LS	PFTNW		
UTU	51,473,976	\$1,695,039,638	\$537,737,499	\$9,399,951	\$1,685,639,687	\$32.747	\$10.447	\$32.74742	0.22974
TCU	6,690,454	222,478,411	31,814,647	5,977,484	216,500,927	32.360	4.755	\$32.35968	0.02986
BLET	40,145,138	1,468,301,364	497,421,345	50,682,093	1,417,619,271	35.312	12.391	\$35.31235	0.17917
SMWIA	963,879	32,291,186	5,252,359	19,200	32,271,986	33.481	5.449	\$33.48137	0.00430
BRS	10,573,634	376,528,227	87,572,902	681,211	375,847,016	35.546	8.282	\$35.55011	0.04719
BMWE	35,392,646	1,093,355,992	195,662,309	2,821,589	1,090,534,403	30.812	5.528	\$30.81246	0.15796
TCU-CAR	10,749,074	360,829,605	50,711,412	851,944	359,977,661	33.489	4.718	\$33.48958	0.04797
NCFO	2,624,947	76,652,312	10,569,430	124,687	76,527,625	29.154	4.027	\$29.15645	0.01172
IAM	8,288,861	283,389,445	43,393,368	408,681	282,980,764	34.140	5.235	\$34.14250	0.03699
IBBM	639,484	21,467,623	3,313,589	42,660	21,424,963	33.504	5.182	\$33.50352	0.00285
IBEW	7,017,913	239,582,291	42,713,350	522,173	239,060,118	34.064	6.086	\$34.06779	0.03132
ATDA	4,478,485	209,680,783	35,232,101	2,421,438	207,259,345	46.279	7.867	\$46.27890	0.01999
UTU-YMD	2,222,173	99,279,981	18,958,143	1,228,295	98,051,686	44.124	8.531	\$44.13085	0.00992
OTHER	42,795,097	2,284,953,229	50,870,810	0	2,284,953,229	53.393	1.189	\$53.39287	0.19100
AAR 112 Total	224,055,761	8,463,830,087	1,611,223,264	75,181,406	8,388,648,681	37.440	7.191	37.441	1.00000
Sum (for proofing)						508.40578	89.68675	508.42584	

Year-End Figures are calculated, based on 2021 WS-112 and union contracts, in YearEnd2021.xlsx exhibited in document titled "Year-End 2021 ST Hourly Rates for U.S."
The ST Hours Weights and the Hourly Rates are full float.

MarketData > Bonds > Money Rates

Quotes & Companies

View All Companies

Inflation

Friday, August 26, 2022

U.S. Consumer Price Index

	JULY INDEX	% CHG FROM	
		JUNE '22	JULY '21
All items	296.276	0.0	8.5
Core	295.646	0.3	5.9

International Rates

Friday, August 26, 2022

Prime Rates [U.S. Effective Date: 7/28/22]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
U.S.	5.50	5.50	5.50	3.25
Canada	4.70	4.70	4.70	2.45
Japan	1.48	1.48	1.48	1.48

Policy Rates

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Euro zone	0.50	0.50	0.50	0.00
Switzerland	0.25	0.25	0.25	0.00
Britain	1.75	1.75	1.75	0.10
Australia	1.85	1.85	1.85	0.10

Overnight Repurchase

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
U.S.	2.29	2.29	2.31	0.01

Other Short Term Rates

Friday, August 26, 2022

Call Money [Effective Date: 7/28/22]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	4.25	4.25	4.25	2.00

Commercial Paper (AA Financial)

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW

Secured Overnight Financing Rate (SOFR) [As of 8/25/22]				
	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	2.28	2.28	2.30	0.03

DTCC GCF Repo Index				
	LATEST	VALUE TRADED (BILLIONS)	52-WEEK	
			HIGH	LOW
Treasury	2.310	12.900	2.315	0.015
MBS	2.329	27.200	2.342	0.018

Secondary Market

Friday, August 26, 2022

Fannie Mae 30-year Mortgage Yields				
	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
30 days	5.086	5.028	5.434	2.337
60 days	5.128	5.073	5.526	2.371

U.S. Government Rates

Friday, August 26, 2022

Discount Rates [Effective Date: 7/28/22]				
	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	2.50	2.50	2.50	0.25

Federal Funds [Effective Date: 7/28/22]				
	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Effective rate	2.33	2.33	2.34	0.07
Target rate	2.25-2.50	2.25-2.50	2.25-2.50	0.00-0.25
High	2.4500	2.4500	2.4500	0.0900
Low	2.3100	2.3000	2.3200	0.0200
Bid	2.3300	2.3300	2.3300	0.0500
Offer	2.3700	2.3700	2.3700	0.0600

Treasury Bill Auction				
	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
4 weeks	2.310	2.150	2.310	0.020
13 weeks	2.740	2.610	2.740	0.035
26 weeks	3.110	3.020	3.110	0.045

Weekly Survey

Thursday, August 25, 2022

Freddie Mac				
			52-WEEK	

	Home	World	U.S.	Politics	Economy	Business	Tech	Markets	Opinion	Books & Arts	Real Estate	Life & Work	Style	Sports
15-year fixed								4.85			4.55			2.17
Five-year ARM								4.36			4.39			2.42

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 7/28/22. **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 7/28/22; **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
2022/Q4**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2021Q3 PPI	2021Q4	2022Q1				224,055,761
NS - BLET 2021Q4 PPI	2022Q1	2022Q2				224,055,761
NS - BLET 2022 Ave PPI	2022Q1	2022Q2				224,055,761
NS - BLET 2022 TPB	2022Q1	2022Q2				224,055,761
CSX - ATDA 2022Q3	2022Q3	2022Q3				224,055,761
NS - BLET 2022Q1 PPI	2022Q2	2022Q3				224,055,761
NS - BLET 2022Q2 PPI	2022Q3	2022Q4				224,055,761
Total			\$59,985,933	0.26773		

Should be slightly less
than amortized amount.

Fell out

NS - BLET 2021Q2 PPI	2021Q3	2021Q4				233,382,710
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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	
2023/Q2	
2023/Q3	
2023/Q4	
2024/Q1	

Lump Sum Adjustment for 2022/Q4	→ 0.271036 or 0.271
---------------------------------	---------------------------

**RCAF Back Pay Amortization
2022/Q4**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
CMQ - all unions 2022	2022Q1	2022Q2				224,055,761	2021
DME - all unions 2022	2022Q1	2022Q2				224,055,761	2021
CSX - ATDA 2022Q3	2022Q2	2022Q3				224,055,761	2021
DME - BLET 2022Q4	2022Q3	2022Q4				224,055,761	2021
Total			\$2,802,399	0.01250759			

Should be slightly less
than amortized amount.

Fell out

None

Notes:

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

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

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

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

Interest Rate

2020/Q2	1.505
2020/Q3	0.130
2020/Q4	0.100
2021/Q1	0.085
2021/Q2	0.030
2021/Q3	0.015
2021/Q4	0.055
2022/Q1	0.050
2022/Q2	0.380
2022/Q3	1.060
2022/Q4	2.740
2023/Q1	
2023/Q2	

Back Pay Adjustment for 2022/Q4

0.01272

or

0.013

Health and Welfare 2022Q4

	Employees Receiving			Total	
	Pay 2021	Monthly Contribution 2021 Avg. 2022		2021 Avg.	2022
1. All Employees					
a. Group health	117,419	\$1,697.55	\$1,856.96	\$199,324,623.45	\$218,042,386.24
b. Group dental	117,419	63.67	75.01	7,476,067.73	8,807,599.19
c. Early retirement major medical	117,419	116.94	84.14	13,730,977.86	9,879,634.66
d. Group vision	117,419	8.51	8.51	999,235.69	999,235.69
2. Supplemental Sickness					
a. Signalmen	5,700	45.05	62.17	256,785.00	354,369.00
b. Shopcrafts	15,459	87.74	98.52	1,356,372.66	1,523,020.68
c. MOW	19,695	39.94	48.22	786,618.30	949,692.90
d. Yardmasters	1,333	60.48	74.61	80,619.84	99,455.13
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				224,373,780.53	241,017,873.49
5. Monthly Employee Contributions To H&W					
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,486	(\$228.89)	(\$228.89)	(\$340,130.54)	(340,130.54)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	18,899	(\$228.89)	(\$228.89)	(\$4,325,792.11)	(4,325,792.11)
c. National BMW (All except SOO, DME, DH)	19,151	(\$228.89)	(\$228.89)	(\$4,383,472.39)	(4,383,472.39)
d. National BRS (All except DME)	5,667	(\$228.89)	(\$228.89)	(\$1,297,119.63)	(1,297,119.63)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,628	(\$228.89)	(\$228.89)	(\$1,059,302.92)	(1,059,302.92)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	366	(\$228.89)	(\$228.89)	(\$83,773.74)	(83,773.74)
g. National IBEW (All except DME)	3,896	(\$228.89)	(\$228.89)	(\$891,755.44)	(891,755.44)
h. National NCFO (All except DME and WC)	1,477	(\$228.89)	(\$228.89)	(\$338,070.53)	(338,070.53)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	546	(\$228.89)	(\$228.89)	(\$124,973.94)	(124,973.94)
j. National TCU (All except DME and DH)	3,768	(\$228.89)	(\$228.89)	(\$862,457.52)	(862,457.52)
k. National TCU-CAR (All except DME)	5,958	(\$228.89)	(\$228.89)	(\$1,363,726.62)	(1,363,726.62)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	26,843	(\$228.89)	(\$228.89)	(\$6,144,094.27)	(6,144,094.27)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,249	(\$228.89)	(\$228.89)	(\$285,883.61)	(\$285,883.61)
n. Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	3,357	(\$234.20)	(\$232.23)	(\$786,220.23)	(779,606.12)
Total Major Union	97,291			(\$22,286,773.49)	(\$22,280,159.38)
All Other Employee Contributions*				(\$4,557,004.09)	(\$4,557,004.09)
6. Net Employer Monthly Payments				\$197,530,002.95	\$214,180,710.02
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments					1.08429
8. H&W hourly rate for base year 2021				\$9.401	
9. H&W hourly rate for projected quarter					\$10.193

* Non-union employee contributions net of opt-outs. The \$22,286,773.49 in major union contributions, plus \$4,557,004.09 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/2022

U.S. ST Hours = 224,055,761
 Wage Statistics are for 2021

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,486	(\$228.89)	(\$4,081,566.48)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	18,899	(\$228.89)	(\$51,909,505.32)
National BMWE (All except SOO, DME, DH)	19,151	(\$228.89)	(\$52,601,668.68)
National BRS (All except DME)	5,667	(\$228.89)	(\$15,565,435.56)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,628	(\$228.89)	(\$12,711,635.04)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	366	(\$228.89)	(\$1,005,284.88)
National IBEW (All except DME)	3,896	(\$228.89)	(\$10,701,065.28)
National NCFO (All except DME and WC)	1,477	(\$228.89)	(\$4,056,846.36)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	546	(\$228.89)	(\$1,499,687.28)
National TCU (All except DME and DH)	3,768	(\$228.89)	(\$10,349,490.24)
National TCU-CAR (All except DME)	5,958	(\$228.89)	(\$16,364,719.44)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	26,843	(\$228.89)	(\$73,729,131.24)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,249	(\$228.89)	(\$3,430,603.32)
Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	3,357	(\$232.23)	(\$9,355,273.44)
Total Union	97,291		(\$267,361,912.56)
All Other @ \$4,557,004.09 total per month			(\$54,684,049.08)
Total			(\$322,045,961.64)

Reduction in Wage Rate Per ST Hour	-\$1.43734738
Deduct this amount from the Wage Rate	-\$1.437

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year	2020	Tier I Maximum Taxable Earnings for 2022	147,000
Wage Statistics Year	2021	Tier II Maximum Taxable Earnings for 2022	109,200
Current Year	2022	Medicare Maximum Taxable Earnings for 2022	no limit
Employees Receiving Pay*	117,419	Tier I Employer Tax Rate for 2022	6.20%
* from 2021 final wage statistics		Tier II Employer Tax Rate for 2022	13.10%
		Medicare Employer Tax Rate for 2022	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2020	\$43.981			
2021	\$43.459	0.98813	\$529,869,982	\$9.587
1Q/2022	\$43.482	0.98866	\$533,012,615	\$9.644
2Q/2022	\$43.606	0.99148	\$534,262,990	\$9.666
3Q/2022	\$43.732	0.99434	\$535,533,532	\$9.689
4Q/2022	\$43.758	0.99494	\$535,797,344	\$9.694

Railroad Retirement & Medicare, U.S.

From 2020 Earnings Distribution			1Q/2022 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$29,135	1.023 %	1,201	\$28,805	\$7,201	\$7,201	\$7,201	\$7,201	\$8,649,975	\$8,649,975	\$8,649,975	
41,700 - 43,699	\$43,170	0.241	283	42,680	10,670	10,670	10,670	10,670	3,019,418	3,019,418	3,019,418	
43,700 - 45,699	\$44,951	0.602	707	44,441	11,110	11,110	11,110	11,110	7,853,442	7,853,442	7,853,442	
45,700 - 47,699	\$46,889	0.722	848	46,357	11,589	11,589	11,589	11,589	9,824,996	9,824,996	9,824,996	
47,700 - 49,699	\$49,192	0.301	353	48,634	12,159	12,159	12,159	12,159	4,297,196	4,297,196	4,297,196	
49,700 - 51,699	\$50,718	0.903	1,060	50,143	12,536	12,536	12,536	12,536	13,291,503	13,291,503	13,291,503	
51,700 - 53,699	\$52,814	0.662	777	52,215	13,054	13,054	13,054	13,054	10,146,851	10,146,851	10,146,851	
53,700 - 55,699	\$54,722	1.144	1,343	54,101	13,525	13,525	13,525	13,525	18,168,212	18,168,212	18,168,212	
55,700 - 57,699	\$56,670	1.445	1,697	56,027	14,007	14,007	14,007	14,007	23,765,408	23,765,408	23,765,408	
57,700 - 59,699	\$58,720	0.963	1,131	58,054	14,513	14,513	14,513	14,513	16,411,057	16,411,057	16,411,057	
59,700 - 61,699	\$60,685	1.505	1,767	59,997	14,999	14,999	14,999	14,999	26,505,870	26,505,870	26,505,870	
61,700 - 63,699	\$62,702	2.288	2,687	61,991	15,498	15,498	15,498	15,498	41,635,293	41,635,293	41,635,293	
63,700 - 65,699	\$64,670	2.769	3,251	63,936	15,984	15,984	15,984	15,984	51,969,678	51,969,678	51,969,678	
65,700 - 67,699	\$66,717	4.214	4,948	65,960	16,490	16,490	16,490	16,490	81,593,442	81,593,442	81,593,442	
67,700 - 69,699	\$68,810	3.793	4,454	68,030	17,007	17,007	17,007	17,007	75,745,810	75,745,810	75,745,810	
69,700 - 71,699	\$70,608	4.455	5,231	69,807	17,452	17,452	17,452	17,452	91,290,551	91,290,551	91,290,551	
71,700 - 73,699	\$72,626	3.913	4,595	71,802	17,951	17,951	17,951	17,951	82,475,733	82,475,733	82,475,733	
73,700 - 75,699	\$74,684	3.793	4,454	73,837	18,459	18,459	18,459	18,459	82,211,889	82,211,889	82,211,889	
75,700 - 77,699	\$76,849	3.070	3,605	75,977	18,994	18,994	18,994	18,994	68,470,076	68,470,076	68,470,076	
77,700 - 79,699	\$78,714	3.070	3,605	77,821	19,455	19,455	19,455	19,455	70,131,733	70,131,733	70,131,733	
79,700 - 81,699	\$80,712	3.552	4,171	79,797	19,949	19,949	19,949	19,949	83,202,290	83,202,290	83,202,290	
81,700 - 83,699	\$82,591	2.047	2,404	81,654	20,414	20,414	20,414	20,414	49,065,336	49,065,336	49,065,336	
83,700 - 85,699	\$84,572	2.709	3,181	83,613	20,903	20,903	20,903	20,903	66,490,534	66,490,534	66,490,534	
85,700 - 87,699	\$86,748	2.830	3,323	85,764	21,441	21,441	21,441	21,441	71,247,580	71,247,580	71,247,580	
87,700 - 89,699	\$88,822	3.371	3,958	87,815	21,954	21,954	21,954	21,954	86,896,746	86,896,746	86,896,746	
89,700 - 91,699	\$90,488	2.047	2,404	89,462	22,365	22,365	22,365	22,365	53,756,755	53,756,755	53,756,755	
91,700 - 93,699	\$92,856	2.709	3,181	91,803	22,951	22,951	22,951	22,951	73,003,417	73,003,417	73,003,417	
93,700 - 95,699	\$94,580	2.950	3,464	93,507	23,377	23,377	23,377	23,377	80,973,990	80,973,990	80,973,990	
95,700 - 97,699	\$96,766	1.746	2,050	95,668	23,917	23,917	23,917	23,917	49,033,313	49,033,313	49,033,313	
97,700 - 99,699	\$98,698	2.589	3,040	97,579	24,395	24,395	24,395	24,395	74,159,128	74,159,128	74,159,128	
99,700 - 101,699	\$100,644	2.228	2,616	99,502	24,876	24,876	24,876	24,876	65,076,965	65,076,965	65,076,965	
101,700 - 103,699	\$102,670	1.746	2,050	101,505	25,376	25,376	25,376	25,376	52,024,991	52,024,991	52,024,991	
103,700 - 105,699	\$104,718	2.167	2,544	103,530	25,883	25,883	25,883	25,883	65,857,382	65,857,382	65,857,382	
105,700 - 107,699	\$106,632	2.529	2,970	105,423	26,356	26,356	26,356	26,356	78,263,740	78,263,740	78,263,740	
107,700 - 109,699	\$108,627	1.385	1,626	107,395	26,849	26,849	26,849	26,849	43,662,819	43,662,819	43,662,819	
109,700 - 111,699	\$110,789	1.445	1,697	109,532	27,383	27,383	27,300	27,383	46,461,016	46,320,034	46,461,016	
111,700 - 113,699	\$112,619	1.866	2,191	111,342	27,835	27,835	27,300	27,835	60,988,439	59,815,352	60,988,439	
113,700 - 115,699	\$114,639	1.626	1,909	113,339	28,335	28,335	27,300	28,335	54,097,493	52,122,059	54,097,493	
\$115,700 - over	\$145,306	17.580	20,642	143,658	35,914	35,914	27,300	35,914	741,355,699	563,533,703	741,355,699	
TOTAL	\$92,450	99.998	117,417				Total Taxable Earnings		2,683,075,766	2,501,964,268	2,683,075,766	
							Employer Tax Rate		6.20%	13.10%	1.45%	
							Quarterly Payment		\$166,350,698	\$327,757,319	\$38,904,599	
							Total Tier I, Tier II, and Medicare Paid this Quarter				\$533,012,615	

Railroad Retirement & Medicare, U.S.

From 2020 Earnings Distribution			2Q/2022 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info								
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I	Tier II	Medicare	Total Taxable Earnings (Taxable x Employees)		
						Taxable	Taxable	Taxable	Tier I	Tier II	Medicare
\$0 - 41,699	\$29,135	1.023 %	1,201	\$28,887	\$7,222	\$7,222	\$7,222	\$7,222	\$8,674,643	\$8,674,643	\$8,674,643
41,700 - 43,699	\$43,170	0.241	283	42,802	10,701	10,701	10,701	10,701	3,028,029	3,028,029	3,028,029
43,700 - 45,699	\$44,951	0.602	707	44,568	11,142	11,142	11,142	11,142	7,875,838	7,875,838	7,875,838
45,700 - 47,699	\$46,889	0.722	848	46,489	11,622	11,622	11,622	11,622	9,853,014	9,853,014	9,853,014
47,700 - 49,699	\$49,192	0.301	353	48,773	12,193	12,193	12,193	12,193	4,309,451	4,309,451	4,309,451
49,700 - 51,699	\$50,718	0.903	1,060	50,286	12,571	12,571	12,571	12,571	13,329,407	13,329,407	13,329,407
51,700 - 53,699	\$52,814	0.662	777	52,364	13,091	13,091	13,091	13,091	10,175,787	10,175,787	10,175,787
53,700 - 55,699	\$54,722	1.144	1,343	54,256	13,564	13,564	13,564	13,564	18,220,024	18,220,024	18,220,024
55,700 - 57,699	\$56,670	1.445	1,697	56,187	14,047	14,047	14,047	14,047	23,833,181	23,833,181	23,833,181
57,700 - 59,699	\$58,720	0.963	1,131	58,220	14,555	14,555	14,555	14,555	16,457,857	16,457,857	16,457,857
59,700 - 61,699	\$60,685	1.505	1,767	60,168	15,042	15,042	15,042	15,042	26,581,459	26,581,459	26,581,459
61,700 - 63,699	\$62,702	2.288	2,687	62,168	15,542	15,542	15,542	15,542	41,754,027	41,754,027	41,754,027
63,700 - 65,699	\$64,670	2.769	3,251	64,119	16,030	16,030	16,030	16,030	52,117,883	52,117,883	52,117,883
65,700 - 67,699	\$66,717	4.214	4,948	66,148	16,537	16,537	16,537	16,537	81,826,126	81,826,126	81,826,126
67,700 - 69,699	\$68,810	3.793	4,454	68,224	17,056	17,056	17,056	17,056	75,961,818	75,961,818	75,961,818
69,700 - 71,699	\$70,608	4.455	5,231	70,006	17,502	17,502	17,502	17,502	91,550,890	91,550,890	91,550,890
71,700 - 73,699	\$72,626	3.913	4,595	72,007	18,002	18,002	18,002	18,002	82,710,934	82,710,934	82,710,934
73,700 - 75,699	\$74,684	3.793	4,454	74,047	18,512	18,512	18,512	18,512	82,446,337	82,446,337	82,446,337
75,700 - 77,699	\$76,849	3.070	3,605	76,194	19,049	19,049	19,049	19,049	68,665,336	68,665,336	68,665,336
77,700 - 79,699	\$78,714	3.070	3,605	78,043	19,511	19,511	19,511	19,511	70,331,731	70,331,731	70,331,731
79,700 - 81,699	\$80,712	3.552	4,171	80,024	20,006	20,006	20,006	20,006	83,439,562	83,439,562	83,439,562
81,700 - 83,699	\$82,591	2.047	2,404	81,887	20,472	20,472	20,472	20,472	49,205,259	49,205,259	49,205,259
83,700 - 85,699	\$84,572	2.709	3,181	83,851	20,963	20,963	20,963	20,963	66,680,148	66,680,148	66,680,148
85,700 - 87,699	\$86,748	2.830	3,323	86,009	21,502	21,502	21,502	21,502	71,450,761	71,450,761	71,450,761
87,700 - 89,699	\$88,822	3.371	3,958	88,065	22,016	22,016	22,016	22,016	87,144,554	87,144,554	87,144,554
89,700 - 91,699	\$90,488	2.047	2,404	89,717	22,429	22,429	22,429	22,429	53,910,056	53,910,056	53,910,056
91,700 - 93,699	\$92,856	2.709	3,181	92,065	23,016	23,016	23,016	23,016	73,211,605	73,211,605	73,211,605
93,700 - 95,699	\$94,580	2.950	3,464	93,774	23,443	23,443	23,443	23,443	81,204,908	81,204,908	81,204,908
95,700 - 97,699	\$96,766	1.746	2,050	95,941	23,985	23,985	23,985	23,985	49,173,144	49,173,144	49,173,144
97,700 - 99,699	\$98,698	2.589	3,040	97,857	24,464	24,464	24,464	24,464	74,370,612	74,370,612	74,370,612
99,700 - 101,699	\$100,644	2.228	2,616	99,786	24,947	24,947	24,947	24,947	65,262,548	65,262,548	65,262,548
101,700 - 103,699	\$102,670	1.746	2,050	101,795	25,449	25,449	25,449	25,449	52,173,354	52,173,354	52,173,354
103,700 - 105,699	\$104,718	2.167	2,544	103,825	25,956	25,956	25,956	25,956	66,045,191	66,045,191	66,045,191
105,700 - 107,699	\$106,632	2.529	2,970	105,723	26,431	26,431	26,431	26,431	78,486,929	78,486,929	78,486,929
107,700 - 109,699	\$108,627	1.385	1,626	107,701	26,925	26,925	26,925	26,925	43,787,335	43,787,335	43,787,335
109,700 - 111,699	\$110,789	1.445	1,697	109,845	27,461	27,461	27,300	27,461	46,593,511	46,320,034	46,593,511
111,700 - 113,699	\$112,619	1.866	2,191	111,659	27,915	27,915	27,300	27,915	61,162,363	59,815,352	61,162,363
113,700 - 115,699	\$114,639	1.626	1,909	113,662	28,415	28,415	27,300	28,415	54,251,766	52,122,059	54,251,766
\$115,700 - over	\$145,306	17.580	20,642	144,068	36,017	36,017	27,300	36,017	743,469,864	563,533,703	743,469,864
TOTAL		99.998	117,417				Total Taxable Earnings		2,690,727,240	2,507,040,885	2,690,727,240
							Employer Tax Rate		6.20%	13.10%	1.45%
							Quarterly Payment		\$166,825,089	\$328,422,356	\$39,015,545
Total Tier I, Tier II, and Medicare Paid this Quarter											\$534,262,990

Railroad Retirement & Medicare, U.S.

From 2020 Earnings Distribution			3Q/2022 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info								
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$29,135	1.023 %	1,201	\$28,970	\$7,243	\$7,243	\$7,243	\$7,243	\$8,699,708	\$8,699,708	\$8,699,708
41,700 - 43,699	\$43,170	0.241	283	42,926	10,731	10,731	10,731	10,731	3,036,779	3,036,779	3,036,779
43,700 - 45,699	\$44,951	0.602	707	44,697	11,174	11,174	11,174	11,174	7,898,596	7,898,596	7,898,596
45,700 - 47,699	\$46,889	0.722	848	46,624	11,656	11,656	11,656	11,656	9,881,485	9,881,485	9,881,485
47,700 - 49,699	\$49,192	0.301	353	48,914	12,228	12,228	12,228	12,228	4,321,903	4,321,903	4,321,903
49,700 - 51,699	\$50,718	0.903	1,060	50,431	12,608	12,608	12,608	12,608	13,367,922	13,367,922	13,367,922
51,700 - 53,699	\$52,814	0.662	777	52,515	13,129	13,129	13,129	13,129	10,205,190	10,205,190	10,205,190
53,700 - 55,699	\$54,722	1.144	1,343	54,412	13,603	13,603	13,603	13,603	18,272,671	18,272,671	18,272,671
55,700 - 57,699	\$56,670	1.445	1,697	56,349	14,087	14,087	14,087	14,087	23,902,047	23,902,047	23,902,047
57,700 - 59,699	\$58,720	0.963	1,131	58,388	14,597	14,597	14,597	14,597	16,505,412	16,505,412	16,505,412
59,700 - 61,699	\$60,685	1.505	1,767	60,342	15,085	15,085	15,085	15,085	26,658,266	26,658,266	26,658,266
61,700 - 63,699	\$62,702	2.288	2,687	62,347	15,587	15,587	15,587	15,587	41,874,675	41,874,675	41,874,675
63,700 - 65,699	\$64,670	2.769	3,251	64,304	16,076	16,076	16,076	16,076	52,268,478	52,268,478	52,268,478
65,700 - 67,699	\$66,717	4.214	4,948	66,339	16,585	16,585	16,585	16,585	82,062,564	82,062,564	82,062,564
67,700 - 69,699	\$68,810	3.793	4,454	68,421	17,105	17,105	17,105	17,105	76,181,311	76,181,311	76,181,311
69,700 - 71,699	\$70,608	4.455	5,231	70,208	17,552	17,552	17,552	17,552	91,815,427	91,815,427	91,815,427
71,700 - 73,699	\$72,626	3.913	4,595	72,215	18,054	18,054	18,054	18,054	82,949,928	82,949,928	82,949,928
73,700 - 75,699	\$74,684	3.793	4,454	74,261	18,565	18,565	18,565	18,565	82,684,566	82,684,566	82,684,566
75,700 - 77,699	\$76,849	3.070	3,605	76,414	19,104	19,104	19,104	19,104	68,863,745	68,863,745	68,863,745
77,700 - 79,699	\$78,714	3.070	3,605	78,269	19,567	19,567	19,567	19,567	70,534,956	70,534,956	70,534,956
79,700 - 81,699	\$80,712	3.552	4,171	80,255	20,064	20,064	20,064	20,064	83,680,662	83,680,662	83,680,662
81,700 - 83,699	\$82,591	2.047	2,404	82,124	20,531	20,531	20,531	20,531	49,347,438	49,347,438	49,347,438
83,700 - 85,699	\$84,572	2.709	3,181	84,093	21,023	21,023	21,023	21,023	66,872,821	66,872,821	66,872,821
85,700 - 87,699	\$86,748	2.830	3,323	86,257	21,564	21,564	21,564	21,564	71,657,219	71,657,219	71,657,219
87,700 - 89,699	\$88,822	3.371	3,958	88,319	22,080	22,080	22,080	22,080	87,396,359	87,396,359	87,396,359
89,700 - 91,699	\$90,488	2.047	2,404	89,976	22,494	22,494	22,494	22,494	54,065,830	54,065,830	54,065,830
91,700 - 93,699	\$92,856	2.709	3,181	92,331	23,083	23,083	23,083	23,083	73,423,151	73,423,151	73,423,151
93,700 - 95,699	\$94,580	2.950	3,464	94,045	23,511	23,511	23,511	23,511	81,439,550	81,439,550	81,439,550
95,700 - 97,699	\$96,766	1.746	2,050	96,218	24,055	24,055	24,055	24,055	49,315,231	49,315,231	49,315,231
97,700 - 99,699	\$98,698	2.589	3,040	98,140	24,535	24,535	24,535	24,535	74,585,506	74,585,506	74,585,506
99,700 - 101,699	\$100,644	2.228	2,616	100,075	25,019	25,019	25,019	25,019	65,451,125	65,451,125	65,451,125
101,700 - 103,699	\$102,670	1.746	2,050	102,089	25,522	25,522	25,522	25,522	52,324,109	52,324,109	52,324,109
103,700 - 105,699	\$104,718	2.167	2,544	104,125	26,031	26,031	26,031	26,031	66,236,029	66,236,029	66,236,029
105,700 - 107,699	\$106,632	2.529	2,970	106,029	26,507	26,507	26,507	26,507	78,713,718	78,713,718	78,713,718
107,700 - 109,699	\$108,627	1.385	1,626	108,012	27,003	27,003	27,003	27,003	43,913,859	43,913,859	43,913,859
109,700 - 111,699	\$110,789	1.445	1,697	110,162	27,541	27,541	27,300	27,541	46,728,144	46,320,034	46,728,144
111,700 - 113,699	\$112,619	1.866	2,191	111,982	27,995	27,995	27,300	27,995	61,339,092	59,815,352	61,339,092
113,700 - 115,699	\$114,639	1.626	1,909	113,990	28,498	28,498	27,300	28,498	54,408,527	52,122,059	54,408,527
\$115,700 - over	\$145,306	17.580	20,642	144,484	36,121	36,121	27,300	36,121	745,618,128	563,533,703	745,618,128
TOTAL		99.998	117,417				Total Taxable Earnings		2,698,502,125	2,512,199,383	2,698,502,125
							Employer Tax Rate		6.20%	13.10%	1.45%
							Quarterly Payment		\$167,307,132	\$329,098,119	\$39,128,281
Total Tier I, Tier II, and Medicare Paid this Quarter											\$535,533,532

Railroad Retirement & Medicare, U.S.

From 2020 Earnings Distribution			4Q/2022 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info								
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$29,135	1.023 %	1,201	\$28,987	\$7,247	\$7,247	\$7,247	\$7,247	\$8,704,913	\$8,704,913	\$8,704,913
41,700 - 43,699	\$43,170	0.241	283	42,951	10,738	10,738	10,738	10,738	3,038,595	3,038,595	3,038,595
43,700 - 45,699	\$44,951	0.602	707	44,723	11,181	11,181	11,181	11,181	7,903,321	7,903,321	7,903,321
45,700 - 47,699	\$46,889	0.722	848	46,652	11,663	11,663	11,663	11,663	9,887,396	9,887,396	9,887,396
47,700 - 49,699	\$49,192	0.301	353	48,943	12,236	12,236	12,236	12,236	4,324,489	4,324,489	4,324,489
49,700 - 51,699	\$50,718	0.903	1,060	50,461	12,615	12,615	12,615	12,615	13,375,919	13,375,919	13,375,919
51,700 - 53,699	\$52,814	0.662	777	52,547	13,137	13,137	13,137	13,137	10,211,295	10,211,295	10,211,295
53,700 - 55,699	\$54,722	1.144	1,343	54,445	13,611	13,611	13,611	13,611	18,283,602	18,283,602	18,283,602
55,700 - 57,699	\$56,670	1.445	1,697	56,383	14,096	14,096	14,096	14,096	23,916,346	23,916,346	23,916,346
57,700 - 59,699	\$58,720	0.963	1,131	58,423	14,606	14,606	14,606	14,606	16,515,286	16,515,286	16,515,286
59,700 - 61,699	\$60,685	1.505	1,767	60,378	15,094	15,094	15,094	15,094	26,674,214	26,674,214	26,674,214
61,700 - 63,699	\$62,702	2.288	2,687	62,385	15,596	15,596	15,596	15,596	41,899,727	41,899,727	41,899,727
63,700 - 65,699	\$64,670	2.769	3,251	64,343	16,086	16,086	16,086	16,086	52,299,748	52,299,748	52,299,748
65,700 - 67,699	\$66,717	4.214	4,948	66,379	16,595	16,595	16,595	16,595	82,111,657	82,111,657	82,111,657
67,700 - 69,699	\$68,810	3.793	4,454	68,462	17,115	17,115	17,115	17,115	76,226,886	76,226,886	76,226,886
69,700 - 71,699	\$70,608	4.455	5,231	70,250	17,563	17,563	17,563	17,563	91,870,355	91,870,355	91,870,355
71,700 - 73,699	\$72,626	3.913	4,595	72,258	18,065	18,065	18,065	18,065	82,999,552	82,999,552	82,999,552
73,700 - 75,699	\$74,684	3.793	4,454	74,306	18,576	18,576	18,576	18,576	82,734,032	82,734,032	82,734,032
75,700 - 77,699	\$76,849	3.070	3,605	76,460	19,115	19,115	19,115	19,115	68,904,942	68,904,942	68,904,942
77,700 - 79,699	\$78,714	3.070	3,605	78,315	19,579	19,579	19,579	19,579	70,577,153	70,577,153	70,577,153
79,700 - 81,699	\$80,712	3.552	4,171	80,303	20,076	20,076	20,076	20,076	83,730,723	83,730,723	83,730,723
81,700 - 83,699	\$82,591	2.047	2,404	82,173	20,543	20,543	20,543	20,543	49,376,959	49,376,959	49,376,959
83,700 - 85,699	\$84,572	2.709	3,181	84,144	21,036	21,036	21,036	21,036	66,912,827	66,912,827	66,912,827
85,700 - 87,699	\$86,748	2.830	3,323	86,309	21,577	21,577	21,577	21,577	71,700,087	71,700,087	71,700,087
87,700 - 89,699	\$88,822	3.371	3,958	88,372	22,093	22,093	22,093	22,093	87,448,643	87,448,643	87,448,643
89,700 - 91,699	\$90,488	2.047	2,404	90,030	22,507	22,507	22,507	22,507	54,098,174	54,098,174	54,098,174
91,700 - 93,699	\$92,856	2.709	3,181	92,386	23,096	23,096	23,096	23,096	73,467,075	73,467,075	73,467,075
93,700 - 95,699	\$94,580	2.950	3,464	94,101	23,525	23,525	23,525	23,525	81,488,271	81,488,271	81,488,271
95,700 - 97,699	\$96,766	1.746	2,050	96,276	24,069	24,069	24,069	24,069	49,344,733	49,344,733	49,344,733
97,700 - 99,699	\$98,698	2.589	3,040	98,198	24,550	24,550	24,550	24,550	74,630,127	74,630,127	74,630,127
99,700 - 101,699	\$100,644	2.228	2,616	100,134	25,034	25,034	25,034	25,034	65,490,281	65,490,281	65,490,281
101,700 - 103,699	\$102,670	1.746	2,050	102,150	25,538	25,538	25,538	25,538	52,355,411	52,355,411	52,355,411
103,700 - 105,699	\$104,718	2.167	2,544	104,188	26,047	26,047	26,047	26,047	66,275,655	66,275,655	66,275,655
105,700 - 107,699	\$106,632	2.529	2,970	106,092	26,523	26,523	26,523	26,523	78,760,807	78,760,807	78,760,807
107,700 - 109,699	\$108,627	1.385	1,626	108,077	27,019	27,019	27,019	27,019	43,940,130	43,940,130	43,940,130
109,700 - 111,699	\$110,789	1.445	1,697	110,228	27,557	27,557	27,300	27,557	46,756,099	46,320,034	46,756,099
111,700 - 113,699	\$112,619	1.866	2,191	112,049	28,012	28,012	27,300	28,012	61,375,788	59,815,352	61,375,788
113,700 - 115,699	\$114,639	1.626	1,909	114,059	28,515	28,515	27,300	28,515	54,441,077	52,122,059	54,441,077
\$115,700 - over	\$145,306	17.580	20,642	144,570	36,143	36,143	27,300	36,143	746,064,189	563,533,703	746,064,189
TOTAL		99.998	117,417					Total Taxable Earnings	2,700,116,485	2,513,270,482	2,700,116,485
								Employer Tax Rate	6.20%	13.10%	1.45%
								Quarterly Payment	\$167,407,222	\$329,238,433	\$39,151,689
Total Tier I, Tier II, and Medicare Paid this Quarter											\$535,797,344

RCAF Unemployment Insurance Tax

	Unemployment Ins.			RRB	Factor	Avg. Ann.	Un. Ins.
	Tax	Earnings	Hourly	Sample	To Update	Taxable	Hourly
	Rate	Base	Earnings	Year	RRB Sample	Earnings	Rate
			\$39.599	(2017)			
2018 Avg.	3.76%	\$18,720	\$41.687		1.052729	\$17,600.87	\$0.347
3Q/19 reb.	3.38%	\$19,260	\$43.672		1.102856	\$18,120.16	\$0.321
4Q/19	3.38%	\$19,260	\$43.660		1.102553	\$18,119.99	\$0.321
1Q/20	0.99%	\$19,860	\$43.839		1.107073	\$18,666.82	\$0.097
2Q/20	0.99%	\$19,860	\$43.626		1.101694	\$18,663.57	\$0.097
3Q/20	0.99%	\$19,860	\$43.572		1.100331	\$18,662.74	\$0.097
			\$41.687	(2018)			
2019 Avg.	3.38%	\$19,260	\$43.000		1.031497	\$17,742.46	\$0.318
3Q/20 reb.	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
4Q/20	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
1Q/21	5.69%	\$20,520	\$43.620		1.046369	\$18,867.16	\$0.569
2Q/21	5.69%	\$20,520	\$43.397		1.041020	\$18,863.22	\$0.569
3Q/21	5.69%	\$20,520	\$43.326		1.039317	\$18,861.96	\$0.569
			\$43.000	(2019)			
2020 Avg.	0.99%	\$19,860	\$43.981		1.022814	\$18,813.21	\$0.100
3Q/21 reb.	5.69%	\$20,520	\$43.508		1.011814	\$19,413.47	\$0.593
4Q/21	5.69%	\$20,520	\$43.504		1.011721	\$19,413.42	\$0.593
1Q/22	11.23%	\$21,060	\$43.482		1.011209	\$19,907.93	\$1.200
2Q/22	11.23%	\$21,060	\$43.606		1.014093	\$19,909.70	\$1.200
3Q/22	11.23%	\$21,060	\$43.732		1.017023	\$19,911.50	\$1.201
		\$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					0.000000		\$0.000
2Q/23					0.000000		\$0.000
3Q/23					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-2020 RRB File

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2207	42705940.84	19350.22
QTRLY_US	2207	43801449.25	19846.60

The SAS System
Factors and Caps 2021 and 2022Q4

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2207	2180.79	0.9881250
FactorQ	2207	2195.82	0.9949330
Capa	2207	45287640.00	20520.00
Capq	2207	46479420.00	21060.00

The SAS System
TOTAL GROSS EARNINGS AND AVERAGE GROSS EARNINGS-2020 RRB File

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2207	42705940.84	19350.22
QTRLY_US	2207	43800327.19	19846.09

The SAS System
Factors and Caps 2021 and 2022Q3 Rebase

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2207	2180.79	0.9881250
FactorQ	2207	2194.14	0.9941740
Capa	2207	45287640.00	20520.00
Capq	2207	46479420.00	21060.00

U.S.

Summary by Composition Category

	MS-2021		Prev. Idx	2022Q3		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	748,703,531	0.1729	371.31	377.70		64.20	65.30	
Metal Products	2,475,909,550	0.5717	192.61	211.47		110.12	120.90	
Misc. Products	1,106,315,926	0.2554	419.05	481.32		107.03	122.93	
Total	4,330,929,007	1.0000	281.35	309.13				1.0987
Total Linked			275.19	302.35				
'77 = 100 Link Fact.= 1.423			391.60	430.24				
'80 = 100 Link Fact.= 1.061			291.98	320.79				

As info only	Change
Forest Products	1.72%
Metal Products	9.79%
Misc. Products	14.86%
Total ('80=100)	9.87%
Rounded 80 Indices	9.9%
Rounded 77 Indices	9.9%

Car Hire for RCAF - 2021 Weights

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

		1980	June 3Q/22	Sept. 4Q/22	Dec. 1Q/23	Mar. 2Q/23	June 3Q/23
RATE							
RR-OWNED TIME		31.00	66.00	66.00	--	--	--
RR-OWNED MILEAGE		4.69	6.60	6.50	--	--	--
PRIVATELY-OWNED CARS		25.47	54.50	55.30	--	--	--
AUTORACKS		47.00	84.28	85.28	--	--	--
INDEX							
RR-OWNED TIME		100.0	212.9	212.9	--	--	--
RR-OWNED MILEAGE		100.0	140.7	138.6	--	--	--
PRIVATELY-OWNED CARS		100.0	214.0	217.1	--	--	--
AUTORACKS		100.0	179.3	181.4	--	--	--
CAR HIRE INDEX (old wts)	2020	100.0	209.9	--	--	--	--
CAR HIRE INDEX (new wts)	2021	100.0	209.8	212.4	--	--	--
CAR HIRE INDEX (LINKED)		100.0	206.9	209.5	--	--	--

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

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

	2022 (first day of month)						2023 (first day of month)							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Railroad Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	11,290	11,241	11,227											
Rate (in cents)														
Superstructures #3 - Auto Rack	96.0	96.0	96.0											
All other #1 - Time	66.0	66.0	66.0											
All other #2 - Mileage	6.6	6.6	6.5											
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	52,889	52,862	52,821											
Covered Hoppers	432,908	433,070	433,230											
Tank Cars	424,667	424,855	424,771											
Others	291,898	292,890	294,113											
Rate (in cents)														
Superstructures #1 - Time	86.0	86.0	86.0											
Superstructures #2 - Mileage	1.4	1.4	1.4											
Superstructures #3 - Auto Rack	82.0	83.0	83.0											
Covered Hoppers #2 - Mileage	45.1	45.1	45.2											
Tank Cars #2 - Mileage	83.8	83.8	86.2											
Others #1 -Time	105.0	105.0	104.0											
Others #2 - Mileage	8.4	8.5	8.5											
AVERAGE RATES														
Private Superstructures	21.61	21.61	21.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Others	31.71	31.81	31.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Total	54.48	54.49	55.30	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	84.46	85.28	85.28	#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"	
	2020	2021
For RCAF & RCR		
RR-owned Time	0.052	0.065
RR-owned Mileage	0.039	0.038
Privately-owned Cars	0.874	0.857
Autoracks	0.035	0.040
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2020	2021
Car Hire - U.S.	0.614	0.647
Lease Rentals - U.S.	0.386	0.353
----- Check sum	1.000	1.000

Notes:

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

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 09/22

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,227	107	0.056	96
Railroad	Number of Zero-Rated Vehicular Flats	148			
Railroad	All Other Cars	362,800	66	0.065	
Railroad	Number of Zero-Rated Other Cars	11,710			
Railroad	Total Railroad Equipment	385,885			
Private	Vehicular Flats	52,821	86	0.014	83
Private	Number of Zero-Rated Vehicular Flats	43			
Private	Covered Hoppers	433,230	0	0.452	
Private	Number of Zero-Rated Covered Hoppers	13,889			
Private	Tanks	424,771	0	0.862	
Private	Number of Zero-Rated Tanks	14,655			
Private	All Other Cars	294,113	104	0.085	
Private	Number of Zero-Rated Other Cars	21,923			
Private	Total Private Equipment	1,255,445			

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.

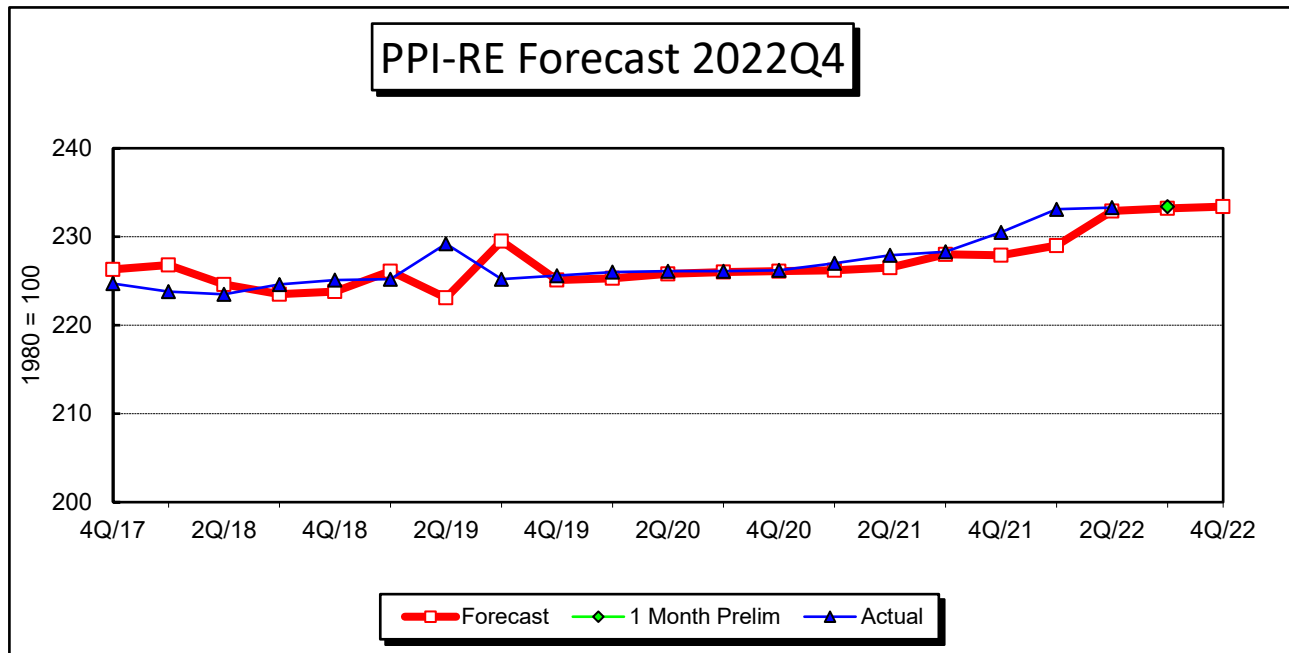
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
4Q/17	226.3	224.7	
1Q/18	226.8	223.8	
2Q/18	224.6	223.5	
3Q/18	223.5	224.6	
4Q/18	223.8	225.1	
1Q/19	226.1	225.2	
2Q/19	223.1	229.2	
3Q/19	229.5	225.2	
4Q/19	225.1	225.6	
1Q/20	225.3	226	
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		233.4
4Q/22	233.4		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2022Q4						
Low	207.5	229.5	-0.4%			
Midpoint	211.0	233.4	1.3%	0.0%	0.0%	0.1%
High	214.5	237.3	3.0%			



PPI RAILROAD EQUIPMENT

Expert Analysis

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

The cumulative MAD for Exponential smoothing was 2.66 and for Box-Jenkins was 2.16.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

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

Model Details

Expert selection

Box-Jenkins

ARIMA(0, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	204.59	Std. deviation	2.64
R-square	0.88	Adj. R-square	0.88
Durbin-Watson	2.22	Ljung-Box(18)	18.0 P=0.54
Forecast error	0.9	BIC	0.9
MAPE	0.23	SMAPE	0.23
RMSE	0.9	MAD	0.47
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8
2022-May	210.9
2022-Jun	211.0
2022-Jul	211.0

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	209.217	211.000	212.783
2022-Sep	208.478	211.000	213.522
2022-Oct	207.911	211.000	214.089
2022-Nov	207.433	211.000	214.567
2022-Dec	207.012	211.000	214.988
QTR AVG	207.452	211.000	214.548

Depreciation

Forecast Report for PPIRE

Description: PPIRE

Expert Analysis

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

The cumulative MAD for Exponential smoothing was 2.66 and for Box-Jenkins was 2.16.
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, 1, 0)

Within-Sample Statistics

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Forecast error	0.9	BIC	0.9
MAPE	0.23	SMAPE	0.23
RMSE	0.9	MAD	0.47
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2016-Aug	204.4
2016-Sep	203.7
2016-Oct	203.7
2016-Nov	201.5
2016-Dec	201.8
2017-Jan	201.9
2017-Feb	204.1
2017-Mar	203.3
2017-Apr	203.4
2017-May	203.5
2017-Jun	204.6
2017-Jul	203.6
2017-Aug	204.5
2017-Sep	203.8
2017-Oct	202.8
2017-Nov	201.7
2017-Dec	201.6

Depreciation

2018-Jan	202.1
2018-Feb	202.1
2018-Mar	202
2018-Apr	202.1
2018-May	202.1
2018-Jun	202.1
2018-Jul	204.1
2018-Aug	204.1
2018-Sep	201.1
2018-Oct	201.3
2018-Nov	201.3
2018-Dec	201.3
2019-Jan	202.1
2019-Feb	203.1
2019-Mar	206.5
2019-Apr	203.4
2019-May	203.4
2019-Jun	203.4
2019-Jul	203.5
2019-Aug	203.5
2019-Sep	203.7
2019-Oct	203.7
2019-Nov	203.9
2019-Dec	204
2020-Jan	204.3
2020-Feb	204.3
2020-Mar	204.3
2020-Apr	204.4
2020-May	204.4
2020-Jun	204.4
2020-Jul	204.4
2020-Aug	204.4
2020-Sep	204.4
2020-Oct	204.4
2020-Nov	204.4
2020-Dec	204.6
2021-Jan	204.9
2021-Feb	204.9
2021-Mar	205.8
2021-Apr	206
2021-May	206
2021-Jun	206.1
2021-Jul	206.4
2021-Aug	206.4
2021-Sep	206.5
2021-Oct	207.2
2021-Nov	208.7
2021-Dec	209.4
2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7

Depreciation

2022-Apr	210.8
2022-May	210.9
2022-Jun	211
2022-Jul	211

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	209.217	211	212.783
2022-Sep	208.478	211	213.522
2022-Oct	207.911	211	214.089
2022-Nov	207.433	211	214.567
2022-Dec	207.012	211	214.988
2023-Jan	206.632	211	215.368
2023-Feb	206.282	211	215.718
2023-Mar	205.956	211	216.044
2023-Apr	205.65	211	216.35
2023-May	205.361	211	216.639
2023-Jun	205.085	211	216.915
2023-Jul	204.822	211	217.178



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022

☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: August 20, 2022 (7:11:47 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: [xls](#) [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	204.9	204.9	205.8	206.0	206.0	206.1	206.359	206.359	206.524	207.166	208.716	209.447
2022	210.629	210.710	210.731	210.761(P)	210.949(P)	210.994(P)	211.030(P)					

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

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

Schedule 210		2021
Line	Item	Col. (b)
42	Total Fixed Charges	\$1,126,644
44	Contingent interest on funded debt	0
22	Less: Release of Premiums on funded debt	410
Total Interest		\$1,126,234

Schedule 200		(close of year)	(beg. of year)
Line	Item	Col. (b)	Col. (c)
29	Current Liabilities, Loans and Notes Payable	\$0	\$0
38	Equip. Obs & Other LT Debt due Within One Yr	1,387,509	973,023
40	Funded Debt Unmatured	594,114	860,684
41	Equipment Obligations	1,328,509	1,400,694
42	Capitalized Lease Obligations	388,761	504,743
43	Debt in Default	0	0
44	Accounts Payable: Affiliated Companies	25,086,705	24,711,803
45	Unamortized Debt Premium	29,709	26,928
Total Debt		\$28,815,307	\$28,477,875

Total Interest for 2021	\$1,126,234
Average Debt for 2021	\$28,646,591
Embedded Interest Rate for 2021	3.93%
Embedded Interest Rate for 1980	7.85%
Interest Rate Index (1980 = 100)	50.1

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	2021	200	1	Cash and Cash Equivalent	1,617,916	2,051,355	1
2	2021	200	2	Temporary Cash Investmnt	51,504	46,678	2
3	2021	200	3	Special Deposits	9,056	0	3
4	2021	200	4	a/r loan and notes	358	367	4
5	2021	200	5	a/r interline	280,325	280,083	5
6	2021	200	6	a/r customers	3,676,185	3,152,701	6
7	2021	200	7	a/r other	781,025	764,479	7
8	2021	200	8	a/r accrued	906,805	879,278	8
9	2021	200	9	a/r from affiliates	40,260,625	31,853,346	9
10	2021	200	10	a/r less allow uncollect	96,197	114,263	10
11	2021	200	11	Wkg Funds Prepmnt DIT dr	396,616	473,718	11
12	2021	200	12	Materials and Supplies	2,327,680	2,245,410	12
13	2021	200	13	Other Current Assets	106,447	104,868	13
14	2021	200	14	Total Current Assets	50,318,345	41,738,020	14
15	2021	200	15	OA Special Funds	462,176	216,068	15
16	2021	200	16	Invest Advan Affiliates	6,900,399	6,579,197	16
17	2021	200	17	Other inv and advances	6,634	7,986	17
18	2021	200	18	Prop Used in non Carrier19	1,562,340	1,571,821	18
19	2021	200	19	Other Assets 20	23,455,233	20,725,573	19
20	2021	200	20	Other Deferred Debits 21	2,096,668	1,636,251	20
21	2021	200	21	Accum Def Income Tax Dr 22	0	0	21
22	2021	200	22	Total Other Assets 23	34,483,450	30,736,896	22
23	2021	200	23	R&E Road 24	218,659,000	213,548,276	23
24	2021	200	24	R&E Equipment 25	53,479,123	52,843,880	24
25	2021	200	25	R&E Unallocated items 26	3,226,104	2,848,524	25
26	2021	200	26	R&E Accum Depreciation 27	(71,361,903)	(67,380,482)	26
27	2021	200	27	Net Road and Equipment 28	204,002,324	201,860,198	27
28	2021	200	28	Total Assets 29	288,804,119	274,335,114	28
29	2021	200	29	CL loan & notes payable 30	0	0	29
30	2021	200	30	CL a/p interline 31	160,470	162,466	30
31	2021	200	31	CL audited accts & wages32	511,404	511,334	31
32	2021	200	32	CL other accounts payble33	760,136	596,008	32
33	2021	200	33	CL int and dividends pbl34	43,851	48,594	33
34	2021	200	34	CL payable to affil. 35	3,202,922	2,346,337	34
35	2021	200	35	CL accrued a/p 36	6,761,615	5,629,814	35
36	2021	200	36	CL taxes accrued 37	2,907,921	2,478,859	36
37	2021	200	37	CL other current liabil.38	958,521	795,059	37
38	2021	200	38	CL Eq Obs & LTD due w1yr39	1,387,509	973,023	38
39	2021	200	39	Total Current Liabilit. 40	16,694,349	13,541,494	39
40	2021	200	40	NC Funded debt unmatured41	594,114	860,684	40
41	2021	200	41	NC Equipment obligations42	1,328,509	1,400,694	41
42	2021	200	42	NC Capitalized lease obs43	388,761	504,743	42
43	2021	200	43	NC Debt in Default 44	0	0	43
44	2021	200	44	NC a/p Affiliates 45	25,086,705	24,711,803	44
45	2021	200	45	NC Unamortized debt prem46	29,709	26,928	45
46	2021	200	46	NC Interest in Default 47	0	0	46
47	2021	200	47	NC Deferr rev - xfr gov 48	324,464	330,373	47
48	2021	200	48	NC Accum Def Inc Tax Cr 49	45,915,979	44,724,056	48
49	2021	200	49	NC Otr LT Liab & Def Cr 50	11,781,649	12,157,884	49
50	2021	200	50	Total Non Current Liab. 51	85,449,890	84,717,165	50

Obs	Year	Sched	LineNo	Label	colb	colc	LineNo
51	2021	200	51	Sh Eq Total Capital Stk52	405,488	405,488	51
52	2021	200	52	Sh Eq Common Stock 53	384,488	384,488	52
53	2021	200	53	Sh Eq Preferred Stock 54	21,000	21,000	53
54	2021	200	54	Sh Eq Discnt on Cap Stk55	0	0	54
55	2021	200	55	Sh Eq Additnl Capital 56	62,410,932	62,263,374	55
56	2021	200	56	Sh Eq Ret Earn Appropri57	0	0	56
57	2021	200	57	Sh Eq Ret Earn Unapprop58	124,446,522	115,130,228	57
58	2021	200	58	Sh Eq Less Treasury Stk60	3,787	3,787	58
59	2021	200	59	Accum Otr Comp Income NU	(929,878)	(2,047,271)	59
60	2021	200	60	Total Stockhldr Equity61	186,329,277	175,748,032	60
61	2021	200	61	Non-controlling interestNU	330,603	328,423	61
62	2021	200	62	Total Equity (L.61+62)NU	186,659,880	176,076,455	62
63	2021	200	63	Total Liab. and Equity 62	288,804,119	274,335,114	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	2021	210	1	Freight	70,332,889	63,407,514	70,332,889	0	1
2	2021	210	2	Passenger	24,109	34,138	0	24,109	2
3	2021	210	3	Passenger related	44	320	0	44	3
4	2021	210	4	Switching	252,784	244,144	252,784	0	4
5	2021	210	5	Water Transfers	131,102	133,084	131,102	0	5
6	2021	210	6	Demurrage	1,688,042	883,580	1,688,042	0	6
7	2021	210	7	Incidental	1,677,931	1,123,433	1,677,931	0	7
8	2021	210	8	Joint Facility - Credit	33,889	33,970	33,889	0	8
9	2021	210	9	Joint Facility - Debit	0	0	0	0	9
10	2021	210	10	Rwy Op Rev excl xfrs	74,140,790	65,860,183	74,116,637	24,153	10
11	2021	210	11	Transfers from Gov Auth	178,443	177,107	5,325	173,118	11
12	2021	210	12	Amort of Def Xfers f Gov	12,264	11,949	12,264	0	12
13	2021	210	13	Total Operating Revenue	74,331,497	66,049,239	74,134,226	197,271	13
14	2021	210	14	Total Operating Expense	46,084,687	42,801,732	45,894,755	189,932	14
15	2021	210	15	Net Revenue from Ops	28,246,810	23,247,507	28,239,471	7,339	15
16	2021	210	16	Rev from prop otc ops	30,638	26,683	0	0	16
17	2021	210	17	Misc rent income	339,037	297,751	0	0	17
18	2021	210	18	Sep Operated Properties	0	0	0	0	18
19	2021	210	19	Dividend Income (cost)	28,220	25,764	0	0	19
20	2021	210	20	Interest Income	498,786	635,634	0	0	20
21	2021	210	21	Sinking and Other Funds	0	0	0	0	21
22	2021	210	22	Release of prem on debt	410	3,035	0	0	22
23	2021	210	23	Reimbursements received	0	0	0	0	23
24	2021	210	24	Misc income	1,005,421	360,634	0	0	24
25	2021	210	25	Aff Dividends (eq meth)	192,647	232,977	0	0	25
26	2021	210	26	Aff Eq In Undist Earns	155,515	86,308	0	0	26
27	2021	210	27	Total Other Income	2,250,674	1,668,786	0	0	27
28	2021	210	28	Total Income (L. 15, 27)	30,497,484	24,916,293	0	0	28
29	2021	210	29	Exp of prop otc ops	38,678	36,319	0	0	29
30	2021	210	30	Misc taxes	0	0	0	0	30
31	2021	210	31	Sep op properties - loss	0	0	0	0	31
32	2021	210	32	Maint of invest organiz	0	0	0	0	32
33	2021	210	33	Income xfrd contracts	0	0	0	0	33
34	2021	210	34	Misc Income Charges	(7,557)	(8,037)	0	0	34

Obs	Year	Sched	LineNo	label	colb	colc	cold	cole	LineNo
35	2021	210	35	Uncollectible accounts	0	0	0	0	35
36	2021	210	36	Total Misc Deductions	31,121	28,282	0	0	36
37	2021	210	37	Income avail for fix chg	30,466,363	24,888,011	0	0	37
38	2021	210	38	Fixed int not in default	1,070,087	1,062,712	0	0	38
39	2021	210	39	Interest in default	0	0	0	0	39
40	2021	210	40	Interest on unfund debt	53,647	98,696	0	0	40
41	2021	210	41	Amort of disc on f debt	2,910	3,116	0	0	41
42	2021	210	42	Total Fixed Charges	1,126,644	1,164,524	0	0	42
43	2021	210	43	Income aft fixed charges	29,339,719	23,723,487	0	0	43
44	2021	210	44	Contingent Interest	0	0	0	0	44
45	2021	210	45	Unusual item (dr) cr	0	0	0	0	45
46	2021	210	46	Income from Cont Op BT	29,339,719	23,723,487	0	0	46
47	2021	210	47	Fed Income taxes on ord	4,854,691	3,705,586	0	0	47
48	2021	210	48	State Inc taxes on ord	1,048,332	802,797	0	0	48
49	2021	210	49	Other Inc taxes on ord	(25,383)	20,544	0	0	49
50	2021	210	50	Prov for deferred taxes	970,101	944,743	0	0	50
51	2021	210	51	Total Prov for Inc Taxes	6,847,741	5,473,670	0	0	51
52	2021	210	52	Income from Contin Ops	22,491,978	18,249,817	0	0	52
53	2021	210	53	Inc from discount ops	0	0	0	0	53
54	2021	210	54	Gain on disposal dis ops	0	0	0	0	54
55	2021	210	55	Income before Extraord	22,491,978	18,249,817	0	0	55
56	2021	210	56	Extraordinary Items	0	0	0	0	56
57	2021	210	57	Inc Tax on Extraord Item	0	0	0	0	57
58	2021	210	58	Def Taxes Extraord Item	0	0	0	0	58
59	2021	210	59	Total Extraordinary Item	0	0	0	0	59
60	2021	210	60	Rent for lease rd n eq 66	0	0	0	0	60
61	2021	210	61	Net Income (L.55,59,60)	22,491,978	18,249,817	0	0	61
62	2021	210	62	Less NI to Non Ctl Int NU	1,469	2,190	0	0	62
63	2021	210	63	Net Income to Rep RR NU	22,490,509	18,247,627	0	0	63
64	2021	210	66	Net Rev from Rwy Ops 62	28,246,810	23,247,507	0	0	66
65	2021	210	67	Inc taxes on ord inc 63	5,877,640	4,528,927	0	0	67
66	2021	210	68	Prov for deferred tax 64	970,101	944,743	0	0	68
67	2021	210	69	Inc fr lease rd and eq 65	53,710	60,128	0	0	69
68	2021	210	70		64,653	60,468	0	0	70
69	2021	210	71	Net Railway Op Income 67	21,410,012	17,774,177	0	0	71

Schedule 210A Consolidated Statements of Comprehensive Income (\$000)

Class I Railroad U.S. Total

b=current year c=preceding year

CPSL did not complete the previous year column c -- do not use it until 2017 data available

Obs	Year	Sched	LineNo	label	colb	colc	LineNo
1	2021	211	1	Net Income	22,491,978	18,249,817	1
2	2021	211	2	OCI Currency Translation Adj	(43,147)	(4,084)	2
3	2021	211	3	OCI Unrealized Gains on Sec	(448)	2,166	3
4	2021	211	4	Less Reclass Adj in NI	0	0	4
5	2021	211	5	OCI DBPP Prior Cost Dur Pd	0	1,903	5
6	2021	211	6	Net Loss	1,050,293	(492,461)	6
7	2021	211	7	Less amort	(19,984)	(8,525)	7
8	2021	211	8	Other Comprehensive Income	91,108	84,723	8
9	2021	211	9	Comprehensive Income (1-8)	23,609,768	17,850,589	9
10	2021	211	10	Less CI attributable NCI	2,219	(457)	10
11	2021	211	11	Comprehensive Inc Attr Rep RR	23,607,549	17,851,046	11

Schedule 220 Retained Earnings (\$000)
Class I Railroad U.S. Total
b=unappropriated c=EUEA

Obs	Year	Sched	LineNo	label	colb	colc	LineNo
1	2021	220	1	Balance at Beg of year	112,499,720	2,630,508	1
2	2021	220	2	Prior Period Adjustments	0	0	2
3	2021	220	3	CR Bal xfrd from income	22,334,645	155,509	3
4	2021	220	4	CR Approp Released	0	0	4
5	2021	220	5	Other CR to retaind earn	705	0	5
6	2021	220	6	**Total Credits	22,335,350	155,509	6
7	2021	220	7	DR Debit Bal xfrd fr inc	0	0	7
8	2021	220	8	DR Otr dr to ret earns	4,481,449	1	8
9	2021	220	9	DR Approp for sink funds	0	0	9
10	2021	220	10	DR Approp for otr purp	0	0	10
11	2021	220	11	DR Divnds Common Stock	8,690,899	2,216	11
12	2021	220	12	DR Divnds Prefer Stock	0	0	12
13	2021	220	13	**Total Debits	13,172,348	2,217	13
14	2021	220	14	Net Increase during year	9,163,002	153,292	14
15	2021	220	15	Balances at close of yr	121,662,722	2,783,800	15
16	2021	220	16	Bal fr line 15c	2,783,800	0	16
17	2021	220	17	Total	124,446,522	0	17

Schedule 240 Statement of Cash Flows (\$000)
Class I Railroad U.S. Total
b=Current Year c=Prior Year

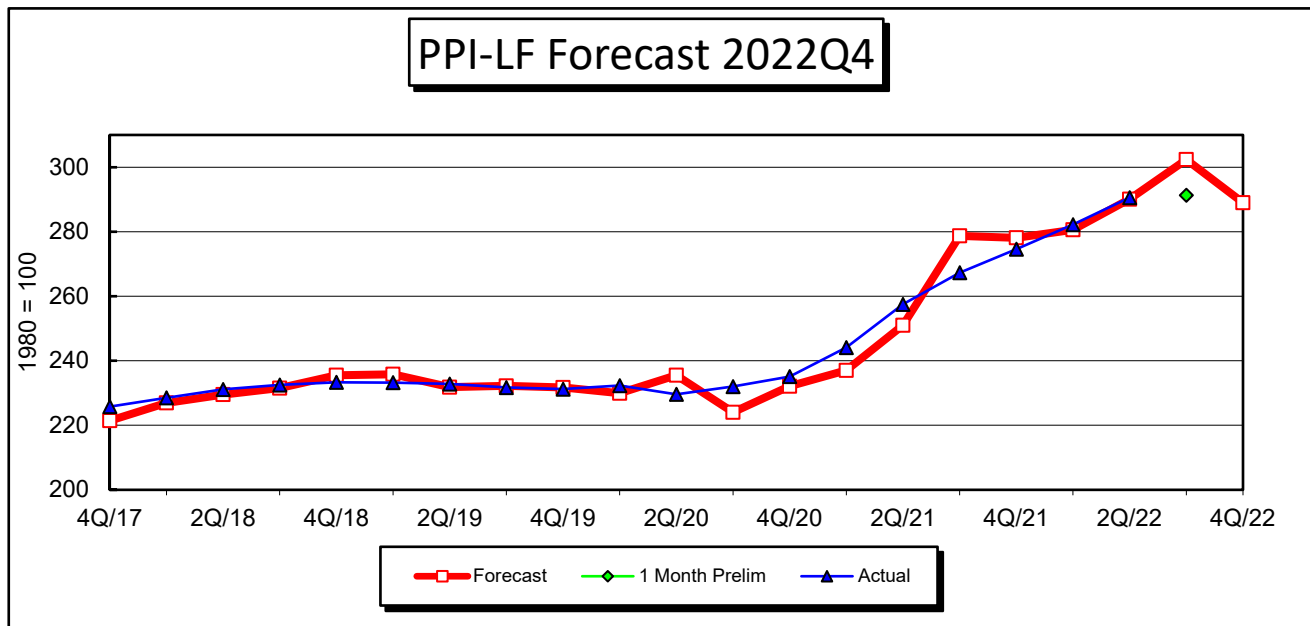
Obs	Year	Sched	LineNo	label	colb	colc	LineNo
1	2021	240	1		0	0	1
2	2021	240	2		0	0	2
3	2021	240	3		0	0	3
4	2021	240	4		0	0	4
5	2021	240	5		0	0	5
6	2021	240	6		0	0	6
7	2021	240	7		0	0	7
8	2021	240	8		0	0	8
9	2021	240	9		0	0	9
10	2021	240	10	Income from Cont. Operatn	22,491,978	18,249,817	10
11	2021	240	11	Op Act: Loss(gain) sale	(754,163)	179,265	11
12	2021	240	12	Op Act: Depreciation	8,250,146	8,132,106	12
13	2021	240	13	Op Act: Incr(decr) DI Tax	970,101	944,743	13
14	2021	240	14	Net decr in Undst Earn Af	(202,763)	(29,340)	14
15	2021	240	15	Decr in accts receivable	(950,737)	406,433	15
16	2021	240	16	Decr in mat sup n otr ca	(16,777)	95,117	16
17	2021	240	17	Incr in C.L. otr thn Debt	1,387,394	(33,257)	17
18	2021	240	18	Increase in other - net	(3,910,595)	(260,948)	18
19	2021	240	19	Net Cash fr Cont Operatns	27,264,584	27,683,936	19
20	2021	240	20	Cash Discont Ops n ExOrd	0	0	20
21	2021	240	21	NET CASH FR OPERATING ACT	27,264,584	27,683,936	21
22	2021	240	22	Proceeds from sale propty	989,944	430,472	22
23	2021	240	23	Capital expenditures	(10,204,766)	(10,247,188)	23
24	2021	240	24	Net Chg temp cash inv NCE	0	0	24
25	2021	240	25	Proceeds from sale inv	1,110	14,392	25

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

	Forecast	Actual	1 Month Prelim
4Q/17	221.4	225.8	
1Q/18	226.9	228.5	
2Q/18	229.5	231.1	
3Q/18	231.5	232.5	
4Q/18	235.5	233.3	
1Q/19	235.8	233.2	
2Q/19	231.8	232.8	
3Q/19	232.2	231.7	
4Q/19	231.7	231.2	
1Q/20	229.9	232.3	
2Q/20	235.5	229.6	
3Q/20	224.0	232.0	
4Q/20	232.1	235.1	
1Q/21	237.0	244.1	
2Q/21	251.0	257.5	
3Q/21	278.7	267.3	
4Q/21	278.1	274.6	
1Q/22	280.6	282.2	
2Q/22	290.1	290.6	
3Q/22	302.4		291.3
4Q/22	289.0		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2022Q4						
Low	251.9	282.4	2.8%			
Midpoint	257.8	289.0	5.2%	-0.8%	-0.6%	-4.4%
High	263.6	295.5	7.6%			



**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 2.61 and for Box-Jenkins was 3.34.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality

LM(0.939, 0.998, 0.999)

Confidence limits proportional to indexes and level

Component	Smoothing Wgt		Final Value
Level	0.9388		259.9
Trend	0.998		-0.5595
Seasonal	0.9985		
Seasonal Indexes			
Jan - Mar	1.002	0.9991	1
Apr - Jun	0.9989	0.9994	0.9996
Jul - Sep	0.9998	1	0.9997
Oct - Dec	1.001	1.001	0.9998

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	213.96	Std. deviation	18.54
R-square	1	Adj. R-square	1
Durbin-Watson	1.78	Ljung-Box(18)	19.7 P=0.65
Forecast error	0.72	BIC	0.77
MAPE	0.23	SMAPE	0.23
RMSE	0.71	MAD	0.51
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2022-Feb	251.3
2022-Mar	254.6
2022-Apr	257.3
2022-May	259.9
2022-Jun	260.3
2022-Jul	259.8

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	257.635	259.384	261.133
2022-Sep	254.936	258.653	262.37
2022-Oct	253.437	258.394	263.35
2022-Nov	251.9	257.845	263.79
2022-Dec	250.225	257.015	263.805
QTR AVG	251.854	257.751	263.648

Other

Forecast Report for PPILF

Description: PPILF

Expert Analysis

Using rule-based logic I have narrowed down the choice to exponential smoothing or Box-Jenkins.
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Apr - Jun	0.9989	0.9994	0.9996
Jul - Sep	0.9998	1	0.9997
Oct - Dec	1.001	1.001	0.9998

Within-Sample Statistics

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Forecast error	0.72	BIC	0.77
MAPE	0.23	SMAPE	0.23
RMSE	0.71	MAD	0.51
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2016-Aug	194
2016-Sep	193.9
2016-Oct	194.3
2016-Nov	194.9
2016-Dec	195.6
2017-Jan	196.8

Other

2017-Feb	197.8
2017-Mar	198.7
2017-Apr	199.3
2017-May	199.2
2017-Jun	199.4
2017-Jul	199.2
2017-Aug	199.7
2017-Sep	200
2017-Oct	200.9
2017-Nov	201.5
2017-Dec	201.7
2018-Jan	203
2018-Feb	203.8
2018-Mar	204.8
2018-Apr	205.4
2018-May	206.3
2018-Jun	207
2018-Jul	207.4
2018-Aug	207.6
2018-Sep	207.9
2018-Oct	208.7
2018-Nov	208.5
2018-Dec	207.8
2019-Jan	208.3
2019-Feb	208.2
2019-Mar	208.4
2019-Apr	208.2
2019-May	207.7
2019-Jun	207.1
2019-Jul	206.9
2019-Aug	206.5
2019-Sep	206.1
2019-Oct	206.5
2019-Nov	206.4
2019-Dec	206.3
2020-Jan	207.2
2020-Feb	207.1
2020-Mar	207.1
2020-Apr	205.2
2020-May	204.4
2020-Jun	205
2020-Jul	205.8
2020-Aug	207
2020-Sep	208.1
2020-Oct	208.7
2020-Nov	209.2
2020-Dec	211.5
2021-Jan	214.9
2021-Feb	217.5
2021-Mar	221.5
2021-Apr	225.9

Other

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	249.8
2022-Feb	251.3
2022-Mar	254.6
2022-Apr	257.3
2022-May	259.9
2022-Jun	260.3
2022-Jul	259.8

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2022-Aug	257.635	259.384	261.133
2022-Sep	254.936	258.653	262.37
2022-Oct	253.437	258.394	263.35
2022-Nov	251.9	257.845	263.79
2022-Dec	250.225	257.015	263.805
2023-Jan	249.381	256.922	264.463
2023-Feb	247.478	255.702	263.927
2023-Mar	246.536	255.389	264.242
2023-Apr	245.106	254.547	263.988
2023-May	244.108	254.101	264.094
2023-Jun	243.071	253.587	264.104
2023-Jul	242.072	253.088	264.103

U.S. BUREAU OF LABOR STATISTICS

Databases, Tables & Calculators by Subject

Change Output Options:

From: 2021 To: 2022

☐ include graphs ☐ include annual averages

Data extracted on: August 25, 2022 (9:55:43 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:

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2021	214.9	217.5	221.5	225.9	230.5	234.0	236.539	238.534	240.004	242.825	245.549	246.483
2022	249.774	251.330	254.556	257.348(P)	259.908(P)	260.300(P)	259.751(P)					
P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.												

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Forecast Error Calculation

	2020	Second Quarter 2022		Difference		Notes
		2022Q2	2022Q2	Pt.	Pct.	
	Weight	Forecast	Actual			
Labor	32.4%	470.4	470.4	0.0	0%	* actual=forecast
Fuel	9.7%	345.3	463.8	118.5	34%	from 1st month of quarter
M&S	4.5%	292.0	292.0	0.0	0%	* actual=forecast
Equip Rents	5.2%	251.1	251.6	0.5	0%	
Depreciation	18.5%	232.9	233.3	0.4	0%	
Interest	2.7%	51.1	51.1	0.0	0%	
Other	27.0%	290.1	290.6	0.5	0%	
Weighted Avg	100.0%					
1980 = 100		334.9	346.6			calculated
1980 = 100 (linked)		313.8	324.8			calculated
4Q17 = 100	2.645	118.6	122.8			calculated
4Q12 = 100	2.976	105.4	109.1			calculated
4Q07 = 100	2.459	127.6	132.1			calculated
4Q02 = 100	1.921	163.4	169.1			calculated
4Q97 = 100	1.732	181.2	187.5			calculated
Forecast Error	→	4.2				calculated
						0.042 = RCAF adj.
<u>Prior Quarter</u>						
1980 = 100		327.5	329.5 **			
1980 = 100 (linked)		306.9	308.8			
4Q17 = 100		116.0	116.7			calculated
4Q12 = 100		103.1	103.8			calculated
4Q07 = 100		124.8	125.6			calculated
4Q02 = 100		159.8	160.7			calculated
4Q97 = 100		177.2	178.3			calculated
<u>Equipment Rents</u>						
Car Hire	64.7%	206.5	207.0			from Equipment Rents/CHARM
Lease Rentals	35.3%	290.1	290.6			(equals PPI-LF from above)
Weighted Average		236.0	236.5			calculated
Linked		251.1	251.6			calculated
<u>Prior Quarter</u>						
Weighted Average		234.9	232.8 **			
Linked		249.9	247.7			
Sum of Weights	ok					** if fourth quarter, weighted avg for prior needs to use new
Sum of ER Wt.	ok					weights, linked is ok

Factors to change from
1982=100 to 1980 = 100

PPI-RE 210.80 210.90 211.00

0.9040

* actual=forecast

PPI-LF 257.30 259.90 260.30

0.8920

RCAF Fuel (Actual All-Inclusive Index)

April 2022

Monthly Report

	April 2022 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	April 2022 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	April 2022 1980=100 Current Index (6)
U.S.	379.56	89.34	99.415	422.36	1.096	462.91

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

(6) = (4) x (5)

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

	April 2022 1980=100 Current Index	Adjustment Factor	April 2022 1980=100 Linked Index
U.S.	462.91	1.00192	463.80 ←

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

Car Hire for RCAF - 2020 Weights

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

		1980	Aug 3Q/21	Nov 4Q/21	Feb 1Q/22	May 2Q/22	Aug 3Q/22
RATE							
RR-OWNED TIME		31.00	65.00	66.00	66.00	66.00	--
RR-OWNED MILEAGE		4.69	6.60	6.60	6.60	6.60	--
PRIVATELY-OWNED CARS		25.47	55.97	55.28	54.15	54.50	--
AUTORACKS		47.00	85.08	85.90	83.24	83.23	--
INDEX							
RR-OWNED TIME		100.0	209.7	212.9	212.9	212.9	--
RR-OWNED MILEAGE		100.0	140.7	140.7	140.7	140.7	--
PRIVATELY-OWNED CARS		100.0	219.7	217.1	212.6	214.0	--
AUTORACKS		100.0	181.0	182.8	177.1	177.1	--
CAR HIRE INDEX (old wts)	2019	100.0	214.5	--	--	--	--
CAR HIRE INDEX (new wts)	2020	100.0	214.7	212.7	208.6	209.8	--
CAR HIRE INDEX (LINKED)		100.0	211.8	209.8	205.8	207.0	--

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

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

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

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

Notes:

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

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 05/22

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

This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).

All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.

Equipment can be zero rated due to owners supplying incorrect or insufficient information to the car accounting process.

Zero-rated equipment includes those with Umler Rate_Indicator of 6 and 0 (zero).

Zero-rated equipment is excluded from the averages shown in this report.

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

RCAF Fuel (Actual All-Inclusive Index)

April 2022

Monthly Report

	April 2022 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	April 2022 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	April 2022 1980=100 Current Index (6)
U.S.	379.56	89.34	99.415	422.36	1.096	462.91

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

(6) = (4) x (5)

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

	April 2022 1980=100 Current Index	Adjustment Factor	April 2022 1980=100 Linked Index
U.S.	462.91	1.00192	463.80 ←

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

RCAF - Depreciation

Series ID : wpu144

Not Seasonally Adjusted

Group : Transportation equipment

Item : Railroad equipment

		Forecast Year 2022			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	22Q1	22Q2	22Q3	22Q4
For Actual	→	21Q3	21Q4	22Q1	22Q2
January	2021	204.9	204.9	204.9	204.9
February	2021	204.9	204.9	204.9	204.9
March	2021	205.8	205.8	205.8	205.8
April	2021	206.0	206.0	206.0	206.0
May	2021	206.0	206.0	206.0	206.0
June	2021	206.1	206.1	206.1	206.1
July	2021	206.3	206.4	206.4	206.4
August	2021	206.4	206.4	206.4	206.4
September	2021	206.4	206.5	206.5	206.5
October	2021	207.3	207.2	207.2	207.2
November	2021		208.8	208.7	208.7
December	2021		209.3	209.4	209.4
January	2022		210.5	210.6	210.6
February	2022			210.7	210.7
March	2022			210.7	210.7
April	2022			210.8	210.8
May	2022				210.9
June	2022				211.0
July	2022				211
Actual Qtr.		206.4	208.4	210.7	210.9

1980=100

Actual Qtr.	228.3	230.5	233.1	233.3
First Mo. next qtr.	229.3	232.9	233.2	233.4

0.904 =1980

RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2022			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	22Q1	22Q2	22Q3	22Q4
For Actual	→	21Q3	21Q4	22Q1	22Q2
January	2021	214.9	214.9	214.9	214.9
February	2021	217.5	217.5	217.5	217.5
March	2021	221.5	221.5	221.5	221.5
April	2021	225.9	225.9	225.9	225.9
May	2021	230.5	230.5	230.5	230.5
June	2021	234.0	234.0	234.0	234.0
July	2021	236.4	236.5	236.5	236.5
August	2021	238.4	238.5	238.5	238.5
September	2021	240.3	240.0	240.0	240.0
October	2021	242.5	242.8	242.8	242.8
November	2021		245.5	245.5	245.5
December	2021		246.4	246.5	246.5
January	2022		249.3	249.7	249.8
February	2022			251.2	251.3
March	2022			254.2	254.6
April	2022			257.2	257.3
May	2022				259.9
June	2022				260.3
July	2022				259.8
Actual Qtr.		238.4	244.9	251.7	259.2

1980=100

Actual Qtr.	267.3	274.6	282.2	290.6
First Mo. next qtr.	271.9	279.5	288.3	291.3

0.892 =1980

All-Inclusive Index (Actual) - 2020 Weights

	20 Wts	3Q/21 19 Wts	3Q/21 20 Wts	% Chg.	4Q/21 20 Wts	% Chg.	1Q/22 20 Wts	% Chg.	2Q/22 20 Wts	% Chg.	3Q/22 20 Wts	% Chg.
Labor	32.4%	447.9	447.9	0.0%	454.9	1.6%	469.5	3.2%	470.4	0.2%		NA
Fuel	9.7%	270.0	270.0	0.0%	306.2	13.4%	313.3	2.3%	463.8	48.0%		NA
M&S	4.5%	277.8	277.8	0.0%	288.8	4.0%	298.2	3.3%	292.0	-2.1%		NA
Equipment Rents	5.2%	246.2	246.2	0.0%	247.6	0.6%	247.7	0.0%	251.6	1.6%	0.0	NA
Depreciation	18.5%	228.3	228.3	0.0%	230.5	1.0%	233.1	1.1%	233.3	0.1%		NA
Interest	2.7%	55.7	55.7	0.0%	51.1	-8.3%	51.1	0.0%	51.1	0.0%	51.1	0.0%
Other	27.0%	267.3	267.3	0.0%	274.6	2.7%	282.2	2.8%	290.6	3.0%		NA
	1.0000											
Weighted Avg.		314.5	312.5	-0.6%	321.1	2.8%	329.5	2.6%	346.6	5.2%	1.4	NA
Linked		292.8			300.9	2.8%	308.8	2.6%	324.8	5.2%	1.3	NA
10/1/80	1.027	285.1			293.0	2.8%	300.7	2.6%	316.3	5.2%	1.3	NA
10/1/82	1.209	242.2			248.9	2.8%	255.4	2.6%	268.7	5.2%	1.1	NA
4Q/87	1.322	221.5			227.6	2.8%	233.6	2.6%	245.7	5.2%	1.0	NA
4Q/92	1.569	186.6			191.8	2.8%	196.8	2.6%	207.0	5.2%	0.8	NA
4Q/97	1.732	169.1			173.7	2.7%	178.3	2.6%	187.5	5.2%	0.8	NA
4Q/02	1.921	152.4			156.6	2.8%	160.7	2.6%	169.1	5.2%	0.7	NA
4Q/07	2.459	119.1			122.4	2.8%	125.6	2.6%	132.1	5.2%	0.5	NA
4Q/12	2.976	98.4			101.1	2.7%	103.8	2.7%	109.1	5.1%	0.4	NA
4Q/17	2.645	110.7			113.8	2.8%	116.7	2.5%	122.8	5.2%	0.5	NA
Equipment Rents												
Car Hire	64.7%	211.8	211.8	0.0%	209.8	-0.9%	205.8	-1.9%	207.0	0.6%		NA
Lease Rentals	35.3%	267.3	267.3	0.0%	274.6	2.7%	282.2	2.8%	290.6	3.0%	0.0	NA
	1.0000											
ER Weighted Avg		233.2	231.4	-0.8%	232.7	0.6%	232.8	0.0%	236.5	1.6%	0.0	NA
ER Linked		246.2			247.6	0.6%	247.7	0.0%	251.6	1.6%	0.0	NA



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Spot Prices

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

Period:

Product by Area	Graph Clear	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	91.64	108.50	101.78	109.55	114.84	101.62	1986-2022
Brent - Europe	☐	97.13	117.25	104.58	113.34	122.71	111.93	1987-2022
Conventional Gasoline								
New York Harbor, Regular	☐	2.739	3.184	3.193	3.828	4.082	3.484	1986-2022
U.S. Gulf Coast, Regular	☐	2.648	3.197	3.180	3.750	4.049	3.283	1986-2022
RBOB Regular Gasoline								
Los Angeles	☐	2.818	3.784	3.408	4.034	4.270	3.330	2003-2022
No. 2 Heating Oil								
New York Harbor	☐	2.737	3.635	3.952	4.497	4.246	3.552	1986-2022
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	2.872	3.780	4.042	4.646	4.362	3.696	2006-2022
U.S. Gulf Coast	☐	2.810	3.676	3.953	3.934	4.286	3.629	2006-2022
Los Angeles	☐	2.851	3.631	3.887	4.050	4.382	3.630	1996-2022
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.682	3.495	3.914	3.902	4.120	3.478	1990-2022
Propane								
Mont Belvieu, Texas	☐	1.283	1.448	1.302	1.223	1.219	1.142	1992-2022

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

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

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

Release Date: 8/31/2022

Next Release Date: 9/8/2022



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Spot Prices

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

Period:

Product by Area		07/22/22	07/29/22	08/05/22	08/12/22	08/19/22	08/26/22	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	102.24	99.60	94.01	94.65	91.81	94.47	1986-2022
Brent - Europe	☐	113.53	109.28	102.54	104.64	96.73	98.87	1987-2022
Conventional Gasoline								
New York Harbor, Regular	☐	3.406	3.469	3.200	3.165	3.025	2.888	1986-2022
U.S. Gulf Coast, Regular	☐	3.097	3.303	2.758	2.806	2.761	2.839	1986-2022
RBOB Regular Gasoline								
Los Angeles	☐	3.264	3.320	3.071	3.181	3.190	3.084	2003-2022
No. 2 Heating Oil								
New York Harbor	☐	3.508	3.539	3.277	3.210	3.404	3.741	1986-2022
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	3.634	3.633	3.386	3.382	3.572	3.915	2006-2022
U.S. Gulf Coast	☐	3.561	3.594	3.295	3.319	3.511	3.868	2006-2022
Los Angeles	☐	3.594	3.528	3.208	3.280	3.541	3.859	1996-2022
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	3.405	3.457	3.129	3.152	3.305	3.651	1990-2022
Propane								
Mont Belvieu, Texas	☐	1.111	1.138	1.098	1.075	1.078	1.115	1992-2022

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Spot Prices

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

Period:

Product by Area	Graph Clear	08/22/22	08/23/22	08/24/22	08/25/22	08/26/22	08/29/22	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	93.42	96.46	95.52	93.33	93.63	97.40	1986-2022
Brent - Europe	☐	95.06	99.49	99.87	98.81	101.13		1987-2022
Conventional Gasoline								
New York Harbor, Regular	☐	2.920	2.958	2.847	2.842	2.874	2.912	1986-2022
U.S. Gulf Coast, Regular	☐	2.728	2.755	2.867	2.905	2.939	2.987	1986-2022
RBOB Regular Gasoline								
Los Angeles	☐	3.105	3.143	3.044	3.029	3.101	3.153	2003-2022
No. 2 Heating Oil								
New York Harbor	☐	3.597	3.661	3.854	3.769	3.823	3.738	1986-2022
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	3.766	3.831	4.026	3.949	4.005	3.921	2006-2022
U.S. Gulf Coast	☐	3.707	3.766	3.954	3.934	3.980	3.888	2006-2022
Los Angeles	☐	3.739	3.778	3.999	3.864	3.917	3.851	1996-2022
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	3.489	3.554	3.766	3.691	3.753	3.651	1990-2022
Propane								
Mont Belvieu, Texas	☐	1.100	1.123	1.125	1.113	1.115	1.131	1992-2022

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

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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: 8/31/2022

Next Release Date: 9/8/2022

AAR 2021 8/18/2022 U.S.

Union	Employees	Straight Time		PFTNW	Union Lump
	Paid	Hours	Comp.	Comp.	Sums
UTU	28,360	51,473,976	1,695,039,638	537,737,499	9,399,951
TCU	3,773	6,690,454	222,478,411	31,814,647	5,977,484
BLET	20,043	40,145,138	1,468,301,364	497,421,345	50,682,093
SMW	546	963,879	32,291,186	5,252,359	19,200
BRS	5,700	10,573,634	376,528,227	87,572,902	681,211
BMWE	19,695	35,392,646	1,093,355,992	195,662,309	2,821,589
TCU-CAR	5,990	10,749,074	360,829,605	50,711,412	851,944
NCFO	1,482	2,624,947	76,652,312	10,569,430	124,687
IAM	4,643	8,288,861	283,389,445	43,393,368	408,681
IBBM	367	639,484	21,467,623	3,313,589	42,660
IBEW	3,913	7,017,913	239,582,291	42,713,350	522,173
ATDA	1,879	4,478,485	209,680,783	35,232,101	2,421,438
UTU-YMD	1,333	2,222,173	99,279,981	18,958,143	1,228,295
OTHER	19,695	42,795,097	2,284,953,229	50,870,810	
Total	117,419	224,055,761	\$8,463,830,087	\$1,611,223,264	\$75,181,406
ST Comp less Union Lump Sums			\$8,388,648,681		

Checks

OK Match	OK Match	OK Match	OK Match
Total including non-union			
			\$345,599,511

US less E+W s.b. 0

0 0 0 0 0

RCAF Weights

	U.S.	2021	2020	Amt Chg	2018	2017 Revised	2016
Labor	\$14,784,200	31.4%	32.4%	-1.0%	33.0%	34.8%	35.6%
Fuel	6,662,569	14.2%	9.7%	4.5%	15.9%	12.9%	10.7%
Mat & Sup.	2,092,924	4.5%	4.5%	0.0%	5.1%	4.9%	5.0%
Equip. Rents	2,298,001	4.9%	5.2%	-0.3%	5.3%	5.7%	5.9%
Depreciation	8,222,727	17.5%	18.5%	-1.0%	15.0%	15.7%	15.6%
Interest	1,124,464	2.4%	2.7%	-0.3%	2.1%	2.1%	2.2%
Other	11,834,334	25.1%	27.0%	-1.9%	23.6%	23.9%	25.0%
Total	\$47,019,219	100.0%	100.0%		100.0%	100.0%	100.0%

Check

410 620f	45,894,755	key this cell only
Interest	1,124,464	
Total	47,019,219	
	ok	

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

Analysis of Other -- as info only

Other	U.S.	2021	2020	Amt Chg.
Purch Service	\$8,321,072	17.7%	18.3%	-0.7%
Taxes	1,664,948	3.5%	3.6%	-0.1%
Cas & Insuran	605,134	1.3%	1.3%	0.0%
Loss & Dam	141,488	0.3%	0.2%	0.1%
Gen & Admn	1,101,692	2.3%	3.6%	-1.2%
Total	\$11,834,334	25.2%	27.0%	-1.8%

RCAF Internal Weights

	U.S.	2021	2020	Amt Diff
Labor				
Wages	10,406,841	70.4%	70.7%	-0.3%
Wage Supplem	4,377,359	29.6%	29.3%	0.3%
Total	14,784,200	100.0%	100.0%	
Check	ok			

Equip. Rents				
Car Hire	1,564,888	68.1%	64.7%	3.4%
Lease Rents	733,113	31.9%	35.3%	-3.4%
Total	2,298,001	100.0%	100.0%	
Check	ok			

Car Hire				
RR Time excl Autork	102,512	6.5%	5.2%	1.3%
RR Mileage excl Auto	58,746	3.8%	3.9%	-0.1%
Private excl Autorack	1,346,616	85.7%	87.4%	-1.7%
Autorack	63,045	4.0%	3.5%	0.5%
Total	1,570,919	100.0%	100.0%	
from Sch. 414	ok			

Car Hire, Adjusted to eliminate negative numbers				
RR Time excl Autork	102,512	6.5%	5.2%	1.3%
RR Mileage excl Auto	58,746	3.8%	3.9%	-0.1%
Private excl Autorack	1,346,616	85.7%	87.4%	-1.7%
Autorack	63,045	4.0%	3.5%	0.5%
Total	1,570,919	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	2020	RR Retirement Tier I Maximum Taxable Earnings for 2021	\$142,800
Wage Statistics Year	2021	RR Retirement Tier II Maximum Taxable Earnings for 2021	\$106,200
Employees Receiving Pay	117,419	Medicare Maximum Taxable Earnings for 2021	no limit
		Tier I Employer Tax Rate for 2021	6.20%
		Tier II Employer Tax Rate for 2021	13.10%
		Medicare Employer Tax Rate for 2021	1.45%

(Info Only)(Info Only)

USA	Taxable Rate	Update Factor	RR Ret. Tax Paid	Hourly Rate
2020	\$43.981			
2021	\$43.459	0.98813	\$529,869,982	\$9.587

Hourly rate from Supplements spreadsheet

Railroad Retirement and Medicare Benchmark for U.S.

From 2020 RRB Earnings Distribution			Quarterly Average for Benchmark Year 2021 (using updated 2020 Earnings Distribution with data for 2021)									
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	\$29,135	1.023	1,201	\$28,789	\$7,197	7,197	\$7,197	\$7,197	\$8,645,349	\$8,645,349	\$8,645,349	
41,700 - 43,699	\$43,170	0.241	283	\$42,658	10,664	10,664	10,664	10,664	3,017,804	3,017,804	3,017,804	
43,700 - 45,699	\$44,951	0.602	707	\$44,417	11,104	11,104	11,104	11,104	7,849,242	7,849,242	7,849,242	
45,700 - 47,699	\$46,889	0.722	848	\$46,332	11,583	11,583	11,583	11,583	9,819,741	9,819,741	9,819,741	
47,700 - 49,699	\$49,192	0.301	353	\$48,608	12,152	12,152	12,152	12,152	4,294,898	4,294,898	4,294,898	
49,700 - 51,699	\$50,718	0.903	1,060	\$50,116	12,529	12,529	12,529	12,529	13,284,394	13,284,394	13,284,394	
51,700 - 53,699	\$52,814	0.662	777	\$52,187	13,047	13,047	13,047	13,047	10,141,424	10,141,424	10,141,424	
53,700 - 55,699	\$54,722	1.144	1,343	\$54,072	13,518	13,518	13,518	13,518	18,158,495	18,158,495	18,158,495	
55,700 - 57,699	\$56,670	1.445	1,697	\$55,997	13,999	13,999	13,999	13,999	23,752,697	23,752,697	23,752,697	
57,700 - 59,699	\$58,720	0.963	1,131	\$58,023	14,506	14,506	14,506	14,506	16,402,279	16,402,279	16,402,279	
59,700 - 61,699	\$60,685	1.505	1,767	\$59,965	14,991	14,991	14,991	14,991	26,491,694	26,491,694	26,491,694	
61,700 - 63,699	\$62,702	2.288	2,687	\$61,958	15,489	15,489	15,489	15,489	41,613,025	41,613,025	41,613,025	
63,700 - 65,699	\$64,670	2.769	3,251	\$63,902	15,976	15,976	15,976	15,976	51,941,883	51,941,883	51,941,883	
65,700 - 67,699	\$66,717	4.214	4,948	\$65,925	16,481	16,481	16,481	16,481	81,549,802	81,549,802	81,549,802	
67,700 - 69,699	\$68,810	3.793	4,454	\$67,993	16,998	16,998	16,998	16,998	75,705,298	75,705,298	75,705,298	
69,700 - 71,699	\$70,608	4.455	5,231	\$69,770	17,442	17,442	17,442	17,442	91,241,725	91,241,725	91,241,725	
71,700 - 73,699	\$72,626	3.913	4,595	\$71,764	17,941	17,941	17,941	17,941	82,431,622	82,431,622	82,431,622	
73,700 - 75,699	\$74,684	3.793	4,454	\$73,797	18,449	18,449	18,449	18,449	82,167,918	82,167,918	82,167,918	
75,700 - 77,699	\$76,849	3.070	3,605	\$75,937	18,984	18,984	18,984	18,984	68,433,455	68,433,455	68,433,455	
77,700 - 79,699	\$78,714	3.070	3,605	\$77,780	19,445	19,445	19,445	19,445	70,094,223	70,094,223	70,094,223	
79,700 - 81,699	\$80,712	3.552	4,171	\$79,754	19,938	19,938	19,938	19,938	83,157,790	83,157,790	83,157,790	
81,700 - 83,699	\$82,591	2.047	2,404	\$81,611	20,403	20,403	20,403	20,403	49,039,094	49,039,094	49,039,094	
83,700 - 85,699	\$84,572	2.709	3,181	\$83,568	20,892	20,892	20,892	20,892	66,454,972	66,454,972	66,454,972	
85,700 - 87,699	\$86,748	2.830	3,323	\$85,718	21,430	21,430	21,430	21,430	71,209,474	71,209,474	71,209,474	
87,700 - 89,699	\$88,822	3.371	3,958	\$87,768	21,942	21,942	21,942	21,942	86,850,270	86,850,270	86,850,270	
89,700 - 91,699	\$90,488	2.047	2,404	\$89,414	22,353	22,353	22,353	22,353	53,728,003	53,728,003	53,728,003	
91,700 - 93,699	\$92,856	2.709	3,181	\$91,754	22,938	22,938	22,938	22,938	72,964,372	72,964,372	72,964,372	
93,700 - 95,699	\$94,580	2.950	3,464	\$93,457	23,364	23,364	23,364	23,364	80,930,681	80,930,681	80,930,681	
95,700 - 97,699	\$96,766	1.746	2,050	\$95,617	23,904	23,904	23,904	23,904	49,007,088	49,007,088	49,007,088	
97,700 - 99,699	\$98,698	2.589	3,040	\$97,526	24,382	24,382	24,382	24,382	74,119,465	74,119,465	74,119,465	
99,700 - 101,699	\$100,644	2.228	2,616	\$99,449	24,862	24,862	24,862	24,862	65,042,159	65,042,159	65,042,159	
101,700 - 103,699	\$102,670	1.746	2,050	\$101,451	25,363	25,363	25,363	25,363	51,997,166	51,997,166	51,997,166	
103,700 - 105,699	\$104,718	2.167	2,544	\$103,475	25,869	25,869	25,869	25,869	65,822,159	65,822,159	65,822,159	
105,700 - 107,699	\$106,632	2.529	2,970	\$105,366	26,342	26,342	26,342	26,342	78,221,881	78,221,881	78,221,881	
107,700 - 109,699	\$108,627	1.385	1,626	\$107,337	26,834	26,834	26,550	26,834	43,639,466	43,177,021	43,639,466	
109,700 - 111,699	\$110,789	1.445	1,697	\$109,474	27,368	27,368	26,550	27,368	46,436,167	45,047,506	46,436,167	
111,700 - 113,699	\$112,619	1.866	2,191	\$111,282	27,821	27,821	26,550	27,821	60,955,820	58,172,073	60,955,820	
113,700 - 115,699	\$114,639	1.626	1,909	\$113,278	28,320	28,320	26,550	28,320	54,068,560	50,690,135	54,068,560	
\$115,700 - over	\$145,306	17.580	20,642	\$143,581	35,895	35,700	26,550	35,895	736,928,689	548,052,008	740,959,190	
TOTAL			99.998	117,417	Total Taxable Earn'gs.			\$2,677,610,239	\$2,480,720,281	\$2,681,640,739		
					Employer Tax Rate			6.20%	13.10%	1.45%		
					Employer Payment			\$166,011,835	\$324,974,357	\$38,883,791		
					Total Tier I & II & Medicare			\$529,869,982				

The SAS System

RRB 2020 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	17	\$495,297	\$29,135	1.023	17	\$495,297	\$29,135	1.023
\$41,700 TO \$43,699	4	\$172,678	\$43,170	0.241	21	\$667,975	\$31,808	1.264
\$43,700 TO \$45,699	10	\$449,511	\$44,951	0.602	31	\$1,117,486	\$36,048	1.866
\$45,700 TO \$47,699	12	\$562,664	\$46,889	0.722	43	\$1,680,150	\$39,073	2.589
\$47,700 TO \$49,699	5	\$245,960	\$49,192	0.301	48	\$1,926,110	\$40,127	2.890
\$49,700 TO \$51,699	15	\$760,767	\$50,718	0.903	63	\$2,686,877	\$42,649	3.793
\$51,700 TO \$53,699	11	\$580,958	\$52,814	0.662	74	\$3,267,835	\$44,160	4.455
\$53,700 TO \$55,699	19	\$1,039,713	\$54,722	1.144	93	\$4,307,548	\$46,318	5.599
\$55,700 TO \$57,699	24	\$1,360,072	\$56,670	1.445	117	\$5,667,620	\$48,441	7.044
\$57,700 TO \$59,699	16	\$939,524	\$58,720	0.963	133	\$6,607,144	\$49,678	8.007
\$59,700 TO \$61,699	25	\$1,517,115	\$60,685	1.505	158	\$8,124,259	\$51,419	9.512
\$61,700 TO \$63,699	38	\$2,382,679	\$62,702	2.288	196	\$10,506,938	\$53,607	11.800
\$63,700 TO \$65,699	46	\$2,974,821	\$64,670	2.769	242	\$13,481,759	\$55,710	14.570
\$65,700 TO \$67,699	70	\$4,670,195	\$66,717	4.214	312	\$18,151,954	\$58,179	18.784
\$67,700 TO \$69,699	63	\$4,335,050	\$68,810	3.793	375	\$22,487,004	\$59,965	22.577
\$69,700 TO \$71,699	74	\$5,224,999	\$70,608	4.455	449	\$27,712,003	\$61,719	27.032

\$71,700 TO \$73,699	65	\$4,720,709	\$72,626	3.913	514	\$32,432,712	\$63,099	30.945
\$73,700 TO \$75,699	63	\$4,705,091	\$74,684	3.793	577	\$37,137,803	\$64,364	34.738
\$75,700 TO \$77,699	51	\$3,919,297	\$76,849	3.070	628	\$41,057,100	\$65,378	37.809
\$77,700 TO \$79,699	51	\$4,014,417	\$78,714	3.070	679	\$45,071,517	\$66,379	40.879
\$79,700 TO \$81,699	59	\$4,762,032	\$80,712	3.552	738	\$49,833,549	\$67,525	44.431
\$81,700 TO \$83,699	34	\$2,808,100	\$82,591	2.047	772	\$52,641,649	\$68,189	46.478
\$83,700 TO \$85,699	45	\$3,805,733	\$84,572	2.709	817	\$56,447,382	\$69,091	49.187
\$85,700 TO \$87,699	47	\$4,077,174	\$86,748	2.830	864	\$60,524,556	\$70,052	52.017
\$87,700 TO \$89,699	56	\$4,974,007	\$88,822	3.371	920	\$65,498,563	\$71,194	55.388
\$89,700 TO \$91,699	34	\$3,076,586	\$90,488	2.047	954	\$68,575,149	\$71,882	57.435
\$91,700 TO \$93,699	45	\$4,178,519	\$92,856	2.709	999	\$72,753,668	\$72,826	60.144
\$93,700 TO \$95,699	49	\$4,634,405	\$94,580	2.950	1,048	\$77,388,073	\$73,844	63.095
\$95,700 TO \$97,699	29	\$2,806,215	\$96,766	1.746	1,077	\$80,194,288	\$74,461	64.840
\$97,700 TO \$99,699	43	\$4,244,023	\$98,698	2.589	1,120	\$84,438,311	\$75,391	67.429
\$99,700 TO \$101,699	37	\$3,723,835	\$100644	2.228	1,157	\$88,162,146	\$76,199	69.657
\$101,700 TO \$103,699	29	\$2,977,441	\$102670	1.746	1,186	\$91,139,587	\$76,846	71.403
\$103,700 TO \$105,699	36	\$3,769,850	\$104718	2.167	1,222	\$94,909,437	\$77,667	73.570
\$105,700 TO \$107,699	42	\$4,478,559	\$106632	2.529	1,264	\$99,387,996	\$78,630	76.099
\$107,700 TO	23	\$2,498,416	\$108627	1.385	1,287	\$101,886,412	\$79,166	77.483

\$109,699								
\$109,700 TO \$111,699	24	\$2,658,940	\$110789	1.445	1,311	\$104,545,352	\$79,745	78.928
\$111,700 TO \$113,699	31	\$3,491,192	\$112619	1.866	1,342	\$108,036,544	\$80,504	80.795
\$113,700 TO \$115,699	27	\$3,095,257	\$114639	1.626	1,369	\$111,131,801	\$81,177	82.420
\$115,700 AND OVER	292	\$42,429,309	\$145306	17.580	1,661	\$153,561,110	\$92,451	100.000
TOTAL	1,661	\$153,561,110	\$92,451	100.000	1,661	\$153,561,110	\$92,451	100.000

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.

2020 RR Retirement Benchmarking

From "Wage Statistics"

	U.S.
2020 ST Comp. Incl. Lump Sums	\$8,917,004,583
2020 PFTNW	\$1,683,266,148
TOTAL	\$10,600,270,731
Pre Tax Emp H&W Cost Sharing	\$335,871,144
ST Hours Paid For	233,382,710
ST Hourly Rate	\$38.208
PFTNW Hourly Rate	\$7.212
ST + PFTNW Hourly Rate	\$45.420
Pre-Tax Contributions	(\$1.439)
Taxable Rate	\$43.981

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/22	\$37.443	\$7.192	\$44.635	\$0.145	\$0.000	\$0.123	\$44.903	-\$1.437	\$43.466
2Q/22	\$37.443	\$7.192	\$44.635	\$0.272	\$0.000	\$0.123	\$45.030	-\$1.437	\$43.593
3Q/22	\$37.443	\$7.192	\$44.635	\$0.271	\$0.002	\$0.254	\$45.162	-\$1.437	\$43.725

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.