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SURFACE TRANSPORTATION BOARD

STB Ex Parte No. 558 (Sub-No. 2)

RAILROAD COST OF CAPITAL — 1998

Decided: May 6, 1999

Upon review of the evidence tendered in this proceeding, the Board finds that in 1998, the railroad industry had a composite after-tax cost of capital of 10.7%, based on: (1) a current cost of debt of 6.64%; (2) a current cost of common equity capital of 13.11%; (3) a cost of preferred equity capital of 6.19%; and (4) a capital structure mix of 36.01% debt, 62.64% common equity, and 1.35% preferred equity capital.

BY THE BOARD:

One of the Surface Transportation Board's regulatory responsibilities is the annual determination of the railroad industry's cost of capital. This determination is one component used in evaluating the adequacy of railroad revenues each year under the procedures and standards mandated by Congress in the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act) and promulgated in *Standards for Railroad Revenue Adequacy*, 364 I.C.C. 803 (1981), revised, 3 I.C.C.2d 261 (1986). This finding may also be used in other regulatory proceedings, including, but not necessarily limited to, those involving the prescription of maximum reasonable rate levels, the proposed abandonments of rail lines, and the setting of compensation for disputed trackage rights fees.

The most recent determination of the railroad industry's cost of capital was for the year 1997, in *Railroad Cost of Capital - 1997*, STB Ex Parte No. 558 (Sub-No. 1) (STB served July 16, 1998) (*Cost 97*). The instant proceeding, instituted in *Railroad Cost of Capital — 1998*, STB Ex Parte No. 558 (Sub-No. 2) (STB served Dec. 29, 1998), updates the railroad industry's cost of capital for the year 1998.

The only party to provide evidence in this proceeding was the Association of American Railroads (AAR). The AAR concluded that the composite after-tax cost of capital for the railroad industry for 1998 was 10.7%, significantly lower than the 1997 cost of capital rate of 11.8%.

Consistent with previous cost of capital proceedings, the AAR determined the overall railroad industry cost of capital rate using a "composite railroad" comprised of Class I carriers controlled by selected major railroad holding companies. The selection of these companies is based

on criteria developed in *Railroad Cost of Capital — 1984*, 1 I.C.C.2d 989 (1985).<sup>1</sup> The following companies which met these criteria are included: Burlington Northern Santa Fe Corporation (BNSF), CSX Corporation (CSX), Kansas City Southern Corporation (KCS), Norfolk Southern Corporation (NSC), and the Union Pacific Corporation (UPC).<sup>2</sup>

As discussed below, we have examined the procedures used by the AAR to determine the following for 1998: (1) the railroad industry's current cost of debt capital; (2) its cost of common equity capital; (3) its cost of preferred equity capital; (4) its capital structure mix; and (5) the composite after-tax railroad industry cost of capital.

### DEBT CAPITAL

The AAR developed its 1998 current cost of debt using bond price data from Standard & Poor's Corporation *Bond Guide*. The AAR's cost of debt is based on the market value yields of the major forms of long-term debt instruments for the sample railroad holding companies listed above. These debt instruments include: (1) bonds, notes, and debentures (bonds); (2) equipment trust certificates (ETCs); and (3) conditional sales agreements (CSAs). The yields of these debt instruments are weighted based on their market values.

#### *Cost of Bonds, Notes, and Debentures (Bonds)*

The AAR used data contained in Standard & Poor's *Bond Guide* for the current cost of bonds, based on monthly prices and yields during 1998, for all issues (a total of 73) that were publicly traded during the year. To determine the current (1998) market value of bonds, the AAR

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<sup>1</sup> These criteria are as follows: (1) the company is listed on either the New York or American Stock Exchange; (2) the company paid dividends throughout the year; (3) the company's rail assets are greater than 50% of its total assets; and (4) the company has a debt rating of at least BBB (Standard & Poor's) and Baa (Moody's).

<sup>2</sup> With the exception of the omission this year of Illinois Central Corporation (Illinois Central), these are the same companies used in *Cost 97*. Illinois Central's stock was purchased by Canadian National (not a study frame carrier because it is a Canadian Corporation) during 1998. Illinois Central, therefore, did not have stock traded throughout the year. Because Illinois Central did not meet the criteria for inclusion in the study frame, its stock prices, dividends, and growth prior to its stock being acquired by Canadian National are not included in the determination of the cost of equity. In addition, the debt of Conrail has been included as if Conrail were a distinct entity. Conrail has no equity since it has been acquired jointly by CSX and Norfolk Southern. But Conrail's debt cannot readily be allocated between those two companies, even though they are responsible for payment in the event that Conrail cannot do so. Because CSX and NSC are study carriers, the Conrail debt, for which they are responsible, has been included.

used these 73 traded bonds and 82 additional bonds that were outstanding but not traded during 1998. Continuing the procedure in effect since 1988, the AAR based the market value on monthly prices for all traded bonds and the face or par value (\$1,000) for all bonds not traded during the year. The AAR computed the total market value of all outstanding bonds to be \$22,052.2 million. Based on the yields for the traded bonds, the AAR calculated the weighted average 1998 yield for all bond, notes, and debentures to be 6.50%.

We have examined the AAR's data and made one minor adjustment to its figures, resulting from the AAR transposing a number in one CSX bond. Our revised market value of all outstanding bonds is \$22,051.81 million and the weighted average yield remains at 6.5%.

#### *Cost of Equipment Trust Certificates (ETCs)*

ETCs are not actively traded on secondary markets. Therefore, their costs must be estimated by comparing them to the yields of other debt securities that are actively traded. Following the practice in previous cost of capital proceedings, the AAR used government securities with maturities similar to these ETCs as surrogates for determining yields. After determining the 1998 yields for these government securities, the AAR added basis points<sup>3</sup> to these yields to compensate for the additional risks associated with the ETCs.

Two new ETCs were issued during 1998, by CSX and NSC. There were 66 ETCs issued prior to 1998 that were outstanding during the year. All of these ETCs were rated "A" by Standard and Poor's.<sup>4</sup> The AAR used the two new ETCs to develop the ETC yield spread for all of the "A" rated ETCs.<sup>5</sup> Using the yield spreads, the AAR calculated the weighted average cost of ETCs to be 6.15% and their market value to be \$1,999 million for 1998.<sup>6</sup>

We have analyzed the ETC cost and market value evidence supplied by the AAR and find it to be acceptable. A summary of the ETC computations is shown in Table 3 in the Appendix.

#### *Cost of Conditional Sales Agreements (CSAs)*

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<sup>3</sup> A basis point equals 1/100th of a percentage point.

<sup>4</sup> All ETC's were also rated "A" in 1997.

<sup>5</sup> The AAR determined that 84 basis points should be added to government bond yields for ETCs rated A, based on the two new ETCs issued by CSX and NSC.

<sup>6</sup> The AAR has approximated the market values of ETCs using the same procedures used in previous cost of capital determinations. These procedures are based on the use of standard security industry formulas found in *Standard Security Calculation Methods*.

CSAs represent a small fraction (less than 1%) of total railroad debt. The cost of CSAs, however, can be estimated. The AAR used the 1997 yield spread between CSAs and ETCs of 32 basis points to develop the cost of CSAs.<sup>7</sup> Using this yield spread, and adding the 84 basis points for ETCs discussed above, the AAR determined the weighted average cost of CSAs for 1998 to be 6.51%. The AAR determined the market value for CSAs to be \$287.0 million.<sup>8</sup> We have examined the cost and market value of the CSAs using the AAR's data, and we agree with the AAR's calculations. The results of our computations are shown in Table 4 in the Appendix.

#### *Miscellaneous Debt and Capitalized Leases*

As in previous cost of capital determinations, the AAR excluded the costs of capitalized leases and miscellaneous debt in its computation of the overall current cost of debt because these costs are not directly observable in the open market. Also in keeping with past practice, the AAR included the book value of leases and commercial paper in the overall market value of debt, which is used to determine the railroads' capital structure mix. The AAR noted that the cost of capitalized leases is generally higher than that of other debt, but it did not make any upward correction for the cost of those leases. The AAR determined that the market value for the capitalized leases and miscellaneous debt was \$7,174.5 million for 1998. We have examined the AAR's work papers and other evidence and have adjusted the figure to \$7,177.7 million.<sup>9</sup> Table 5 in the appendix shows our recalculations for capitalized leases and miscellaneous debt.

The AAR determined that the total market value for all debt during 1998 was \$31,512.7 million. Due to the various adjustments discussed above, we have recomputed the total market value for all railroad debt in 1998 to be \$31,515.46 million.<sup>10</sup>

#### *Flotation Costs of Debt*

As in past cost of capital decisions, the AAR's calculation of the current cost of debt included a flotation cost factor consisting of costs associated with the issuance of new debt such as

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<sup>7</sup> This yield spread was developed in the 1997 cost of capital determination based on the yield spread for a new CSA issued during that year. No new CSAs were issued during 1998.

<sup>8</sup> The AAR approximated the market values of CSAs using the same procedures used in previous cost of capital determinations. These procedures are based on the use of standard security industry formulas found in *Standard Security Calculation Methods*.

<sup>9</sup> Our adjustment is based on an examination of the AAR's work papers. The amount of the adjustment (\$3.2 million out of a total of over \$7 billion) is minor.

<sup>10</sup> See Table 6 in the Appendix for a complete breakdown of the market value of debt.

underwriters' fees, advertising costs, and legal fees. The AAR determined that flotation costs for debt equaled 0.158%. We have reviewed the AAR's calculations concerning flotation costs and find that the cost factors developed for the various components of debt are reasonable.<sup>11</sup>

*Overall Current Cost of Debt*

The AAR concluded that the railroads' current cost of debt for 1998 was 6.64%. We have reviewed the AAR's evidence relative to the current cost of debt and concur with that figure.<sup>12</sup> Our calculations are shown in Table 8 in the Appendix.

COMMON EQUITY CAPITAL

In previous cost of capital decisions, we have determined the cost of common equity using the Discounted Cash Flow (DCF) method. The AAR submitted evidence as to the current cost of equity capital using this procedure. This evidence is virtually identical to that furnished by the AAR in previous cost of capital proceedings.

*Market Value of Common Equity*

The AAR calculated the 1998 market value of common equity by multiplying the number of shares outstanding by the daily closing price for each trading day during the year for each of the sample railroad holding companies. The AAR determined that the average market value for the year 1998 was \$54,802.7 million. We have reviewed the AAR's calculations and have determined that they correctly calculate the average market value of common equity. Table 9 in the Appendix shows our calculations of the average market value of common equity and relative weights for each railroad.

*Discounted Cash Flow (DCF) Method*

The DCF method of determining the cost of common equity is used by the majority of state regulatory agencies and has been used by the Interstate Commerce Commission (ICC) and the Board for many years. Under the DCF method, the cost of common equity is the discount rate that makes the present value of expected returns from holding a stock (dividends and price appreciation)

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<sup>11</sup> See Table 7 in the Appendix for these calculations. The AAR's flotation cost factors are based on data developed by Salomon Brothers for ETCs and studies by the Securities and Exchange Commission concerning flotation costs for issuances of new bonds. The estimated flotation cost for CSAs is the same as that used in prior proceedings.

<sup>12</sup> This is significantly lower than the 1997 cost of debt (7.22%).

equal to the current market value of that stock. The DCF method considers two variables — dividend yield and expected growth in earnings per share.<sup>13</sup>

#### *Dividend Yield*

The AAR computed the 1998 average dividend yield for the composite group of railroads using the same method that it employed in past cost of capital determinations, *i.e.*, weighting each company's monthly dividend yield on the basis of its prorated share of the total market value for the composite for each day during that month based on daily closing prices. The AAR developed a composite dividend yield of 1.83% for 1998. We have determined that this number was correctly computed. This figure is 0.28 of a percentage point lower than the 1997 dividend yield (2.11%). Calculations of the dividend yield are shown in Table 10 in the Appendix.

#### *Growth Rate*

The AAR used the earnings per share growth rate forecasts published monthly by the Institutional Brokers Estimate System (IBES) throughout 1998.<sup>14</sup> The AAR developed growth rates for each of the railroad holding companies that make up the composite by averaging the IBES forecasts for that company. It then weighted each company's growth rate according to its prorated

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<sup>13</sup> In *Railroad Cost of Capital - 1982*, 367 I.C.C. 662 (1983) (*Cost 82*), the ICC developed the following DCF formula:

$$K = [D_{(0)} \times (1 + g/2)/P_{(0)}] + g, \text{ where:}$$

- K = cost of common equity
- $D_{(0)}$  = annual dividend
- $P_{(0)}$  = current stock price
- g = expected growth rate

This formula assumes that, at the start of the year, an investor would require a return on equity (K) equal to  $[D_{(0)}/P_{(0)}] + g$ , where  $D_{(0)}/P_{(0)}$  represents the average dividend yield expected for the year and g represents an estimate of the expected growth rate. At the end of the year, the investor would be concerned with projected returns for the following year and would require a K equal to  $[D_{(0)} \times (1+g)/P_{(0)}] + g$ , which would allow for dividend growth for the following year. The average of these two formulas produces this DCF formula.

<sup>14</sup> As has been the case since the findings in *Railroad Cost of Capital - 1987*, 4 I.C.C.2d 621 (1988), we have relied on the use of consensus analyst 5-year earnings per-share growth rate data published by IBES to develop the growth rate estimates used in the DCF approach. IBES data include growth rate estimates from essentially all major brokerage firms.

share of the market value of the total railroad composite to arrive at a single projected growth rate. The AAR concluded that this composite growth rate was 11.18%, based on a truncated average of the forecasts.<sup>15</sup> Our calculations agree with those made by the AAR. The 11.18% growth rate is 0.35 of a percentage point lower than the 11.53% growth rate developed in the 1997 cost of capital decision. The growth rate calculations are shown in Tables 11 (truncated) and 12 (nontruncated) of the Appendix.

#### *Flotation Costs*

As with the issuance of new debt instruments, flotation costs are also incurred with the issuance of new equity securities. In *Adequacy of Railroad Revenue (1979 Determination)*, 363 I.C.C. 344, 352 (1979), the ICC concluded that flotation costs for equity capital should not be considered unless new equity had, in fact, been issued. This conclusion has been reaffirmed in subsequent cost of capital decisions. Because no railroad issued any new common equity capital during 1998, no flotation cost factor has been included in the DCF formula.

#### *Conclusion - Cost of Common Equity Capital*

Using a truncated average IBES growth rate (g) forecast of 11.18%, a dividend yield ( $D_{(O)}/P_{(O)}$ ) of 1.83%, and the Board's DCF formula, the AAR determined the cost of common equity for 1998 to be 13.11%. We have computed the same figure. This figure is 0.65 of a percentage point lower than the cost of common equity for 1997 (13.76%).<sup>16</sup>

### PREFERRED EQUITY

Preferred equity has some of the characteristics of debt and some of the characteristics of equity. Essentially, preferred issues are like common stocks in that they have no maturity dates and represent ownership in the company (usually with no voting rights attached). They are like debt in that they usually have fixed dividend payments (akin to interest payments).

The AAR examined the three preferred stock issues of the sample railroad holding companies,<sup>17</sup> and determined their cost using the dividend yield method (dividends divided by market price). The AAR computed the market value of preferred stock by multiplying the average

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<sup>15</sup> IBES provides a simple average, the highest forecast, and the lowest forecast for each railroad. The AAR excluded the highest and lowest forecasts to arrive at the truncated average. This is the same procedure that has been followed in previous cost of capital determinations.

<sup>16</sup> See Table 13 in the Appendix for our calculation of the cost of equity.

<sup>17</sup> The three railroad holding companies with preferred stock are KCS, NSC, and UPC. UPC issued its preferred stock on April 1, 1998. The other two issues existed prior to 1998.

quarterly price for each issue by the number of shares outstanding during the quarter. This is the same procedure used in previous cost-of-capital determinations. The AAR computed the market value and current cost of preferred equity during 1998 to be \$1,178.3 million. This is significantly higher than the \$43 million figure for 1997, due to the new UPC issue. The AAR computed the cost of preferred equity to be 6.19%, slightly higher than the 6.12% figure for 1997.

We have examined the AAR's evidence and have determined that its figures are correct. Table 14 in the Appendix contains the calculations of the cost of preferred equity.

### CAPITAL STRUCTURE MIX

Our computations of market values and the capital structure mix for 1998 are shown in Table 15 in the Appendix. We have determined that the market value of bonds, preferred stock, and common equity for 1998 was \$87,514.445 million. The percentage share of common equity declined from 70.28% in 1997 to 62.64% in 1998. The percentage share of debt increased from 29.67% in 1997 to 36.01% in 1998. The percentage share of preferred equity increased from 0.05% in 1997 to 1.35% in 1998.

### COMPOSITE COST OF CAPITAL

Based on the evidence furnished in the record, and our adjustments to that evidence discussed above, we conclude that the 1998 composite after-tax cost of capital for the railroad industry, as set forth in Table 16 in the Appendix, was 10.7%. The procedure used by the AAR to develop the composite cost of capital is consistent with the Statement of Principle established by the Railroad Accounting Principles Board: "Cost of capital shall be a weighted average computed using proportions of debt and equity as determined by their market values and current market rates."<sup>18</sup> The 1998 cost of capital is 1.1 percentage points lower than the 1997 cost of capital (11.8%).

### CONCLUSIONS

*We find that for 1998:*

1. The current cost of railroad debt equals 6.64%.
2. The cost of common equity equals 13.11%.
3. The cost of preferred equity equals 6.19%.
4. The capital structure mix of the railroads equals 36.01% debt, 62.64% common equity, and 1.35% preferred equity.
5. The composite railroad industry cost of capital equals 10.7%.

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<sup>18</sup> Railroad Accounting Principles Board *Final Report*, Vol. 1, (1987).

#### Environmental and Energy Considerations

We conclude that this action will not significantly affect either the quality of the human environment or the conservation of energy resources.

#### Regulatory Flexibility Analysis

Pursuant to 5 U.S.C. 605(b), we conclude that our action in this proceeding will not have a significant economic impact on a substantial number of small entities. The purpose and effect of the action are merely to update the annual railroad industry cost of capital finding. No new reporting or other regulatory requirements are imposed, directly or indirectly, on small entities.

*It is Ordered:*

1. This decision is effective on May 17, 1999.
2. This proceeding is discontinued.

By the Board, Chairman Morgan, Vice Chairman Clyburn, and Commissioner Burkes.

Vernon A. Williams  
Secretary

**APPENDIX****Table 1**  
**1998 Traded & Untraded Bonds / Market Value By Company**

<b>Railroad</b>	<b>When Issued</b>	<b>Number</b>	<b>Market Value (\$ in Millions)</b>	<b>% Market Value to All Bonds</b>
BNSF	Traded	24	\$3,164,253	88.70%
	Untraded	15	402,992	11.30%
	Total	39	3,567,245	
Conrail <sup>1</sup>	Traded	3	1,276,515	97.06%
	Untraded	4	38,717	2.94%
	Total	7	1,315,232	
CSX <sup>1</sup>	Traded <sup>2</sup>	7	1,180,732	24.85%
	Untraded	27	3,571,195	75.15%
	Total	34	4,751,927	
KCS	Traded	4	421,385	53.95%
	Untraded	4	359,643	46.05%
	Total	8	781,028	
NSC <sup>1</sup>	Traded	15	5,484,241	98.76%
	Untraded	2	69,061	1.24%
	Total	17	5,553,302	
UPC	Traded	20	4,071,638	66.93%
	Untraded	30	2,011,436	33.07%
	Total	50	6,083,074	
<b>COMPOSITE</b>	Traded	73	15,598,764	70.74%
	Untraded	82	6,453,044	29.26%
	Total	155	22,051,808	

<sup>1</sup> Although Conrail is no longer a study frame carrier, due to its acquisition by CSX and NS, it still has outstanding debt obligations which are being assumed by CSX and NSC but which are shown separately since these obligations are being jointly acquired and are not severable between CSX and NS.

<sup>2</sup> The AAR transposed the average price for one CSX traded bond, resulting in a slight difference in its figures. The AAR's traded total is shown as \$1,181,110 thousand. This also makes a slight difference to CSX's total, with the AAR showing \$4,752,305 thousand.

**Table 2**  
**Calculation of 1998 Value and Cost of Bonds, Notes, & Debentures**

Railroad	Number of Traded Issues	Market Value Traded Issues (\$Millions)	Current Cost	Weighted Cost
BNSF	24	\$3,164.25	6.55%	1.33%
Conrail	3	1,276.52	6.68%	0.55%
CSX	7	1,180.73	6.40%	0.48%
KCS	4	421.39	6.72%	0.18%
NSC	15	5,484.24	6.35%	2.23%
UPC	20	4,071.64	6.62%	1.73%
<b>Composite</b>	<b>73</b>	<b>\$15,598.77</b>		<b>6.50%</b>

**Table 3**  
**Calculation of 1998 Value and Cost of Equipment Trust Certificates**

Railroad	No. of Issues	Market Value (\$000)	Yield %	Weighted \$ Yield (\$000)
BNSF	12	\$384,003	6.182%	\$23,739.1
Conrail	4	164,531	6.192%	10,187.8
CSX	19	606,877	6.215%	37,717.4
KCS	4	86,809	6.112%	5,305.8
NSC	19	382,253	5.976%	22,843.4
UPC	10	374,485	6.174%	23,120.7
<b>Composite</b>	<b>68</b>	<b>\$1,998,958</b>	<b>6.149%</b>	<b>\$122,914.1</b>

**Table 4**  
**Calculation of 1998 Value and Cost of Conditional Sales Agreements**

Railroad	Number of Issues	Market Value (\$000)	Current Cost	Weighted Cost
CSX	3	\$165,555	6.57%	3.79%
UPC	6	121,483	6.43%	2.72%
<b>Composite</b>	<b>9</b>	<b>\$287,038</b>		<b>6.51%</b>

**Table 5**  
**Calculation of 1998 Value of Capitalized Leases & Miscellaneous Debt**

<b>Railroad</b>	<b>Capitalized Leases (\$000)</b>	<b>Miscellaneous Debt (\$000)</b>	<b>Total Other Debt (\$000)</b>
BNSF	\$817,829	\$647,971	\$1,465,800
Conrail	391,000	95,888	486,888
CSX	109,268	1,057,913	1,167,181
KCS	4,366	19	4,385
NSC	307,465	1,889,410	2,196,875
UPC	1,428,672	427,855	1,856,527
<b>Composite</b>	<b>\$3,058,600</b>	<b>\$4,119,056</b>	<b>\$7,177,656</b>

**Table 6**  
Calculation of 1998 Market Value of Debt

<b>Type of Debt</b>	<b>Market Value of Debt (000)</b>	<b>Percentage of Total Market Value (Excluding Miscellaneous Debt)</b>
Bonds, Notes, & Debentures	\$22,051,808.0	90.61%
ETCs	1,998,958.0	8.21%
CSAs	287,038.0	1.18%
Subtotal	24,337,804	100.00%
Capitalized Leases/Miscellaneous Debt	7,177,656	NA
<b>Total Market Value of Debt</b>	<b>\$31,515,460.0</b>	<b>NA</b>

**Table 7**  
Calculation of 1998 Flotation Cost For Debt

<b>Type of Debt</b>	<b>Market Weight (Excludes Miscellaneous Debt)</b>	<b>Flotation Cost</b>	<b>Weighted Average Flotation Cost</b>
Bonds, Notes, & Debentures	90.61%	.16%	0.145%
ETCs	8.21%	.13%	0.011%
CSAs	1.18%	.13%	0.002%
<b>Total</b>	<b>100.00%</b>		<b>0.158%</b>

**Table 8**  
Calculation of 1998 Cost of Debt

Type of Debt	Percentage of Total Market Value (Excludes Miscellaneous Debt)	Debt Cost	Weighted Debt Cost (Excluding Miscellaneous Debt)
Bonds, Notes, & Debentures	90.61%	6.50%	5.89%
ETCs	8.21%	6.15%	0.51%
CSAs	1.18%	6.51%	0.08%
Subtotal	100.00%	-	6.48%
Flotation Cost			.16%
<b>Weighted Average Cost of Debt</b>		-	<b>6.64%</b>

**Table 9**  
Calculation of 1998 Market Value and Weights of Common Equity

Railroad	Average Market Value (000)	Average Market Weight
BNSF	\$15,288,219.4	27.90%
CSX	10,748,924.3	19.61%
KCS	4,455,325.9	8.13%
NSC	12,122,348.6	22.12%
UPC	12,187,866.6	22.24%
<b>COMPOSITE</b>	<b>\$54,802,684.8</b>	<b>100.00%</b>

**Table 10**  
Calculation of 1998 Dividend Yields for Common Equity

Railroad	Average Weight In Composite	Dividend Yield	Weighted Dividend Yield
BNSF	27.90%	1.32%	0.37%
CSX	19.61%	2.48%	0.49%
KCS	8.13%	0.40%	0.03%
NSC	22.12%	2.51%	0.56%
UPC	22.24%	1.78%	0.40%
<b>COMPOSITE</b>	<b>100.00%</b>		<b>1.83%</b>

**Table 11**  
**Calculation of 1998 Truncated Growth Rates**

<b>Railroad</b>	<b>Average Weight In Composite</b>	<b>Truncated Average Growth Rate</b>	<b>Contribution To Truncated Average Growth Rate</b>
BNSF	27.90%	11.40%	3.18%
CSX	19.61%	10.77%	2.11%
KCS	8.13%	12.50%	1.02%
NSC	22.12%	10.30%	2.28%
UPC	22.24%	11.67%	2.60%
<b>COMPOSITE</b>	<b>100.00%</b>		<b>11.18%</b>

**Table 12**  
**Calculation of 1998 Nontruncated Growth Rates**

<b>Railroad</b>	<b>Average Weight In Composite</b>	<b>Nontruncated Average Growth Rate</b>	<b>Contribution To Nontruncated Average</b>
BNSF	27.90%	11.34%	3.16%
CSX	19.61%	10.70%	2.10%
KCS	8.13%	13.14%	1.07%
NSC	22.12%	10.09%	2.23%
UPC	22.24%	11.54%	2.57%
<b>COMPOSITE</b>	<b>100.00%</b>		<b>11.13%</b>

**Table 13**  
**Computation of the 1998 Cost of Common Equity**

Dividend Yield	1.83%	
Dividend Yield Times 1+½ Growth Rate	1.83% times 1.0559	1.93%
Growth Rate		11.18%
Cost of Equity		13.11%

**Table 14**  
**Computation of 1998 Cost & Market Value of Preferred Stock**

<b>Railroad</b>	<b>Div \$</b>	<b>Value Per Share</b>	<b>Div. Yield</b>	<b>Shares (000)</b>	<b>Market Value (000)</b>	<b>Market Weight</b>	<b>Weighted Yield</b>
KCS	\$1.00	\$41.32	2.42%	242.17	10,006	0.8%	0.02%
NSC	2.60	47.06	5.52%	920.20	43,305	3.7%	0.20%
UPC <sup>1</sup>	3.125	50.00	6.25%	30,000	1,125,000	95.5%	5.97%
<b>COMPOSITE</b>					<b>\$1,178,311</b>	<b>100.0%</b>	<b>6.19%</b>

<sup>1</sup> UPC's preferred stock was issued April 1, 1998. Therefore, the market value was adjusted to reflect only a 9 month time frame.

**Table 15**  
**Computation of 1998 Capital Structure Mix**

<b>Type of Capital</b>	<b>Market Value (000)</b>	<b>Weight</b>
Debt	\$31,515,460.0	36.01%
Preferred Equity	1,178,300	1.35%
Common Equity	54,820,684.8	62.64%
<b>TOTAL</b>	<b>\$87,514,445</b>	<b>100.00%</b>

**Table 16**  
**1998 Cost of Capital Computation**

<b>Type of Capital</b>	<b>Cost (Rounded)</b>	<b>Weight</b>	<b>Weighted Average</b>
Long-Term Debt	6.64%	36.01%	2.391%
Preferred Equity	6.19%	1.35%	0.084%
Common Equity	13.11%	62.64%	8.21%
<b>COMPOSITE COST OF CAPITAL</b>		<b>100.0%</b>	<b>10.69%</b>