

ASSOCIATION  
OF AMERICAN  
RAILROADS

Craig F. Rockey  
Vice President - Policy

September 5, 2000

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 fourth quarter 2000 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2000-4), *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 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 2000 results, and shows the percentage changes from the previous quarter.

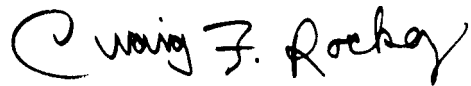
	<u>2000Q3</u>	<u>2000Q4</u>	<u>% Change</u>
All-Inclusive Index	104.8	105.9	1.0
Preliminary RCAF	1.048	1.059	1.0
Forecast Error Adjustment	0.002	0.003	
RCAF (Unadjusted)	1.050	1.062	1.1
Productivity Adjustment Factor	1.7871	1.8025	
RCAF (Adjusted)	0.588	0.589	0.2
PAF-5	1.8468	1.8727	
RCAF-5	0.569	0.567	-0.4

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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 (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, stylized initial "C".

Craig F. Rockey

Attachments

**Fourth Quarter 2000  
All-Inclusive Index**

**Ex Parte No. 290 (Sub-No. 5) (2000-4)**

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

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

**September 5, 2000**

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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 fourth quarter of 2000.

## 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. The 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 (1998) weights were used for the fourth quarter of 1999 through the third quarter of 2000. Beginning with the fourth quarter of 2000, the current (1999) weights are used. Reweighting from 1998 to 1999 caused little change. All changes were by less than 1 percentage point, and only one change, the "other" category, was by more than four tenths of a percentage point. The current and previous weights are shown below. *This fourth quarter 2000 forecast is the first forecast that uses 1999 weights.*

RCAF Weights		
	Previous 1998	Current 1999
Labor	39.9 %	39.5 %
Fuel	7.0	7.1
Materials & Supplies	5.5	5.2
Equipment Rents	10.8	10.9
Depreciation	10.6	10.6
Interest	4.8	4.6
Other	21.4	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 linked in order to eliminate the effect of the change in weighting.

## All-Inclusive Index Fourth Quarter 2000

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.

	1999 Weights	Forecast		Percent Change
		Previous 2000Q3	Current 2000Q4	
1. Labor	39.5%	245.7	247.1	0.6 %
2. Fuel	7.1%	98.7	123.4	25.0
3. M&S	5.2%	147.6	150.1	1.7
4. Equipment Rents	10.9%	175.0	174.2	-0.5
5. Depreciation	10.6%	150.2	150.3	0.1
6. Interest	4.6%	98.0	94.9	-3.2
7. Other	22.1%	161.3	160.3	-0.6
8. Weighted Average				
a. 1980 = 100		186.9	188.9	
b. 1980 = 100 (linked)		181.6	183.5 <sup>1</sup>	
c. 4Q97 = 100		104.8	105.9 <sup>2</sup>	1.0

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Note: The 186.9 weighted average for 2000Q3 has been recalculated with 1999 weights to eliminate any changes in the fourth quarter index that would be caused by changing weights. The original figure with 1998 weights is 187.1.

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

$$\begin{aligned} \text{Index}_{80} &= (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index} \\ &= 188.9 \text{ divided by } 186.9 \text{ times } 181.6 \\ &= 183.5 \end{aligned}$$

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

$$\begin{aligned} \text{Index}_{4Q97} &= (\text{Current Linked Index} / 4Q97 \text{ Index}) * 100 \\ &= 183.5 \text{ divided by } 173.2 \text{ times } 100 \\ &= 105.9 \end{aligned}$$

$$4Q92 \text{ based index} = 117.0$$

$$4Q87 \text{ based index} = 138.8$$

## Forecast vs. Actual All-Inclusive Index Second Quarter 2000

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.

	1998 Weight	Second Quarter 2000		Amt Difference
		Forecast	Actual	
1. Labor	39.9%	242.8	242.8	
2. Fuel	7.0%	102.6	102.1	
3. M&S	5.5%	146.5	146.5	
4. Equipment Rents <sup>1</sup>	10.8%	174.5	174.8	
5. Depreciation	10.6%	149.8	150.2	
6. Interest	4.8%	98.0	98.0	
7. Other	21.4%	159.9	159.8	
8. Weighted Average				
a. 1980 = 100		185.8	185.8	
b. 1980 = 100 (linked)		180.3	180.8 <sup>2</sup>	
c. 4Q97 = 100 <sup>3</sup>		104.1	104.4	0.3

**Forecast error** —————▶ **0.3 index points**

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1	1998 Weight	Second Quarter 2000	
		Forecast	Actual
Car-Hire	58.8%	178.1	178.5
Lease Rentals	41.2%	159.9	159.8
Weighted Average		170.6	170.8
Weighted Average (linked)		174.5	174.8

<sup>2</sup> Linked actual index = (actual index / previous actual index) x previous linked actual index.  
 $180.8 = 185.8 / 184.8 \times 179.8$

<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).  
 2000Q2 actual index based on 4Q92: —————▶ 115.2



# Productivity

On January 27, 2000, the STB served a decision in Ex Parte 290 (Sub-No. 4) which added the year 1998 to the Productivity Adjustment Factor (PAF) and deleted the year 1993. This creates an average annual productivity for 1994 through 1998 of 3.5 percent – a decrease from the 1993 through 1997 average of 5.7 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 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>1994 - 1998</b>			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
1994	1.084	1.025	1.058
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	<u>0.987</u>
Average			1.035
Previous Average (1993-1997)			1.057

<b>Calculation of PAF and PAF-5</b>			
For 1994-1998 use fourth root of avg. productivity change			1.0086
For 1993-1997 use fourth root of previous avg. change			1.0140
Quarter	Year	PAF	PAF-5
Q4	1999	1.7325	1.7714
Q1	2000	<u>1.7568</u>	1.7962
Q2	2000	1.7719	1.8213
Q3	2000	1.7871	1.8468
Q4	2000	1.8025	<u>1.8727</u>
Q1	2001	1.8180	<u>1.8888</u>

1993-1997

←

1994-1998

←

## Rail Cost Adjustment Factor

### Fourth Quarter 2000

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 2000Q3	Current 2000Q4	Percent Change
All-Inclusive Index <sup>1</sup>	104.8	105.9	1.0
Preliminary RCAF <sup>2</sup>	1.048	1.059	1.0
Forecast Error Adjustment <sup>3</sup>	0.002	0.003	
RCAF (Unadjusted) <sup>4</sup>	1.050	1.062	1.1
Productivity Adjustment Factor <sup>5</sup>	1.7871	1.8025	
RCAF (Adjusted) <sup>6</sup>	0.588	0.589	0.2
PAF-5 <sup>7</sup>	1.8468	1.8727	
RCAF-5 <sup>8</sup>	0.569	0.567	-0.4

<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

### Fourth Quarter 2000

The fourth quarter 2000 wage index is forecast to decrease 1.8 percent, while the supplements index will increase 5.1 percent. These changes are caused almost entirely by rebenchmarking with 1999 wage and annual report data. The overall impact of these changes in wages and supplements is an increase of 0.6 percent in the overall labor index.

**Rebenchmarking:** Rebenchmarking, as well as updating the internal weights (i.e., the proportion of labor costs represented by wages and supplements, respectively), is reflected each year in the fourth quarter filing. The 1999 data underlying the fourth quarter rebenchmarking are obtained from the railroads' 112-Class Wage Statistics and the railroads' R-1 Annual Reports to the Surface Transportation Board. The source for the wage and supplements internal weights, like the external weights, is the R-1 Annual Report summary.

### Wage Index

**Base Wage Rate:** There were no wage increases in the fourth quarter. Therefore, the rebenchmarked 3rd quarter Straight Time and Pay For Time Not Worked hourly rate is the same as the fourth quarter. The 1.8 percent decrease from the 3rd quarter filing to the fourth quarter was caused entirely by rebenchmarking.

**Lump Sums:** The lump sum adjustment for the fourth quarter decreased by \$0.001 as one small independent lump sum was completely amortized in the third quarter. Rebenchmarking caused the lump sum adjustment to increase by an amount so small that the increase is eliminated after rounding.

**Back Pay:** Rebenchmarking caused the back pay hourly rate to increase by \$0.001 when rounded to the nearest tenth of a cent. The fourth quarter rate decreased with the complete amortization of a GTW back pay amount in the third quarter.

**Other:** This component contains the amortization of a profit sharing payment that the Burlington Northern and Santa Fe Railway made to its Brotherhood of Locomotive Engineers employees from the former Atchison, Topeka and Santa Fe Railway in the spring of 2000. Rebenchmarking causes this figure to round up to \$0.008 instead of rounding down to \$0.007. The fourth quarter figure is also \$0.008.

## Labor

### Fourth Quarter 2000

#### Supplements Index

The Supplements index is forecast to increase by 5.1 percent. The change is almost entirely caused by rebenchmarking.

**Health & Welfare:** The rebenchmarked third and fourth quarter health and welfare hourly rate increased 14.1% from the original third quarter level.

**Railroad Retirement:** Rebenchmarking caused the Railroad Retirement rate to increase by 1.2%. The fourth quarter rate is slightly (\$0.001) lower than the rebenched third quarter rate because of the slightly lower lump sum and back pay adjustments.

**Supplemental Annuities:** The supplemental annuities rate increased from \$0.235 to \$0.237. This increase was caused entirely by rebenchmarking.

**Unemployment Insurance:** Rebenchmarking caused the unemployment insurance rate to decrease from \$0.054 to \$0.038.

**Other:** The "Other" category reflects a quarterly employer matching contribution by BNSF to certain BLE and BMWWE employees. The third quarter figure rounded up to \$0.008, and rebenchmarking caused the figure to round down to \$0.008. Fourth quarter's \$0.009 was caused by a higher amount contributed rather than rebenchmarking.

#### Labor Index Calculation

As shown in table A-1 on the next page, the 1.8 percent decrease in the Wage Index and the 5.1 percent increase in the Supplements Index had a combined effect of a 0.6 percent increase in the Labor Index. The linked fourth quarter 2000 labor index of 247.1 is determined by multiplying the third quarter linked index of 245.7 times the change between the fourth quarter labor index (253.6) and a third quarter labor index (252.2) recalculated using the original third quarter wages and supplements indexes weighted with new 1999 weights. This method eliminates changes caused by the new weights, but captures changes caused by rebenchmarking.

## Labor Fourth Quarter 2000

Table A-1 Labor Index

	2000Q3		2000Q4	
	Used in Previous Index Filing	Updated to Reflect 1999 Actual Data	Based on 1999 Data	Pct Change From Prev. Filing
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$26.329	\$25.858	\$25.858	-1.8%
Adjustments:				
Lump Sum	0.010	0.010	0.009	-10.0%
Back Pay	0.053	0.054	0.050	-5.7%
Other	0.007	0.008	0.008	14.3%
<b>Total Wages</b>	<b>\$26.399</b>	<b>\$25.930</b>	<b>25.925</b>	<b>-1.8%</b>
Health & Welfare Benefits	2.846	3.247	3.247	14.1%
RR Retirement & Medicare	5.741	5.809	5.808	1.2%
Supplemental Annuities	0.235	0.237	0.237	0.9%
Unemployment Insurance	0.054	0.038	0.038	-29.6%
Other	0.008	0.008	0.009	12.5%
Adjustments	0.000	0.000	0.000	
<b>Total Supplements</b>	<b>\$8.884</b>	<b>\$9.339</b>	<b>\$9.339</b>	<b>5.1%</b>
Total Labor	\$35.283	\$35.269	\$35.264	
<b>Wage Index<sup>1</sup></b>	225.9	221.9	221.9	-1.8%
<b>Supplements Index<sup>2</sup></b>	328.3	345.1	345.1	5.1%
Total labor Index, 1998 Weights <sup>3</sup>	251.4			
Total labor Index, 1999 Weights <sup>4</sup>	252.2	253.6	253.6	
<b>Labor Index (linked)<sup>5</sup></b>	245.7		<b>247.1</b>	0.6%

<sup>1</sup> 1980 wage rate \$11.685

<sup>2</sup> 1980 supplements rate \$2.706

<sup>3</sup> 1998 weights: wages, supplements 75.1% 24.9%

<sup>4</sup> 1999 weights: wages, supplements 74.3% 25.7%

<sup>5</sup> 2000Q4 linked Index = 2000Q3<sub>linked</sub> x (2000Q4<sub>99Wt</sub> / 2000Q3<sub>99Wt</sub>)

$$= 245.7 \times 253.6 / 252.2$$

## Fuel

### Fourth Quarter 2000

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.

Railroad fuel prices are expected to be much higher in the fourth quarter (October) than the third quarter average (July). Heating oil prices recently matched a 10-year high, inventories are 39 percent below last year's level, and the winter heating season will increase demand. According to the Energy Information Administration, No. 2 Heating Oil spot prices on August 25 were 24% higher than the July average.

Forecasted fuel index	123.4
Increase from previous quarter forecast	25.0%
Increase from previous quarter actual	14.0%

## Materials & Supplies

### Fourth Quarter 2000

The materials and supplies index for fourth quarter 2000 is 1.7 percent higher than the previous quarter.

2000Q4 Materials & Supplies Index = 150.1

2000Q3 Materials & Supplies Index = 147.6

Difference	2.5 basis points
	or
	1.7 %



## Equipment Rents Fourth Quarter 2000

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 the Car Hire Rate Master File (CHARM). First, an average rate per car is developed. Second, those average rates are grouped into car type categories to create an overall summary of car hire rates. Car hire rates for the forecast quarter are estimated based on data for the most recent month available. 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 forecast of the PPI-LF is discussed in Appendix G.

### Equipment Rent Index Calculation

The table below calculates the Equipment Rent Index.

	1999 Weight	2000Q3	2000Q4	Percent Change
Car Hire	52.5%	178.0	177.5	-0.3 %
Lease Rentals	47.5%	161.3	160.3	-0.6
Weighted Average		170.1	169.3	-0.5
Weighted Average (Linked)		175.0	174.2	-0.5

The Car Hire forecast uses the latest CHARM File rates. 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.

The Lease Rental forecast uses the AAR PPI-LF forecast for that quarter.

## Depreciation Fourth Quarter 2000

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.

Forecasted depreciation index (1982=100)	135.9
Forecasted depreciation index (1980=100)	150.3
Increase from previous quarter forecast	0.1%
Increase from actual first month of previous quarter	0.0%
Increase from same quarter of prior year	0.5%

## Depreciation Fourth Quarter 2000

### PPI RAIL EQUIPMENT

Forecast Model for PPIRE

Recommended model: Exponential Smoothing, no trend, no seasonality

<u>Component</u>	<u>Smoothing Weight</u>	<u>Final Value</u>
Level	0.80937	135.87

#### Within-Sample Statistics

Sample size 72	Number of parameters 1
Mean 135	Standard deviation 2.099
R-square 0.6461	Adjusted R-square 0.6461
Durbin-Watson 1.87	Ljung-Box(18)=16.35 P=0.4316
Forecast error 1.248	BIC 1.277
MAPE 0.004405	RMSE 1.24
MAD 0.5972	Forecast Report

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

<u>Date</u>	<u>Actual</u>
2000-02	135.300
2000-03	135.600
2000-04	135.800
2000-05	135.800
2000-06	135.700
2000-07	135.900

#### *Forecasted Values*

<u>Date</u>	<u>2.5 Lower</u>	<u>Forecast</u>	<u>97.5 Upper</u>
2000-08	133.362	135.865	138.368
2000-09	132.645	135.865	139.085
2000-10	132.061	135.865	139.670
2000-11	131.555	135.865	140.175
2000-12	131.103	135.865	140.628
<b>QTR AVG</b>	<b>131.573</b>	<b>135.865</b>	<b>140.158</b>
2001-01	130.690	135.865	141.041
2001-02	130.307	135.865	141.423
2001-03	129.950	135.865	141.781

## Interest Fourth Quarter 2000

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 Obligations - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

1999 Interest Rate	7.45%
1980 Interest Rate	7.85%
<b>2000Q4 Interest Index</b>	<b>94.9</b>
2000Q3 Interest Index	98.0
Percent Change	-3.2%

## Other Expenses

### Fourth Quarter 2000

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. 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 0.6 percent below the previous quarter forecast. This decrease was triggered by the monthly PPI-LF data from the last 4 months, which has been increasing at a lower rate than the months prior to April.

Forecasted Other Expense (1982=100)	143.0
Forecasted Other Expense (1980=100)	160.3
Increase from previous quarter forecast	-0.6%
Increase from actual first month of previous quarter	0.2%
Increase from same quarter of prior year	1.5%

## Other Expenses Fourth Quarter 2000

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

Forecast Model for PPILF  
 Multiplicative Winters: Linear trend, Multiplicative seasonality  
 Confidence limits proportional to indexes

<u>Component</u>	<u>Smoothing Weight</u>	<u>Final Value</u>
Level	0.82483	142.67
Trend	0.69776	0.069091
Seasonal	0.37021	

#### Seasonal Indexes

January - March	0.99996	0.99985	0.99960
April - June	0.99960	0.99986	0.99998
July - September	1.00021	1.00035	0.99957
October - December	1.00113	1.00018	0.99971

#### Within-Sample Statistics

Sample size 72	Number of parameters 3
Mean 139	Standard deviation 1.746
R-square 0.9814	Adjusted R-square 0.9809
Durbin-Watson 1.779	* Ljung-Box(18)=30.41 P=0.9663
Forecast error 0.2416	BIC 0.2586
MAPE 0.00126	RMSE 0.2365
MAD 0.1745	Forecast Report

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

<u>Date</u>	<u>Actual</u>
2000-02	141.800
2000-03	142.100
2000-04	142.400
2000-05	142.500
2000-06	142.600
2000-07	142.700

#### *Forecasted Values*

<u>Date</u>	<u>2.5 Lower</u>	<u>Forecast</u>	<u>97.5 Upper</u>
2000-08	142.287	142.794	143.301
2000-09	141.879	142.751	143.623
2000-10	141.919	143.043	144.168
2000-11	141.647	142.977	144.307
2000-12	141.470	142.978	144.485
<b>QTR AVG</b>	<b>141.679</b>	<b>142.999</b>	<b>144.320</b>
2001-01	141.417	143.083	144.749
2001-02	141.325	143.136	144.948
2001-03	141.224	143.169	145.114