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SURFACE TRANSPORTATION BOARD

DECISION

STB Ex Parte No. 558 (Sub-No. 11)

RAILROAD COST OF CAPITAL — 2007

Decided: September 24, 2008

Upon review of the evidence tendered in this proceeding, the Board finds that, in 2007, the railroad industry had an after-tax cost of capital of 11.33%, based on: (1) a current cost of debt of 6.15%; (2) a current cost of common equity of 12.68%; and (3) a capital structure mix of 20.68% debt and 79.32% common equity.

**BY THE BOARD:**

One of the Board's regulatory responsibilities is to determine annually the railroad industry's cost of capital.<sup>1</sup> This determination is one component used in evaluating the adequacy of individual railroads' revenues each year pursuant to 49 U.S.C. 10704 (a)(2) and (3). See Standards for Railroad Revenue Adequacy, 364 I.C.C. 803 (1981), modified, 3 I.C.C.2d 261 (1986), aff'd sub nom. Consolidated Rail Corp. v. United States, 855 F.2d 78 (3d Cir. 1988). The cost-of-capital finding may also be used in other regulatory proceedings, including, but not limited to, those involving the prescription of maximum reasonable rate levels, the proposed abandonment of rail lines, and the setting of compensation for use of another carrier's line.

This proceeding was instituted in Railroad Cost of Capital – 2007, STB Ex Parte No. 558 (Sub- No. 11) (STB served Apr. 23, 2008), to update the railroad industry's cost of capital for 2007. We have received comments from the Association of American Railroads (AAR) that contain the information that is used in making the annual cost-of-capital determination established in Methodology to be Employed in Determining the Railroad Industry's Cost of Capital, STB Ex Parte No. 664 (STB served Jan. 17, 2008) (Cost of Capital Methodology), and applied most recently in Railroad Cost of Capital – 2006, STB Ex Parte No. 558 (Sub- No. 10) (STB served Apr. 15, 2008) (Cost of Capital 2006). Western Coal Traffic League (WCTL) and The People of the State of California

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<sup>1</sup> The railroad cost of capital determined here is an aggregate measure. It is not intended to measure the desirability of any individual capital investment project.

and The California Public Utilities Commission (CPUC) replied to AAR's submission. WCTL disagrees with AAR's beta calculation used in the Capital Asset Pricing Model and the calculation of flotation costs for debt. CPUC disputes the equity risk premium that the AAR has provided.

Consistent with previous cost-of-capital proceedings, AAR calculated the cost of capital for a "composite railroad" based on criteria developed in the Railroad Cost of Capital – 1984, 1 I.C.C.2d 989 (1985).<sup>2</sup> The following railroad holding companies meet these criteria: Burlington Northern Santa Fe Corporation (BNSF), CSX Corporation (CSX), Norfolk Southern Corporation (NSC), and Union Pacific Corporation (UPC).<sup>3</sup>

As discussed below, we have examined the procedures used by the AAR to calculate for 2007: (1) the railroad industry's cost-of-debt capital; (2) its cost of common equity capital; (3) its cost of preferred equity capital;<sup>4</sup> (4) its capital structure; and (5) the composite after-tax cost of capital. We estimate that the 2007 railroad cost of capital was 11.33%.

## DEBT CAPITAL

AAR developed its 2007 current cost of debt using bond price data from Standard & Poor's Corporation *Bond Guide* and a Standard & Poor's database for those bonds not traded. AAR's cost-of-debt figure 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)*

AAR used data contained in Standard & Poor's *Bond Guide* for the current cost of bonds, based on monthly prices and yields during 2007, for all issues (a total of 67) that were publicly traded during the year. To develop the current (in 2007) market value of bonds, AAR used these traded bonds and 49 additional bonds that were outstanding but not traded during 2007. Continuing the procedure in effect since 1988, 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. AAR computed the total market value of all outstanding bonds to be \$22.12 billion (\$17.51 billion traded, and \$4.61 billion non-

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<sup>2</sup> The composite railroad includes those Class I carriers that: (1) are listed on either the New York or American Stock Exchange; (2) paid dividends throughout the year; (3) had rail assets greater than 50% of their total assets; and (4) had a debt rating of at least BBB (Standard & Poor's) and BAA (Moody's).

<sup>3</sup> These are the same companies used in Cost of Capital 2006.

<sup>4</sup> There was no preferred stock outstanding in the year 2007.

traded). Based on the yields for the traded bonds, AAR calculated the weighted average 2007 yield for all bonds to be 6.018% (rounded to 6.02%). We have examined AAR's bond price and yield data and have determined that AAR's computations are correct. Our calculations and data for all bonds are shown in **Tables 1** and **2** of the Appendix.

#### *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, AAR used government securities with maturities similar to these ETCs as surrogates for developing yields. After calculating the 2007 yields for these government securities, AAR added basis points<sup>5</sup> to these yields to compensate for the additional risks associated with the ETCs.

In 2007, a new ETC was issued by Union Pacific and its interest rate spread above government bonds was 125 basis points. Because it is a current measure of the current costs of ETCs, the 125 basis point spread is used here as the interest rate spread above government bonds. There were 24 ETCs issued prior to 2007 that were outstanding during the year. Using the yield spreads, AAR calculated the weighted average cost of ETCs to be 5.845% (rounded to 5.85%)<sup>6</sup> and their market value to be \$804.623 million for 2007.<sup>7</sup>

We have examined the cost and market value of the ETCs using AAR's data, and we agree with the AAR's calculation.<sup>8</sup> A summary of our ETC computations is shown in **Table 3** in the Appendix.

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

CSAs represent a small fraction (less than 1%) of total railroad debt, and only three CSAs (issued by CSX) were outstanding in 2007. The cost of CSAs can be estimated by adding an additional factor to the yield spread between government bonds and ETCs. AAR used the yield spread between CSAs and ETCs for 1997 (the last year when a new CSA was issued) of 32 basis points to develop the year 2007 yield spread between CSAs and government bonds. These 32 basis points are added to the 125 basis point spread between government bonds and ETC. As a result, AAR estimates that

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<sup>5</sup> A basis point equals 1/100th of a percentage point.

<sup>6</sup> This is lower than the 2006 figure of 6.01%.

<sup>7</sup> AAR has approximated the market values of ETCs using the same procedures used in previous cost-of-capital determinations.

<sup>8</sup> WCTL expressed concern that AAR did not include in its submissions detailed calculations of its ETC market valuations, but did not submit evidence regarding alternative valuations.

157 basis points must be added to government bond yields to develop the cost of CSAs. Using this yield spread, AAR calculated the weighted average cost of CSAs for 2007 to be 6.096% (rounded to 6.10%). AAR calculated the market value for CSAs to be \$63.4 million. We have examined the cost and market value of the CSAs using AAR's data, and agree with the AAR's calculations. **Table 4** in the Appendix shows the market value of all modeled CSAs to be \$63.4 million.

#### *Capitalized Leases and Miscellaneous Debt*

As in previous cost-of-capital determinations, 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, 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. AAR calculated that the market value for the capitalized leases and miscellaneous debt was \$2.858 billion for 2007.<sup>9</sup> We have examined the market value for capitalized leases and miscellaneous debt using the AAR's data, and we agree with the AAR's calculations. **Table 5** in the Appendix shows the calculations for capitalized leases and miscellaneous debt to be \$2.858 billion.

#### *Total Market Value of Debt*

AAR calculated that the total market value for all debt during 2007 was \$25.846 billion. **Table 6** in the Appendix shows a breakdown of the market value of debt.

#### *Flotation Costs of Debt*

As in past cost-of-capital decisions, AAR's current cost of debt included a flotation cost factor consisting of costs associated with the issuance of new debt such as underwriters' fees, advertising costs, and legal fees. AAR calculated that flotation costs for debt equaled 0.159% (rounded to 0.16%). Here, AAR calculated flotation costs in the same manner as it did in Cost of Capital 2006. The Board adopted this evidence in 2006, as it has routinely done in previous years. While the studies on which the flotation costs are derived date back to the 1950's, heretofore this evidence was the best evidence of record, and was unchallenged by any other party to these proceedings.

This year, WCTL argues that the flotation cost figure introduced by AAR is in error. WCTL argues that AAR implicitly assumes a 7.78% coupon rate for bonds and a 13.41% interest rate for Equipment Trust Certificates and Conditional Sales Agreements, when calculating the flotation costs. WCTL contends that utilizing the actual interest rates calculated by the AAR would cause the flotation costs to be reduced to 0.139% for

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<sup>9</sup> This consists of \$2.363 billion of capitalized leases and \$0.495 billion of miscellaneous debt.

bonds, notes, and debentures, and 0.091% for ETCs and CSAs. AAR rejects that assertion and points out that its methodology has been adopted by the Board.

There is a difference between a methodology which the Board has explicitly adopted in Cost of Capital Methodology (e.g., CAPM, the beta calculation, the risk premium) and evidence that is appropriately reviewed in the Ex Parte 558 annual cost of capital calculation proceeding. The calculation of flotation costs falls in the latter, not the former category. That the Board has routinely accepted the AAR's flotation cost calculations in the past does not imply that this figure has been adopted as a methodology by the Board.

Here, WCTL demonstrates that the key fact is not that the flotation costs are equivalent to a 0.16% increase in yield on a 20-year bond, but that flotation costs were estimated at 1.59 percent of the gross proceeds from the bond issuance. If we take this figure 1.59 percent to be the proper measure of flotation costs, then at currently prevailing interest rates, WCTL is correct in asserting the mark-up should instead be calculated as 0.14%. Using similar logic, WCTL suggests that the proper mark-up on ETC flotation costs should be 0.09% not 0.14% as suggested by the AAR.

We believe that WCTL is correct; the key figure here is not the effective mark-up as estimated in 1970, but the size of the flotation costs themselves. Therefore, we adopt WCTL's evidence here as the best evidence of record. However, the Board would welcome a better and more transparent calculation of flotation costs in future proceedings. **Table 7** in the Appendix shows these calculations.

#### *Overall Current Cost of Debt*

AAR concluded that the railroads' cost of debt for 2007 was 6.15%.<sup>10</sup> Our calculations are shown in **Table 8** in the Appendix.

### **COMMON EQUITY CAPITAL**

Under CAPM, the cost of equity is equal to  $RF + \beta \times RP$ , where RF is the risk-free rate, RP is the market-risk premium, and  $\beta$  (or beta) is the measure of systematic, non-diversifiable risk. In order to calculate RF, we asked the railroads to provide the average yield to maturity in 2007 for a 20-year U.S. Treasury Bond. Similarly, the railroads were asked to provide an estimate for RP based on returns experienced by the S&P 500 since 1926. Finally, we instructed parties to calculate beta using a portfolio of weekly, merger-adjusted railroad stock returns for the prior 5 years in the following equation:

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<sup>10</sup> This is slightly higher than the 2006 cost of debt (5.97%). As explained above, our measurement of the railroads' cost of debt entails the calculation of a weighted average of the current yields of the various debt instruments issued by the four railroads in our sample.

$R - SRRF = \alpha + \beta(RM - SRRF) + \epsilon$ , where

- $\alpha$  = constant term;
- $R$  = merger-adjusted stock returns for the portfolio of railroads that meet the screening criteria set forth in *Railroad Cost of Capital – 1984*, 1 I.C.C.2d 989 (1985)
- $SRRF$  = the short-run risk-free rate, which we will proxy using the 3-month U. S. Treasury bond rate;
- $RM$  = return on the S&P 500; and
- $\epsilon$  = random error term.

*RF – The Risk Free Rate*

To establish the risk-free rate, AAR relies on the Federal Reserve web site to retrieve the average yield to maturity for a 20-year U.S. Treasury Bond. Using the average yield to maturity in 2007 for a 20-year U.S. Treasury Bond, as directed by the Board in Cost of Capital Methodology 2006, the CAPM risk free rate is 4.91%. We have examined the AAR's data and the Federal Reserve web site data and have determined that the AAR's computation is correct.

*RP – The Market-Risk Premium*

CPUC contends that we should have adopted a geometric mean rather than arithmetic mean in calculating the market-risk premium. The Board was aware of the differences between these approaches and was convinced by the evidence presented to us in Cost of Capital Methodology that the standard practice was to employ the arithmetic average. As standard practice evolves over time, we will review and revise our procedures, but at this time we see no need to revisit the conclusions we reached last year.

To establish the market-risk premium, AAR relies on the Morningstar/Ibbotson Equity Risk Premium, a well-regarded source. According to the AAR, page 72 of the 2008 Yearbook Valuation Edition published by Morningstar lists the Long Horizon Equity Risk Premium that is based on the Standard & Poor's 500 as 7.05%, which is used as the rate for the CAPM's market risk premium. We have examined the AAR's data and the 2008 Yearbook Valuation Edition and have determined that the AAR's computation is correct.

### *Calculating Beta*

According to AAR, its beta calculation is in accordance with Cost of Capital Methodology, which requires parties to calculate the CAPM's beta using a portfolio of weekly, merger-adjusted stock returns for the prior five years in the following equation:  $R - SRRF = \text{Alpha} + \text{Beta} (RM - SRRF) + E$ . Using the SAS General Linear Model procedure to calculate the regression, with composite railroad returns less the short-run risk-free rate as the dependent variable and the market returns less the short-run risk-free rate as the independent variable, and including an intercept, we estimate a beta of 1.1025.

We have examined the AAR's data and have determined that the weekly portfolio change and the weekly T-Bill rate were not calculated in accordance to Cost of Capital Methodology and Cost of Capital 2006. As stated in Cost of Capital 2006, beta is a measure of the sensitivity of an asset's returns to market returns – in other words, the non-diversifiable or systematic risk associated with a particular asset. That is, we find the best fit between the changes in a portfolio of railroad stocks and changes in the S&P 500 Index. The AAR has not done this, but instead has examined changes in the railroad industry's market capitalization as a whole. Applying the correct methodology to the beta calculation will produce a beta estimate of 1.1027.

We have also examined WCTL's submission and found that it departs from the methodology adopted in Cost of Capital Methodology. Rather than calculating beta over the previous 5-year period, 2003-2007, WCTL uses an altogether different approach to estimate beta. WCTL calculates a different 5-year average beta for *each week* in 2007 and then averages the 52 observations together. In so doing, WCTL continues to rely on 2002 data that ought to have been excluded from the calculation and does not give sufficient weight to the 2007 data. It is as if WCTL calculated its beta using the time period July 2002 through June 2007, rather than the period January 2003 through December 2007. Therefore, we reject WCTL's approach.

### *Cost of Common Equity Capital*

Having made small changes to AAR's submission with respect to the portfolio, we calculate the beta as 1.1027. This is only marginally different from AAR's estimate of 1.1025. We therefore calculate the cost of equity as  $RF + \beta \times RP$ , or  $4.91\% + (1.1027 \times 7.05\%)$ , which equals 12.68%. **Table 10** in the Appendix shows the calculations of the Cost of Common equity.

AAR calculated the 2007 market value of common equity for each railroad by calculating weekly market values for each railroad using data on shares outstanding from railroad 10-Q and 10-K reports multiplied by stock prices at the close of each week in 2006. AAR calculated the 52-week average market capitalization of the composite railroad to be \$99.108 billion. We have reviewed AAR's calculations and have determined that this number is incorrect. Our calculations based on shares outstanding provided by the AAR and from railroad 10-Q and 10-K reports, compute the average market capitalization of the composite railroad to be \$99.126 billion. **Table 11** in the

Appendix shows the calculations of the average market value of common equity and relative weights for each railroad.

### **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).

There were no preferred stock issues outstanding at the end of 2007.

### **CAPITAL STRUCTURE MIX**

Our computations of market values and the capital structure mix for 2007 are shown in **Table 12** in the Appendix. We have determined that the market value of bonds and common equity for 2007 was \$99.126 billion. The percentage share of common equity increased, from 76.95% in 2006 to 79.32% in 2007. The percentage share of debt decreased, from 23.05% in 2006 to 20.68% in 2007.

### **COMPOSITE COST OF CAPITAL**

Based on the evidence furnished in the record, and our adjustments to that evidence discussed above, we conclude that the 2007 composite after-tax cost of capital for the railroad industry, as set forth in **Table 13** in the Appendix, was 11.33%. The procedure used 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>11</sup> The 2007 cost of capital was 1.3 percentage points higher than the 2006 cost-of-capital (9.94%).

### **CONCLUSIONS**

We find that for 2007:

1. The current cost of railroad long-term debt was 6.15%.
2. The cost of common equity was 12.68%.
3. The capital structure mix of the railroads was 20.68% long-term debt and 79.32% common equity.

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<sup>11</sup> Railroad Accounting Principles Board *Final Report*, Vol. 1 (1987).

4. The composite railroad industry cost of capital was 11.33%.

*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 compute the annual railroad industry cost of capital. No new reporting or other regulatory requirements are imposed, directly or indirectly, on small entities.

It is ordered:

1. This decision is effective on September 26, 2008.
2. This proceeding is discontinued.

By the Board, Chairman Nottingham, Vice Chairman Mulvey, and Commissioner Buttrey.

Anne K. Quinlan  
Acting Secretary

## APPENDIX

**Table 1**  
**2007 Traded & Non-traded Bonds**

| <b>Railroad</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>Traded vs. Untraded</b> | <b>Number</b> | <b>Market Value (\$ in 000)</b> | <b>% Market Value To All Bonds</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------|---------------------------------|------------------------------------|
| BNSF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Traded <sup>1</sup>        | 27            | \$5,211,867                     | 84.14%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-traded <sup>2</sup>    | 10            | 982,713                         | 15.86%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total                      | 37            | 6,194,580                       |                                    |
| CSX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Traded <sup>3</sup>        | 11            | 3,091,099                       | 62.33%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-traded <sup>4</sup>    | 19            | 1,868,190                       | 37.67%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total                      | 30            | 4,959,289                       |                                    |
| NSC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Traded                     | 13            | 5,352,635                       | 88.70%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-traded                 | 5             | 681,644                         | 11.30%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total                      | 18            | 6,034,279                       |                                    |
| UPC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Traded <sup>5</sup>        | 16            | 3,849,503                       | 78.05%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-traded <sup>6</sup>    | 15            | 1,082,350                       | 21.95%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total                      | 31            | 4,931,853                       |                                    |
| <b>Composite</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Traded                     | 67            | \$17,505,104                    | 79.14%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-traded                 | 49            | 4,614,897                       | 20.86%                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Total                      | 116           | 22,120,001                      |                                    |
| <p><sup>1</sup> Includes 2 bonds issued during 2007, prorated based on date of issue. AAR incorrectly indicated BNSF notes MTN00015 and MTN00016 as new issues of debt. The correct new issues of debt are debenture DEB00015 and debenture DEB00016.</p> <p><sup>2</sup> Includes 3 bonds issued during 2007, prorated based on date of issue.</p> <p><sup>3</sup> Includes 2 bonds issued during 2007, prorated based on date of issue.</p> <p><sup>4</sup> Includes 3 bonds issued during 2007, prorated based on date of issue.</p> <p><sup>5</sup> Includes 2 bonds issued during 2007, prorated based on date of issue.</p> <p><sup>6</sup> Includes 2 bonds issued during 2007, prorated based on date of issue.</p> |                            |               |                                 |                                    |

**Table 2**  
**2007 Bonds, Notes, & Debentures**

| <b>Railroad</b>  | <b>Number of Traded Issues</b> | <b>Market Value Traded Issues (\$000)</b> | <b>Current Cost</b> | <b>Weighted Cost</b> |
|------------------|--------------------------------|-------------------------------------------|---------------------|----------------------|
| BNSF             | 27                             | \$5,211,867                               | 6.04%               | 1.80%                |
| CSX              | 11                             | 3,091,099                                 | 6.01%               | 1.06%                |
| NSC              | 13                             | 5,352,635                                 | 6.15%               | 1.88%                |
| UPC              | 16                             | 3,849,503                                 | 5.80%               | 1.28%                |
| <b>Composite</b> | <b>67</b>                      | <b>\$17,505,104</b>                       |                     | <b>6.02%</b>         |

**Table 3**  
**2007 Equipment Trust Certificates**

| <b>Railroad</b>  | <b>No. of Issues</b> | <b>Market Value (\$000)</b> | <b>Yield %</b> | <b>Weighted \$ Yield (\$000)</b> |
|------------------|----------------------|-----------------------------|----------------|----------------------------------|
| BNSF             | 8                    | \$262,421                   | 5.84%          | \$15,337                         |
| CSX              | 8                    | 221,209                     | 5.82%          | 12,874                           |
| NSC              | 4                    | 131,643                     | 5.81%          | 7,652                            |
| UPC              | 5 <sup>1</sup>       | 189,350                     | 5.90%          | 11,167                           |
| <b>Composite</b> | <b>25</b>            | <b>\$804,623</b>            | <b>5.85%</b>   | <b>\$47,030</b>                  |

<sup>1</sup> Includes 1 ETC issued in 2007, prorated based on date of issue.

**Table 4**  
**2007 Conditional Sales Agreements**

| <b>Railroad</b>  | <b>Number of Issues</b> | <b>Market Value (\$000)</b> | <b>Current Cost</b> | <b>Weighted Cost</b> |
|------------------|-------------------------|-----------------------------|---------------------|----------------------|
| CSX              | 2                       | \$63,389                    | 6.10%               | 6.10%                |
| <b>Composite</b> | <b>2</b>                | <b>\$63,389</b>             |                     | <b>6.10%</b>         |

**Table 5**  
**2007 Capitalized Leases & Miscellaneous Debt**

| <b>Railroad</b>                                                                           | <b>Capitalized Leases (\$000)</b> | <b>Miscellaneous Debt <sup>3</sup> (\$000)</b> | <b>Total Other Debt (\$000)</b> |
|-------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------|---------------------------------|
| BNSF                                                                                      | \$929,753                         | \$272,090                                      | \$1,201,843                     |
| CSX                                                                                       | 59,280                            | 170,846                                        | 230,126                         |
| NSC                                                                                       | 160,595                           | 125,472                                        | 286,067                         |
| UPC <sup>1</sup>                                                                          | 1,213,463                         | (73,029)                                       | 1,140,434                       |
| <b>Composite</b>                                                                          | <b>\$2,363,091</b>                | <b>\$495,379</b>                               | <b>\$2,858,470</b>              |
| <sup>1</sup> UPC has negative miscellaneous debt as a result of unamortized debt premium. |                                   |                                                |                                 |

**Table 6**  
**2007 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            | \$22,120,001                        | 96.22%                                                                 |
| ETCs                                  | 804,623                             | 3.50%                                                                  |
| CSAs                                  | 63,389                              | .28%                                                                   |
| Subtotal                              | \$22,988,013                        | 100.00%                                                                |
| Capitalized Leases/Miscellaneous Debt | 2,858,470                           | NA                                                                     |
| <b>Total Market Value of Debt</b>     | <b>\$25,846,483</b>                 | <b>NA</b>                                                              |

**Table 7**  
**2007 Flotation Cost for Debt**

| <b>Type of Debt</b>        | <b>Market Weight<br/>(Excludes<br/>Miscellaneous<br/>Debt)</b> | <b>Flotation<br/>Cost</b> | <b>Weighted<br/>Average<br/>Flotation Cost</b> |
|----------------------------|----------------------------------------------------------------|---------------------------|------------------------------------------------|
| Bonds, Notes, & Debentures | 96.22%                                                         | 0.14%                     | 0.135%                                         |
| ETCs                       | 3.50%                                                          | 0.09%                     | 0.003%                                         |
| CSAs                       | 0.28%                                                          | 0.09%                     | 0.0003%                                        |
| <b>Total</b>               | <b>100.00%</b>                                                 |                           | <b>0.14%</b>                                   |

**Table 8**  
**2007 Cost of debt**

| <b>Type of Debt</b>                      | <b>Percentage of<br/>Total Market<br/>Value<br/>(Excludes<br/>Miscellaneous<br/>Debt)</b> | <b>Debt<br/>Cost</b> | <b>Weighted<br/>Debt Cost<br/>(Excluding<br/>Miscellaneous<br/>Debt)</b> |
|------------------------------------------|-------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------|
| Bonds, Notes, & Debentures               | 96.22%                                                                                    | 6.02%                | 5.79%                                                                    |
| ETCs                                     | 3.50%                                                                                     | 5.85%                | 0.20%                                                                    |
| CSAs                                     | 0.28%                                                                                     | 6.10%                | 0.02%                                                                    |
| Subtotal                                 |                                                                                           |                      | 6.01%                                                                    |
| Flotation Cost                           |                                                                                           |                      | 0.14%                                                                    |
| <b>Weighted Average Cost of<br/>Debt</b> |                                                                                           |                      | <b>6.15%</b>                                                             |

**Table 9  
Summary Output**

| <b>Regression Statistics</b> |              | <b>Beta measured against S&amp;P 500 Price return Index, 2002-2006</b> |             |             |                |
|------------------------------|--------------|------------------------------------------------------------------------|-------------|-------------|----------------|
| Multiple R                   | 0.626030124  |                                                                        |             |             |                |
| R-Square                     | 0.391913716  |                                                                        |             |             |                |
| Adjusted-R Square            | 0.389556792  |                                                                        |             |             |                |
| Standard Error               | 0.022679413  |                                                                        |             |             |                |
| Observations                 | 260          |                                                                        |             |             |                |
| <b>ANOVA</b>                 |              |                                                                        |             |             |                |
|                              | df           | SS                                                                     | MS          | F           | Significance F |
| Regression                   | 1            | 0.085528053                                                            | 0.085528053 | 166.2818935 | 1.06677E-29    |
| Residual                     | 258          | 0.132703792                                                            | 0.00514356  |             |                |
| Total                        | 259          | 0.218231845                                                            |             |             |                |
|                              | Coefficients | Standard Error                                                         | T Stat      | P-Value     |                |
| Intercept                    | 0.00221899   | 0.001411859                                                            | 1.571679376 | 0.117250453 |                |
| X-Variable                   | 1.102686823  | 0.08551252                                                             | 12.89503367 | 1.06677E-29 |                |

**Table 10  
2007 Cost of Common Equity**

|                                 |                          |               |
|---------------------------------|--------------------------|---------------|
| Risk-Free Rate (RF)             | 4.91%                    |               |
| RF + Beta x Market Risk Premium | 4.91% + (1.1027 x 7.05%) | .1268         |
| <b>Cost of Equity</b>           |                          | <b>12.68%</b> |

**Table 11  
2007 Common Equity**

| <b>Railroad</b>  | <b>Average Market Value (\$000)</b> | <b>Average Market Weight</b> |
|------------------|-------------------------------------|------------------------------|
| BNSF             | \$29,833,050                        | 30.10%                       |
| CSX              | 18,407,069                          | 18.57%                       |
| NSC              | 20,465,627                          | 20.65%                       |
| UPC              | 30,420,445                          | 30.69%                       |
| <b>COMPOSITE</b> | <b>\$99,126,191</b>                 | <b>100.00%</b>               |

**Table 12**  
**2007 Capital Structure Mix**

| <b>Railroad</b>  | <b>Type of Capital</b> | <b>Market Value (\$000)</b> | <b>Weight</b> |
|------------------|------------------------|-----------------------------|---------------|
| BNSF             | Debt                   | \$7,658,844                 | 20.43%        |
|                  | Equity                 | 29,833,050                  | 79.57%        |
| CSX              | Debt                   | 5,474,013                   | 22.92%        |
|                  | Equity                 | 18,407,069                  | 77.08%        |
| NSC              | Debt                   | 6,451,989                   | 23.97%        |
|                  | Equity                 | 20,465,627                  | 76.03%        |
| UPC              | Debt                   | 6,261,637                   | 17.07%        |
|                  | Equity                 | 30,420,445                  | 82.93%        |
| Composite Weight | Debt                   | 25,846,483                  | 20.68%        |
|                  | Equity                 | 99,126,191                  | 79.32%        |
|                  | Total                  | 124,972,674                 | 100.0%        |

**Table 13**  
**2007 Cost-of-Capital Computation**

| <b>Type of Capital</b>           | <b>Cost</b> | <b>Weight</b>  | <b>Weighted Average</b> |
|----------------------------------|-------------|----------------|-------------------------|
| Long-Term Debt                   | 6.15%       | 20.68%         | 1.27%                   |
| Common Equity                    | 12.68%      | 79.32%         | 10.06%                  |
| <b>Composite Cost of Capital</b> |             | <b>100.00%</b> | <b>11.33%</b>           |