

ASSOCIATION  
OF AMERICAN  
RAILROADS

Craig F. Rockey  
Vice President - Policy & Economics

December 5, 2001

The Honorable Vernon A. Williams  
Secretary  
Surface Transportation Board, Room 711  
1925 K Street, N.W.  
Washington, DC 20423-0001

Dear Mr. Williams:

This submission is the AAR forecast of the first quarter 2002 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2002-1), *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the first quarter 2002 results, and shows the percentage changes from the previous quarter.

	<u>2001Q4</u>	<u>2002Q1</u>	<u>% Change</u>
All-Inclusive Index	107.4	107.6	0.2
Preliminary RCAF	1.074	1.076	0.2
Forecast Error Adjustment	0.004	0.000	
RCAF (Unadjusted)	1.078	1.076	-0.2
Productivity Adjustment Factor	1.8558	1.8686	
RCAF (Adjusted)	0.581	0.576	-0.9
PAF-5	1.9379	1.9513	
RCAF-5	0.556	0.551	-0.9

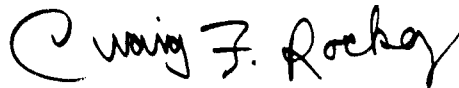
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December 5, 2001

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.

Two copies of the quarterly non-proprietary workpapers underlying this submission are 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. A third copy of the working papers has been delivered to Jeff Warren in the STB office handling this proceeding. All workpapers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,

A handwritten signature in black ink that reads "Craig F. Rockey". The signature is written in a cursive style with a large initial "C".

Craig F. Rockey

Attachments

**First Quarter 2002  
All-Inclusive Index**

**Ex Parte No. 290 (Sub-No. 5) (2002-1)**

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

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

**December 5, 2001**

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## Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) [now the Surface Transportation Board (STB)] adopted the All-Inclusive Index of Railroad costs as the basis for the Rail Cost Adjustment Factor (RCAF). The quarterly projection of railroad costs, as documented herein, employs the All-Inclusive Index as required by the regulations. Also presented in this submission is the RCAF, both Adjusted and Unadjusted, as required by the ICC in its decision in Ex Parte No. 290 (Sub-No. 4), *Rail Cost Recovery Procedures - Productivity Adjustment*, served March 24, 1989. In addition, the AAR has included (but does not endorse) the RCAF-5, which was instituted by an STB decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*. This quarter's projection of railroad costs is for the first quarter of 2002.

## Index Weights

In the Ex Parte No. 290 (Sub-No. 2) final rules, issued in April 1981, the Interstate Commerce Commission mandated that the weights of each major cost component be updated annually. These "external" weights are calculated using data from Schedules 410 and 210 of the R-1 annual report filed with the Surface Transportation Board by the Class I railroads. The weights are typically updated with the fourth quarter projection.

The previous (1999) weights were used for the fourth quarter of 2000 through the third quarter of 2001. Beginning with the fourth quarter of 2001, the 2000 weights are used. The major changes in the weights were for Fuel and Labor as the railroads experienced lower labor expenses while fuel prices soared. The changes for the remaining components were by one half of a percentage point or less. The 2000 (current) and 1999 (previous) weights are shown below.

RCAF Weights		
	Previous 1999	Current 2000
Labor	39.3 %	36.5 %
Fuel	7.1	10.7
Materials & Supplies	5.3	4.8
Equipment Rents	11.4	11.1
Depreciation	10.6	10.2
Interest	4.6	4.6
Other	21.7	22.1

Reweighting of the index is accomplished by calculating both the current quarter (normally the fourth) and prior (normally the third) quarter indexes with the new weights. The relative change between the two quarters is then multiplied times the prior quarter (usually the third) *linked* index. Use of this method ensures that the weight change, by itself, does not cause a change in the level of the All-Inclusive Index.

Internal weights in the labor and equipment rents components are updated at the same time as the external weights. When these weights are changed, they are also linked using the procedure described above in order to eliminate the effect of the change in weighting.

## All-Inclusive Index First Quarter 2002

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.

	2000 Weights	Forecast		Percent Change
		Previous 2001Q4	Current 2002Q1	
1. Labor	36.5%	253.0	260.3	2.9 %
2. Fuel	10.7%	108.5	87.4	-19.4
3. M&S	4.8%	153.8	155.5	1.1
4. Equipment Rents	11.1%	179.2	178.9	-0.2
5. Depreciation	10.2%	150.0	150.1	0.1
6. Interest	4.6%	108.8	108.8	0.0
7. Other	22.1%	160.2	159.2	-0.6
8. Weighted Average				
a. 1980 = 100		186.9	187.2	
b. 1980 = 100 (linked)		186.1	186.4 <sup>1</sup>	
c. 4Q97 = 100		107.4	107.6 <sup>2</sup>	0.2

---

<sup>1</sup> To calculate the 1980 = 100 Linked Index:

$$\begin{aligned} \text{Index}_{80} &= (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index} \\ &= 187.2 \quad \text{divided by} \quad 186.9 \quad \text{times} \quad 186.1 \\ &= 186.4 \end{aligned}$$

<sup>2</sup> To calculate the 4Q97 = 100 index:

$$\begin{aligned} \text{Index}_{4Q97} &= (\text{Current Linked Index} / \text{4Q97 Index}) * 100 \\ &= 186.4 \quad \text{divided by} \quad 173.2 \quad \text{times} \quad 100 \\ &= 107.6 \end{aligned}$$

$$4Q92 \text{ based index} = 118.8$$

$$4Q87 \text{ based index} = 141.0$$

## Forecast vs. Actual All-Inclusive Index Third Quarter 2001

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

	1999 Weights	Third Quarter 2001		Amt Difference
		Forecast	Actual	
1. Labor	39.3%	256.3	256.3	
2. Fuel	7.1%	108.3	101.3	
3. M&S	5.3%	155.8	155.8	
4. Equipment Rents <sup>1</sup>	11.4%	177.8	177.7	
5. Depreciation	10.6%	150.2	150.0	
6. Interest	4.6%	94.9	94.9	
7. Other	21.7%	161.2	160.2	
8. Weighted Average				
a. 1980 = 100		192.2	191.5	
b. 1980 = 100 (linked)		186.9	186.8 <sup>2</sup>	
c. 4Q97 = 100 <sup>3</sup>		107.9	107.9	0.0

**Forecast error** —————▶ **0.0 index points**

<sup>1</sup>	1999 Weights	Third Quarter 2001	
		Forecast	Actual
Car-Hire	54.9%	183.0	183.2
Lease Rentals	45.1%	161.2	160.2
Weighted Average		173.2	172.8
Weighted Average (linked)		177.8	177.7

<sup>2</sup> Linked actual index = (actual index / previous actual index) x previous linked actual index.  
 $186.8 = 191.5 / 191.1 \times 186.4$

<sup>3</sup> The 4Q97 based indexes are 1980 based indexes divided by the 4Q97 index (173.2/100).  
 4Q92 based indexes are the 1980 based indexes divided by the 4Q92 index (156.9/100).  
 2001Q3 actual index based on 4Q92: —————▶ 119.1



# Productivity

On January 25, 2001, the STB served a decision in Ex Parte 290 (Sub-No. 4) which added the year 1999 to the Productivity Adjustment Factor (PAF) and deleted the year 1994. This creates an average annual productivity for 1995 through 1999 of 2.8 percent – a decrease from the 1994 through 1998 average of 3.5 percent. The components of this average annual value are shown on the following table. Productivity changes are calculated by dividing the output index by the input index. The average annual rate is calculated by multiplying each of the five productivity changes together and taking the result to the one fifth power. The quarterly productivity adjustment factors (PAF) are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate which are the fourth root of the average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the 5-year productivity trend.

<b>Comparison of Output, Input, &amp; Productivity</b>			
<b>1995 - 1999</b>			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
1995	1.058	1.045	1.012
1996	1.038	0.913	1.137
1997	1.007	1.019	0.988
1998	1.005	1.018	0.987
1999	1.028	1.003	<u>1.025</u>
Average			1.028
Previous Average (1994-1998)			1.035

<b>Calculation of PAF and PAF-5</b>			
For 1995-1999 use fourth root of avg. productivity change			1.0069
For 1994-1998 use fourth root of previous avg. change			1.0086
Quarter	Year	PAF	PAF-5
Q1	2001	1.8180	1.8888
Q2	2001	1.8305	1.9050
Q3	2001	1.8431	1.9214
Q4	2001	1.8558	1.9379
Q1	2002	1.8686	1.9513

1994-1998

←

1995-1999

←

## Rail Cost Adjustment Factor First Quarter 2002

Four RCAF values are presented in this filing. Two of the indexes, the All-Inclusive Index and the Unadjusted RCAF, are not modified for productivity, while the Adjusted RCAF and the RCAF-5 incorporate a productivity calculation. The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below.

	Previous 2001Q4	Current 2002Q1	Percent Change
All-Inclusive Index <sup>1</sup>	107.4	107.6	0.2
Preliminary RCAF <sup>2</sup>	1.074	1.076	0.2
Forecast Error Adjustment <sup>3</sup>	<u>0.004</u>	<u>0.000</u>	
RCAF (Unadjusted) <sup>4</sup>	1.078	1.076	-0.2
Productivity Adjustment Factor <sup>5</sup>	1.8558	1.8686	
RCAF (Adjusted) <sup>6</sup>	0.581	0.576	-0.9
PAF-5 <sup>7</sup>	1.9379	1.9513	
RCAF-5 <sup>8</sup>	0.556	0.551	-0.9

<sup>1</sup> See All-Inclusive Index on page 3.

<sup>2</sup> All-Inclusive Index divided by the All-Inclusive Index in the base period (100.0).

<sup>3</sup> 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.

<sup>4</sup> Preliminary RCAF plus the forecast error adjustment.

<sup>5</sup> See Productivity on page 5.

<sup>6</sup> RCAF (Unadjusted) divided by the Productivity Adjustment Factor (PAF).

<sup>7</sup> See Productivity on page 5.

<sup>8</sup> RCAF (Unadjusted) divided by the PAF-5.

# Appendixes

## Labor

### First Quarter 2002

The first quarter 2002 labor rate is forecast to increase 2.9 percent, caused by small wage increases and larger increases in supplements costs. Cost of living allowances in most national contracts caused the wage rate index to increase 0.4 percent. Higher health & welfare and unemployment insurance rates for 2002, along with the higher wages, were the main causes for a 7.4 percent increase in the supplements index.

### Wage Index

**National Contracts:** The 1996 national agreements with the major railroads' unions provide for a cost-of-living allowance (COLA) to be added to basic rates of pay effective January 1, 2002. This COLA amount is 10 cents per hour for all unions except the Brotherhood of Maintenance of Way Employees (BMWE). The BMWE signed a new agreement in the spring of 2001, and receives its next increase in July 2002. Non-union employees, which typically receive one wage increase at the beginning of each year, were assigned the same 10 cent increase that most union employees received.

**Independent Contracts:** Grand Trunk Western's January 1 wage increases for its Sheet Metal Workers' International Association, BMWE, and Brotherhood of Railway Carmen Division of the Transportation Communications International Union were added to the wage rate. (See note at bottom of page concerning GTW's SMW.) CN/Illinois Central had COLA increases (10 cents) added for its United Transportation Union, Brotherhood of Locomotive Engineers, and UTU-Yardmasters. In addition, new contracts for CN/IC's International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers, and Helpers (IBBM) and International Brotherhood of Electrical Workers (IBEW) had retroactive wage increases effective July 2000 and July 2001. The Soo Line had 10 cent COLAs for all of its unions, including its BMWE, added to the wage rate.

**Lump Sums:** Lump sums were added for CN/IC's IBBM and IBEW because of signing bonuses specified in their new contracts. No other lump sums were added to the wage rate. One lump sum payment to the CN/IC TCU was fully amortized and dropped from the rate, causing the slight decrease.

**Back Pay:** The back pay adjustment decreased by 1.3 cents. A small back pay amount was added to the wage rate for the new CN/IC IBBM and IBEW contracts, and 2 amounts (national BRS and 6 IC unions) were removed since they were fully amortized – causing the decrease.

Note: Since the GTW SMW employees are benchmarked (based on 2000 wage statistics) to 0 employees, no wage increases, lump sum amounts, or back pay amounts related to this railroad's union were added to the labor rate. GTW confirmed that their SMW signing bonus for the new contract signed August 24 applied to two part-time and 3 furlough employees. In 1999, GTW had 8 employees in this category.

## Labor

### First Quarter 2002

**Other:** This component contains the amortization of a profit sharing payment that the BNSF made to its Brotherhood of Locomotive Engineers employees from the former Atchison, Topeka and Santa Fe Railway in early 2001. The first quarter 2002 figure is unchanged from the fourth quarter filing.

### Supplements Index

The supplements index is forecast to increase by 7.4 percent from the fourth quarter filing. The change is mostly caused by new 2002 rates for health & welfare.

**Health & Welfare:** The health and welfare hourly rate increased 17 percent from the fourth quarter level because of the new 2002 health and welfare rates. Page 4 of this appendix compares various supplement rates, and page 5 shows the National Railway Labor Conference memo that lists the 2002 rates.

**Railroad Retirement:** Higher wages and higher tax maximums for 2002 caused the Railroad Retirement and Medicare hourly rate to increase 2.2 percent. (At the time of this filing, there exists the possibility of legislation being passed that could change the Railroad Retirement tax rate and the supplemental annuities rate. The tax rate used here is the one currently in place for 2002 and specified by the Railroad Retirement Board in its October 2001 news release.)

**Supplemental Annuities:** The supplemental annuities rate is expected to decrease slightly in 2002.

**Unemployment Insurance:** Railroad unemployment insurance rates are experience-rated by employer and will range from 3.15 (0.65 plus a 2.5 percent surcharge) to 12 percent on monthly employee compensation up to \$1,100. The weighted-average 2002 unemployment insurance rate for Class I railroads is 3.81 percent, which is higher than the rates for the previous two years.

**Other:** The "Other" category, a reflection of a quarterly employer matching contribution by BNSF to certain BLE and BMWE employees, is unchanged.

### Labor Index Calculation

As shown in table A-1 on the next page, the 0.4 percent increase in the Wage Index and the 7.4 percent increase in the Supplements Index had a combined effect of a 2.9 percent increase in the Labor Index. The linked first quarter 2002 labor index is 260.3.



**Labor**  
**First Quarter 2002**

**Supplement Comparisons**

**Health and Welfare Rates**

Plan	Railroad Contribution Per Employee Per Month			
	2000	2001	2002	'00-'02 Chg
Group Health & Life	\$598.26	\$705.52	\$836.48	39.8%
Early Retirement Major Medical	22.35	30.35	31.00	38.7%
Group Dental	34.15	43.27	43.41	27.1%
Group Vision	7.51	7.51	8.40	11.9%
Supplemental Sickness				
Maintenance of Way	18.04	24.53	33.32	84.7%
Shop Crafts	20.24	38.51	46.22	128.4%
Signalmen	7.25	23.59	32.24	344.7%
Yardmasters	30.78	29.65	32.18	4.5%

**Railroad Retirement and Medicare**

	Earnings Base			Employer Rate 2000 = 2001 = 2002
	2000	2001	2002	
Tier I	\$76,200	\$80,400	\$84,900	6.20%
Tier II	56,700	59,700	63,000	16.10%
Medicare	no limit	no limit	no limit	1.45%

**Unemployment Insurance**

Monthly Taxable Earnings Base			Weighted Avg. Class I Rate		
2000	2001	2002	2000	2001	2002
\$1,005	\$1,050	\$1,100	0.79%	2.15%	3.81%

**Supplemental Annuity rate**

	For all 4 quarters		Q-1
	2000	2001	2002
RRB Rate	26.5¢	26.0¢	25.0¢

# Labor

## First Quarter 2002

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### NATIONAL RAILWAY LABOR CONFERENCE EMPLOYEE BENEFITS DEPARTMENT

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November 16, 2001

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

Dear Mr. Crimmel:

The revised employer Payment Rates which are effective January 1, 2002 are as follows:

UNUMProvident - Supplemental Sickness Plans	
ShopCrafts	\$ 45.22
Signalmen	\$ 32.24
Maintenance of Way	\$ 33.32
Trustmark - Supplemental Sickness Plans	
Yardmasters	\$ 32.18
Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan Non-Hospital Road	\$836.48
Railroad Employees National Early Retirement Major Medical Benefit Plan Non-Hospital Road	\$ 31.00
Aetna US Healthcare - National Dental Plan	\$ 43.41
VSP - National Vision Plan	\$ 8.40

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

Very truly yours,

  
Susan E. Parks

cc: Carol Kearns

TOTAL P. 01



## Fuel

### First Quarter 2002

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 discussions with their major suppliers, and (3) a consensus of petroleum industry experts and general business publications.

The railroads expect first quarter (January) fuel prices to decrease from the fourth quarter (October) level. NYMEX heating oil prices at the end of November are already well over ten percent lower than the October average. There are several factors related to war that could reverse this decline in prices by decreasing the oil supply. Possible terrorist attacks on U.S. oil and gas companies, recent statements by President Bush concerning Iraq, and the current situation in Israel are seen as circumstances that could develop into causes of a decrease in oil supply. However, crude oil futures prices have at this time been more affected by concern about weakening demand than possible decreases in supply.

Forecast fuel index	87.4
Change from previous quarter forecast	-19.4%
Change from previous quarter actual	-10.5%

## Materials & Supplies

### First Quarter 2002

The materials & supplies index for first quarter 2002 is 1.1 percent higher than the previous quarter. Most of this increase was caused by ballast purchases. Recent ballast work has shifted back to the higher-priced Northeast. Although the current quarter has increased 1.1 percent, it is still slightly lower than the third quarter 2001 index of 155.8.

2002Q1 Materials & Supplies Index = 155.5

2001Q4 Materials & Supplies Index = 153.8

Difference	1.7 basis points
	or
	1.1 %

## Equipment Rents First Quarter 2002

The equipment rents index consists of two components -- car hire and lease rentals. The methodology used to create these two components and the final equipment rents index are explained below.

### Car Hire

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

### Lease Rentals

The lease rental 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 Rent Index Calculation

The table below calculates the Equipment Rent Index.

	2000 Weight	2001Q4	2002Q1	Percent Change
Car Hire	52.8%	186.5	186.8	0.2 %
Lease Rentals	47.2%	160.2	159.2	-0.6
Weighted Average		174.1	173.8	-0.2
Weighted Average (Linked)		179.2	178.9	-0.2

## Depreciation

### First Quarter 2002

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE 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 be the most recent monthly data 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 value for the forecast, slightly higher than the previous quarter's forecast, reflects a PPI-RE that has not changed much during 2001, but increased recently to its highest level since February.

Forecasted depreciation index (1982=100)	135.7
Forecasted depreciation index (1980=100)	150.1
Change from previous quarter forecast	0.1%
Change from actual first month of previous quarter	-0.1%
Change from same quarter of prior year (actual)	-0.1%

## Depreciation First Quarter 2002

### PPI RAIL EQUIPMENT

Forecast Model for PPIRE  
ARIMA(0,1,2)

Term	Coefficient	Std. Error	t-Statistic	Significance
b[1]	0.3235	0.1103	2.9341	0.9955
b[2]	0.3761	0.1101	3.4172	0.9989

### Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 135.6	Standard deviation 1.41
R-square 0.4028	Adjusted R-square 0.3943
Durbin-Watson 1.946	Ljung-Box(18)=8.158 P=0.02381
Forecast error 1.097	BIC 1.148
MAPE 0.003637	RMSE 1.082
MAD 0.4945	

### Actual Values for the Most Recent 6 Periods:

Date	Actual
2001-05	135.600
2001-06	135.700
2001-07	135.600
2001-08	135.700
2001-09	135.600
2001-10	135.800

### Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2001-11	133.640	135.776	137.912
2001-12	133.122	135.701	138.279
2002-01	133.044	135.701	138.358
2002-02	132.967	135.701	138.434
2002-03	132.893	135.701	138.508
<b>QTR AVG</b>	<b>132.968</b>	<b>135.701</b>	<b>138.433</b>
2002-04	132.821	135.701	138.581
2002-05	132.750	135.701	138.651
2002-06	132.681	135.701	138.720

## Interest First Quarter 2002

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt. The interest rate is calculated for the most recent year and used until the next year’s figures are available. Typically in the fourth quarter filing, the interest rate is updated to the new level. The source for interest expense is Schedule 210, column b, from the R-1 annual report. The lines used from current R-1 annual reports are listed below. The source for average total debt is Schedule 200 from the R-1 annual report. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers are listed below.

**Interest Expense (Schedule 210)**

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

**Average Total Debt (Schedule 200)**

- Line
- 30 Current Loans and Notes Payable
- 39 Equipment Obligations and Other Long Term Debt Due Within One Year
- 41 Funded Debt Unmatured - Non-Current
- 42 Equipment Obligations - Non-Current
- 43 Capitalized Lease Obligatons - Non-Current
- 44 Debt in Default - Non-Current
- 45 Accounts Payable: Affiliated Companies - Non-Current
- 46 Unamortized Debt Premium - Non-Current

2000	Interest Rate	8.54%
1980	Interest Rate	7.85%
<b>2002Q1</b>	<b>Interest Index</b>	<b>108.8</b>
2001Q4	Interest Index	108.8
	Percent Change	0.0%

## Other Expenses

### First Quarter 2002

The Producer Price Index for Industrial Commodities less Fuel 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 be the most recent monthly data 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 lower than the previous quarter forecast and reflects a recent trend of lower monthly data.

Forecasted Other Expense (1982=100)	142.0
Forecasted Other Expense (1980=100)	159.2
Change from previous quarter forecast	-0.6%
Change from actual first month of previous quarter	-0.4%
Change from same quarter of prior year (actual)	-1.1%

## Other Expenses First Quarter 2002

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

Forecast Model for PPILF  
ARIMA(1,1,1)\*(1,0,0) with log transform

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.8858	0.0900	9.8385	1.0000
b[1]	0.5505	0.1601	3.4393	0.9990
A[12]	0.4390	0.1200	3.6594	0.9995

**Within-Sample Statistics**

Sample size 72	Number of parameters 3
Mean 4.943	Standard deviation 0.01299
R-square 0.9881	Adjusted R-square 0.9878
Durbin-Watson 2.001	Ljung-Box(18)=14.82 P=0.3254
Forecast error 0.001436	BIC 0.2155
MAPE 0.001092	RMSE 0.1976
MAD 0.1533	

*Actual Values for the Most Recent 6 Periods:*

Date	Actual
2001-05	143.700
2001-06	143.600
2001-07	143.200
2001-08	142.700
2001-09	142.700
2001-10	142.500

*Forecasted Values*

Date	2.5 Lower	Forecast	97.5 Upper
2001-11	141.805	142.199	142.594
2001-12	141.355	142.010	142.669
2002-01	141.187	142.104	143.027
2002-02	140.777	141.956	143.145
2002-03	140.426	141.869	143.326
<b>QTR AVG</b>	<b>140.797</b>	<b>141.976</b>	<b>143.166</b>
2002-04	140.091	141.796	143.522
2002-05	139.728	141.693	143.687
2002-06	139.337	141.559	143.817