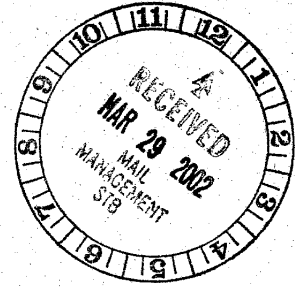


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**BEFORE THE
SURFACE TRANSPORTATION BOARD**



RAILROAD COST OF
CAPITAL--2001

EX PARTE NO. 558 (Sub- No. 5)

**COMMENTS OF THE
ASSOCIATION OF AMERICAN RAILROADS
AND ITS MEMBER RAILROADS**

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VERIFIED STATEMENTS

<u>TAB</u>	<u>WITNESS*</u>	<u>SUBJECT</u>
1	Craig F. Rockey	The railroads' cost of equity and overall cost of capital.
2	David F. Miller	Bond yields for 2001; yields on equipment trust certificates and conditional sales agreements; railroads' cost of debt and preferred stock; the market value capital structure.

*Verified statements are referenced in these comments by witness name -- viz., V.S. Rockey at

**BEFORE THE
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RAILROAD COST OF
CAPITAL--2001

EX PARTE NO. 558 (Sub- No. 5)

**COMMENTS OF THE
ASSOCIATION OF AMERICAN RAILROADS**

By order dated December 13, 2001 (served December 21) the STB initiated its annual proceeding to determine the railroads' cost of capital for the year 2001. That determination in turn, will enable the STB to make the statutorily required (49 U.S.C. section 107) annual individual railroad revenue adequacy determination for 2001. As noted in the December 12 decision, the cost of capital may also be used in various other STB railroad proceedings.

The railroads, through the Association of American Railroads (AAR) are submitting herewith their calculation of (1) the railroads' current 2001 cost of debt capital; (2) the railroads' 2001 current cost of preferred equity capital; (3) the railroads' 2001 cost of common equity capital and (4) the 2001 capital structure mix of the railroad industry on a market value basis.

AAR, through the attached verified statements of Craig F. Rockey, Vice President, Policy

and Economics Department of the Association of American Railroads, and David F. Miller, Director - Accounting and Finance, AAR Policy and Economics Department. These statements establish the following:

1. The 2001 cost of debt capital is 6.88 (VS. Miller pp. 2, 14; Rockey pp. 2, 17).
2. The 2001 cost of preferred equity capital is 6.26 (VS. Miller p.18; Rockey p. 2).
3. The 2001 cost of common equity capital is 12.80 (VS. Rockey pp. 2, 17).
4. The capital structure of the railroad industry is 41.06% debt, 2.25% preferred equity and 56.69% common equity. (VS. Miller p. 19; VS. Rockey p. 2). From these data Mr. Rockey concludes that the overall railroad industry cost of capital for 2001 is 10.22% (V. S. Rockey pp. 2, 17).

I. INTRODUCTION

The sole purpose of this proceeding is to determine the cost of capital for 2001. See 558 (3) Decision at 1. The Board's revenue adequacy standards are not at issue in this proceeding. In Ex Parte No. 393 (Sub-No. 1), the Board decided that the current cost of capital will continue to be the sole standard of revenue adequacy. The Board also decided that the cost of capital will be computed using the current cost of debt and market value weights.¹

II. THE COST OF EQUITY

The Discounted Cash Flow (DCF) methodology has been used in all previous cost of capital proceedings to determine the cost of equity. The validity of the DCF approach is recognized by nearly every rate of return analyst in the United States, and among federal and state regulatory

¹ Ex Parte No. 393 (Sub-No. 1), *Standards for Railroad Revenue Adequacy*, 3 I.C.C. 2d 261 (1986), *aff'd sub. nom., Consolidated Rail Corporation v. United States*, 855 F.2d 78 (CA3 1988).

agencies, the DCF model is the most widely used method for determining the cost of equity.² Mr. Rockey has established the DCF methodology in his calculation of the cost of common equity in this proceeding.

Under the DCF methodology, the cost of common equity is determined by adding together the dividend yield (the expected dividend for the next period divided by the common stock price) and the expected growth rate. The dividend yield is computed using publicly available data from the stock market. In all cost of capital proceedings since 1982, the Board has determined the expected growth rate by using a truncated average of published long-term earnings growth forecasts by a large number of security analysts to obtain an estimate of the investors' consensus of earnings growth expectations. The use of analysts' forecasts to estimate the composite growth rate is the most accurate approach available. As the Board has properly recognized, this part of the DCF formula measures investors' expectations, and a consensus of analysts' forecasts is the best evidence of those expectations. V.S. Rockey at pp. 9-13.

In cost of capital proceedings prior to Ex Parte No. 473, *Railroad Cost of Capital--1987*, 4 I.C.C. 2d 621 (1988), the expected growth rate has been calculated based on the consensus forecasts made by a group of prominent investment analysts who follow the rail industry. Commencing with Ex Parte No. 473, the Board has expressed a preference for use of consensus analyst five-year earnings per share growth rate forecasts published in Institutional Brokers Estimate

² V.S. Rockey at 8-9; National Association of Regulatory Utility Commissioners, *Utility Regulatory Policy in United States and Canada 1994-1995*, at pp. 520, 588, 615 (August 23, 1995).

System (IBES) reports.³ AAR has accordingly used IBES data in determining the expected growth rate in this proceeding. Rockey at p. 9-10.

Based on a four-railroad composite and the identical DCF procedures used in the last nine cost of capital proceedings, Mr. Rockey estimates that the cost of equity for 2001 is 12.80 percent. V.S. Rockey at pp. 15.

III. THE COST OF PREFERRED STOCK

Preferred stock is a hybrid security which has some characteristics of debt and some characteristics of equity. Its cost depends in large part on its specific features. David F. Miller, the AAR's Director - Accounting and Finance, has determined the cost of railroad preferred stock based on the methodology used by the Board in the last eleven proceedings. That methodology is based upon the following criteria:

- (a) Where the preferred is not convertible into common stock, and where the corporation is not required to redeem the preferred at specific times, the cost of preferred is equal to its current dividend yield.
- (b) Where the preferred is not convertible but is subject to mandatory redemption providing holders of the instrument with a premium, the cost is equal to the current dividend yield, plus the present value of the premium.

³ These reports are available from Lynch, Jones & Ryan, 325 Hudson Street, New York, N.Y. 10013.

- (c) Where the preferred is convertible at the option of the holder, and the market values of the preferred and common indicate that conversion is likely to occur or that the conversion right controls the price of the preferred, the preferred has the same cost as equity.

Based on these criteria, the railroads' 2001 cost of preferred stock is 6.26 percent. V.S. Miller at p.18.

IV. THE COST OF DEBT

To determine the cost of debt, Mr. Miller has computed the average current bond yield for all bonds of the sample railroads that were publicly traded in 2001 (comprising 73 bonds). This methodology is identical to that used in the last twelve cost of capital proceedings. *See Ex Parte No. 558 (Sub 4) Railroad Cost of Capital - 2000*, __ S.T.B. __ (Served June 12, 2001); *see also* V.S. Miller at 5-6. Under this approach, the bond yield is effectively based on a sample representing 78.3 percent of the total market value of the bonds issued by the railroads in the sample. As the Board has recognized, equipment trust certificates (ETCs) and conditional sales agreements (CSAs) are not actively traded in secondary markets. Their costs were therefore estimated by comparing them to the yields on other debt securities that are actively traded.⁴ This is the same methodology used by the Board in the last fifteen proceedings.

⁴ V.S. Miller at 8-12.

Using the Board's established methodology, the railroads' 2001 cost of debt is 6.88 percent.

V.S. Miller at p. 14.

V. THE 2001 CAPITAL STRUCTURE OF THE RAILROAD INDUSTRY AND THE OVERALL COST OF CAPITAL

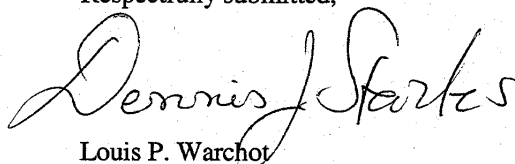
Pursuant to the Board's December 12, 2001 decision, the market values of debt, preferred equity, and common equity were compiled to compute the 2001 capital structure mix of the railroad industry. The railroads' market value capital structure is 41.06 percent debt, 2.25 percent preferred equity, and 56.69 percent common equity. V.S. Miller at p. 19. Based upon this capital structure, the overall 2001 cost of capital is 10.22 percent. V.S. Rockey at 17.

The cost of capital for 2001 is lower than the cost of capital for 2000, which was found to be 11.00 percent.

CONCLUSION

The Board should determine that the railroads' cost of capital for 2001 is 10.22 percent.

Respectfully submitted,



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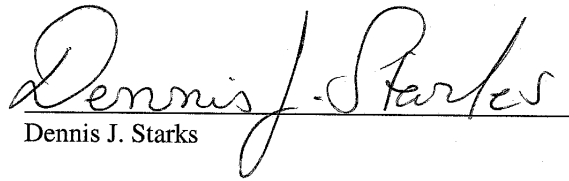
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March 29, 2001

CERTIFICATE OF SERVICE

I, Dennis J. Starks, hereby certify that on this 29th day of March 2001, I have served copies of the foregoing Comments of the Association of American Railroads and Its Member Railroads on all parties on the service list in this proceeding.


Dennis J. Starks

BEFORE THE
SURFACE TRANSPORTATION BOARD

EX PARTE NO. 558 (Sub-No. 5)
RAILROAD COST OF CAPITAL - 2001

VERIFIED STATEMENT
OF
CRAIG F. ROCKEY
VICE PRESIDENT
ASSOCIATION OF AMERICAN RAILROADS

March 29, 2002

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VERIFIED STATEMENT

OF

CRAIG F. ROCKEY

I. INTRODUCTION

My name is Craig F. Rockey. I am Vice President – Policy and Economics of the Association of American Railroads (AAR), with offices at 50 F Street, N.W., Washington, D.C. 20001. The AAR is the trade association for the nation's railroads, as well as the railroads of Canada and Mexico. The AAR's United States railroad members, which include all of the Class I railroads, account for 93 percent of our nation's total railroad freight operating revenue.

The AAR serves as the central agency of the railroad industry for the collection and analysis of economic and financial data. In addition, it represents the industry in regulatory proceedings before the Surface Transportation Board ("STB" or "Board"). In particular, the AAR has participated in all of the STB proceedings addressing revenue adequacy standards and the annual cost of capital determinations.

Aside from other responsibilities, I have conducted or directed a wide range of analyses or projects addressing regulatory, legislative and internal issues relevant to the railroad industry. Furthermore, I have testified before federal, state, and local regulatory agencies, and have been an expert witness for the railroad industry on economic, statistical, and financial matters over the past 24 years. A summary of my qualifications and experience appears at the end of this statement.

In this submission, I am responding to the Board's decision of December 12, 2001 (served December 13) instituting the proceeding to determine the railroad industry's 2001 cost of capital – Ex Parte No. 558 (Sub-No.5), Railroad Cost of Capital – 2001 ("Ex Parte 558 Decision"). In my statement, I calculate the cost of common equity capital and the overall cost of capital of the railroad

industry (incorporating the cost of debt, cost of preferred equity, and market value capital structure mix of the railroad industry as computed by the AAR using the procedures accepted in previous STB proceedings). My statement is accompanied by the Verified Statement of David F. Miller, Director – Accounting & Finance of the AAR's Policy and Economics Department in which he presents the details underlying the calculation of the current cost of debt and preferred equity and the market value of the capital structure mix.

I conclude that the 2001 cost of capital for the railroad industry is 10.22 percent. This estimate is based on a cost of common equity capital of 12.80 percent, a cost preferred equity of 6.26 percent, a current cost of debt of 6.88 percent, and market value weights for common equity, preferred equity, and debt of 56.69 percent, 2.25 percent, and 41.06 percent, respectively.

II. DETERMINING THE COST OF CAPITAL

A. Defining the Cost of Capital

The cost of capital is the minimum rate of return on investment which the providers of capital require as a condition for undertaking an investment. In essence, it is the threshold rate of return on investment which makes capital investment attractive. The cost of capital is an opportunity cost in that it recognizes what investors sacrifice by not investing their funds elsewhere. Investment funds generally flow to projects and companies where the expected returns are thought to at least equal to the expected returns available of other investment opportunities, giving consideration to the relative (or commensurate) risk of investment.

As an example of the cost of capital, assume that an investment in a company is valued at \$1,000 and that the current rate of return on that investment generated by that company is \$70, equating to 7.0 percent. The investors in that company would generally not elect to keep their money

in this company if, assuming equal risk, other investment opportunities offer higher expectations of greater returns. It may be that the cost of capital to this company is 12.0 percent, because that is the rate of return on investment required to attract investors and to keep investors from ultimately transferring their funds to alternative investments. In this case, the 12.0 percent return on investment to be found elsewhere is the opportunity cost, and thus, the cost of capital to the firm. Simply stated, that company's investors "demand" the opportunity (or expected) rate of return on investment or they will move their funds to alternative choices that provide such expectations.

B. The Composite Railroad Approach

The STB has adopted a composite railroad approach to computing an industry-wide cost of capital. This approach relies upon data from a sample of railroads meeting criteria established by the Board in Ex Parte No. 458, Railroad Cost of Capital--1984, 1 I.C.C. 2d 989, 1003-1004 (1985). The composite approach is both statistically and economically sound for several reasons. First, the current cost of investment-grade debt does not vary significantly among major railroads. This is because major railroads face similar market pressures from such forces as the economic climate, foreign trade policy, regulation and competition. Second, while there may be estimation errors associated with the direct measurement of the cost of equity for individual railroads, an industry-wide calculation tends to average out such errors. Third, financial theory indicates that, when computing the cost of capital based on current debt costs, increases (or decreases) in the debt/equity ratio cause corresponding increases (or decreases) in the cost of equity that result in a constant current cost of capital. (This relationship stems from the fact that as the percentage of debt in the capital structure increases, the cost of equity increases as a result of the increased risk.) Use of

an industry-wide debt/equity ratio and industry-wide costs of debt and equity are, therefore, appropriate.¹

C. Selection of Railroads for Analysis

Under the criteria established by the Board for individual firm inclusion in the composite railroad sample, the company must operate a Class I railroad, must have at least 50 percent of its assets devoted to rail operations, must be listed on the New York or American Stock Exchanges, must have investment grade debt², and must have paid dividends throughout the year in question. (Ex Parte 558 Sub -No. 3 Decision at 1-2.)

The Board's criteria for inclusion in the sample are generally sound. First, as the Board has recognized, in order to determine the cost of equity using the DCF model, it is essential that the company has paid dividends throughout the year at issue and that the company's stock is actively traded on either the New York or American Stock Exchanges. These qualifications help to insure that the dividend yield component of the DCF model is accurately estimated.

Second, it is necessary to determine the cost of debt for the composite sample based on investment grade railroad debt issues. This is necessary to avoid incorporating an estimate of the default premium associated with non-investment grade debt.

Finally, the composite must be representative of the railroad industry. The Board has properly determined that any company included should be predominantly railroad-oriented, and thus have at least 50 percent of its assets devoted to the railroad business.

¹See, e.g., F. Modigliani and M. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment," American Economic Review, June 1958, p. 7; M. Miller, "Debt and Taxes," Journal of Finance, May 1977.

²Investment grade debt is defined as senior debt securities with a Rating of AAA to BBB.

This year there are four railroad corporations or holding companies in the sample under the Board's criteria: Burlington Northern Santa Fe Corp.; CSX Corporation; Norfolk Southern Corporation; and Union Pacific Corporation. (See Table No. 1.) The 2001 sample is composed of the same railroad entities that were included in the 2000 sample.

Table No. 1

**EVALUATION OF CLASS I RAILROADS
UNDER STB SELECTION CRITERIA**

Class I Railroad	Parent	Listed NYSE/ASE	Dividends Throughout 2001	Rail Assets Account For At Least 50% of Parent	Adequate Debt Rating
BNSF	BNSF	YES	YES	YES	YES
CRC	CSX and NSC	NO	NO	YES	YES
CSXT	CSX	YES	YES	YES	YES
GTW*	CN	YES	YES	NO	YES
IC*	CN	YES	YES	NO	YES
KCS	KCSI	YES	NO	YES	YES
NS	NSC	YES	YES	YES	YES
SOO *	CP Ltd.	YES	YES	NO	YES
UP	UPC	YES	YES	YES	YES

* Following STB precedent, CN (parent of GTW and IC) and CP Ltd. (parent of SOO during the majority of 2001) were not included in the Sample because both CN and CP Ltd. are Canadian corporations and the cost of capital proceeding is concerned with determining costs for U.S. railroads under STB jurisdiction.

As in past years, this year's sample includes a substantial percentage of both the revenues and assets of the entire rail industry. As shown in Table No. 2, the four-firm composite accounts for approximately 93.8 percent of the revenues and 93.6 percent of the assets of all Class I railroads in 2001. Accordingly, the sample is representative of the industry.

Table No. 2

RELATIVE SIZE OF THE RAILROAD COMPOSITE SAMPLE (2001)

<u>Railroad</u>	<u>Revenues</u> <u>(\$Thousands)</u>	<u>Assets</u> <u>(\$Thousands)</u>	<u>Percent of Total Class I</u> <u>Railroads:</u>	
			<u>Revenues</u>	<u>Assets</u>
BNSF	9,201,022	25,522,645	26.9%	28.6%
CSXT	6,082,282	14,001,122	17.8	15.7
Norfolk Southern	6,169,823	12,913,637	18.1	14.5
Union Pacific	<u>10,613,895</u>	<u>31,049,563</u>	<u>31.1</u>	<u>34.8</u>
Total	32,067,022	83,486,967	93.8	93.6
Total Class I RR's	34,175,849	89,149,799	100.0%	100.0%

NOTE: Revenue and asset figures are from the Revenues, Expenses and Income reports and the Condensed Balance Sheet reports, submitted by Class I railroads to the STB for 2001.

D. Types of Railroad Capital

A firm's overall cost of capital is the opportunity cost of the funds available to the firm and to its investors. As an alternative to investing in a new project of average risk, a firm could repurchase a fraction of its outstanding securities at prevailing market prices. Because the expected rate of return on the total market value of a firm's outstanding securities reflects the opportunity cost of funds used in repurchasing such securities, the expected rate of return on the total market value of the firm's outstanding securities is equal to its overall cost of capital. The total capital of a firm

generally includes common and preferred stock (equity), as well as debt. Each of these three sources of capital have different expected rates of return, and thus the overall cost of capital is a market value of the weighted average of the costs of common equity, preferred equity, and debt.

Different approaches are used to estimate the costs of the three types of capital. In this statement, I estimate the cost of equity employing the DCF method and review the calculations of the cost of preferred equity and the cost of debt presented in the accompanying statement of Mr. Miller. These calculations are based on average 2001 costs. I then compute the industry's overall cost of capital as a weighted average based on the market value of the three types of capital.

III. THE COST OF EQUITY IN 2001

The cost of equity is the opportunity cost of investing in a share of a firm's stock; i.e., the expected rate of return, which investors require on the market value (purchase price) of the stock in light of alternative investment opportunities of comparable risk. Because investor expectations are not directly observable, analysts have developed methods of inferring the cost of equity from available financial data. The DCF method used in this statement to compute the cost of equity is the same method which has been used in the Board's previous cost of capital proceedings, and relies upon observed stock prices and analyst growth forecasts. The DCF method is recognized as a valid approach to measuring the cost of equity by the overwhelming majority of financial experts in the country, and among federal and state regulatory agencies it is the most widely used method for determining the cost of equity. See National Association of Regulatory Utility Commissioners, Utility Regulatory Policy in United States and Canada 1995-96 at pages 269, 530, 603 and 631 (December 16, 1996).

A. The Discounted Cash Flow ("DCF") Method

In previous cost of capital determinations, the Board has relied upon the Discounted Cash Flow (DCF) methodology to determine the railroad industry's cost of common equity capital. The DCF methodology requires an estimate of expected growth in earnings (the "g" component of the DCF formula), and the Board has in past proceedings encouraged the use of growth rate data developed by the Institutional Brokers Estimate System (IBES) for this purpose.³ Accordingly, I have employed the DCF methodology using IBES data, as relied on by the Board in its 2000 cost of capital determination in Ex Parte No. 558 (Sub-No 4), Railroad Cost of Capital—2000 (June 2001).

The cost of equity under the DCF method is the discount rate which makes the present value of all expected returns from holding the stock, including both dividends and price appreciation, equal to the stock's current market value.

In formulaic terms, under the DCF model the firm's cost of equity capital may be expressed as:

$$K = \frac{D_1}{P_0} + g$$

where:

K = the firm's cost of equity,

D₁ = the prospective annual dividend,

P₀ = the current price of the firm's stock, and

g = the expected rate of earnings growth.

The two terms in the formula, $\frac{D_1}{P_0}$ and g, correspond to the two forms of return from

³The IBES data are available from I/B/E/S Inc., 325 Hudson Street, New York, NY 10013.

holding a stock — namely, dividends and price appreciation. The first term, $\frac{D_1}{P_0}$, is the expected dividend yield. The price appreciation component (g) arises from the growth in the firm's earnings and dividends over time. If the earnings of the firm grow at a rate of g , and if the earnings/price ratio of the firm's stock remains constant, the value of a share in the firm would also grow at a rate of g .

In the last 19 cost of capital proceedings, the STB used the current dividend yield (D_0) multiplied by unity plus one-half the growth rate, $\frac{D_0(1 + g/2)}{P_0}$, rather than one plus the full growth rate to estimate $\frac{D_1}{P_0}$. This multiplier was adopted by the Board on the assumption that dividends are paid annually. Actually, railroads pay quarterly dividends and thus the agency's multiplier understates the expected dividend rate because it ignores the time value of money; i.e., the payment of four quarterly dividends over the next year is more valuable than a single year-end dividend equal to the sum of the quarterly dividends. However, I agree with the previous statement of Dr. Robert H. Litzenberger, then Professor of Finance, Wharton School, University of Pennsylvania, in his testimony in Ex Parte No. 473, Railroad Cost of Capital - 1987 on behalf of the railroad industry, that "...the use of the Commission's procedure is not a major source of bias...." Litzenberger Ex Parte No. 473 V.S. at 13.

1. Composite Growth Rate

In the past 20 cost of capital proceedings, the Board has used a consensus of security analysts' forecasts to obtain an estimate of the composite earnings growth rate. As the Board has recognized, the " g " component of the DCF formula measures investor's expectations, and a

consensus of analysts' forecasts is the most accurate method available for estimating those expectations.

In its decision in Ex Parte No. 473, the Board expressed a preference for use of consensus analyst five-year earnings-per-share forecasts developed by IBES in lieu of the consensus five-year growth forecasts of prominent investment analysts that was employed in previous proceedings. I have, accordingly, employed IBES data in determining the composite growth rate in this proceeding. As in Ex Parte No. 491, Railroad Cost of Capital – 1990, where the Board focused on the issue of a truncated average vs. an overall average forecast where sufficient forecasts are available for a sample railroad, I have employed a truncated average⁴ of IBES survey forecasts.

The methodology employed here is identical to that employed and accepted by the STB in Ex Parte No. 491. The truncated average of the IBES survey forecasts for each railroad was calculated for each month and then averaged over the 12-month period January 2001 through December 2001. From IBES data, the following are determined for each sample railroad for each of the 12 sample months during 2001: a simple average, the highest forecast, the lowest forecast, and the number of forecasts. The number of forecasts upon which the IBES sample average was based varied between a monthly high of nine for Union Pacific Corporation to a monthly low of four for CSX. For each of the four railroads in the industry composite, the 2001 average of the IBES monthly mean growth forecasts (both simple and truncated) is provided in Table No. 3. The composite growth estimate based on the truncated means is 11.03 percent.

⁴The Board has observed that a truncated average, which excludes the upper-most and lower-most forecasts, is more reliable than an overall average forecast. 4 I.C.C. 2d at 628.

Table No. 3
CALCULATION OF 2001 AVERAGE RAILROAD GROWTH RATES

<u>Railroad</u>	<u>IBES Composite</u>				
	<u>Simple Average¹</u>	<u>Truncated Average²</u>	<u>Railroad Weights³</u>	<u>Simple Average⁴</u>	<u>Truncated Average⁵</u>
BNSF	8.98	9.19	0.2869	2.58	2.64
CSXT	14.45	12.19	0.1862	2.69	2.27
Norfolk Southern	13.10	10.56	0.1824	2.39	1.93
Union Pacific	12.16	12.18	0.3445	4.19	4.20
Average:	12.17	11.03			
Composite Growth Rate:			1.000	11.84	11.03

NOTES:

- ¹ Data extracted from IBES database; see Appendix B summary.
- ² Computed by eliminating high and low growth estimates from Simple Average computation; see Appendix C.
- ³ Weights based on market value of each sample railroad divided by the composite railroad market value.
- ⁴ Computed by multiplying the Simple Average by the Railroad Weights.
- ⁵ Computed by multiplying the Truncated Average by the Railroad Weights.

As summarized in Table No. 3, the 11.03 percent composite growth estimate is calculated as follows:

Step 1 A simple average rate of 12.17 percent is computed from the IBES estimates based on monthly verages for each railroad;

Step 2 The high and low rates are deleted in each month for each railroad and a truncated simple average of 11.03 percent is derived;

Step 3 Railroad weights are calculated using average daily closing prices from Dow Jones and the number of shares outstanding at the end of each quarter (as reported by the sample railroads).

Quarterly data was adjusted with specific monthly data when there were new issues of common stock; and

Step 4 The weights for each railroad were multiplied by each railroad's truncated average to derive in a weighted-average, truncated growth rate of 11.03 percent.

Thus, the IBES consensus forecast provides an 11.03 percent estimate of the average 2001 long-term (five-year) growth expectations of investors. The 2001 average estimate of the industry's growth expectation is 37 basis points (approximately a quarter of a percentage point) more than the 2000 estimate used by the Board in its previous (2000) cost of capital determination Ex Parte No. 558 (Sub-No. 4) of 10.66 percent.

2. Composite Dividend Yield

Using the same methodology relied upon by the Board in prior proceedings, I have determined the 2001 dividend yield for the composite railroad as an average of the composite dividend yield for each month using the average of all daily closing stock prices for that month. The daily closing stock prices were obtained from Dow Jones News/Retrieval Service.

The estimate of the 2001 average current dividend yield for the composite railroad is 1.68 percent. This estimate is 1.39 basis points (1.39 percent) less than the 2000 average dividend yield determined by the Board in Ex Parte No. 558 (Sub-No.3), i.e., 3.07 percent. Table No. 4 summarizes the calculation of the composite current dividend yield.

TABLE NO. 4

**CALCULATION OF COMPOSITE CURRENT DIVIDEND YIELD
FOR EACH MONTH OF 2001 AND FOR THE YEAR**

JANUARY			FEBRUARY			MARCH			APRIL		
<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>
BN	0.3120	0.53 %	BN	0.3040	0.49 %	BN	0.2996	0.50 %	BN	0.2901	0.48 %
CSX	0.1632	0.71	CSX	0.1737	0.67	CSX	0.1761	0.68	CSX	0.1832	0.65
NSC	0.1685	0.26	NSC	0.1756	0.24	NSC	0.1667	0.25	NSC	0.1681	0.23
UPC	0.3563	0.55	UPC	0.3467	0.52	UPC	0.3575	0.53	UPC	0.3586	0.50
Total:	1.0000	2.05 %	Total:	1.0000	1.92 %	Total:	1.0000	1.95 %	Total:	1.0000	1.87 %
MAY			JUNE			JULY			AUGUST		
<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>
BN	0.2852	0.44 %	BN	0.2855	0.46 %	BN	0.2770	0.46 %	BN	0.2647	0.48 %
CSX	0.1839	0.60	CSX	0.1846	0.21	CSX	0.1924	0.21	CSX	0.2024	0.22
NSC	0.1958	0.22	NSC	0.1969	0.23	NSC	0.1948	0.22	NSC	0.1942	0.24
UPC	0.3351	0.47	UPC	0.3329	0.49	UPC	0.3357	0.48	UPC	0.3388	0.51
Total:	1.0000	1.73 %	Total:	1.0000	1.40 %	Total:	1.0000	1.37 %	Total:	1.0000	1.44 %
SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER		
<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>	<u>Railroad</u>	<u>Weight</u>	<u>Weighted Yield</u>
BN	0.2814	0.53 %	BN	0.2883	0.52 %	BN	0.2802	0.47 %	BN	0.2776	0.47 %
CSX	0.1903	0.24	CSX	0.1976	0.24	CSX	0.1961	0.22	CSX	0.1900	0.65
NSC	0.1848	0.26	NSC	0.1761	0.26	NSC	0.1825	0.23	NSC	0.1808	0.23
UPC	0.3435	0.56	UPC	0.3381	0.56	UPC	0.3413	0.50	UPC	0.3517	0.50
Total:	1.0000	1.59 %	Total:	1.0000	1.58 %	Total:	1.0000	1.43 %	Total:	1.0000	1.85 %

Note: The simple average of the above 12 monthly dividend yields is 1.68 percent.

Source: Dividend yields were obtained from railroad financial reports. Weights were based on the monthly market values of individual railroads divided by the total monthly market value. See Appendix P of D. F. Miller's Verified Statement submitted in this proceeding for underlying data.

3. Application of Data to DCF Model

The 11.03 percent growth rate and the 1.68 percent dividend yield for the composite railroad produces a 2001 average cost of equity capital estimate of 12.80 percent. That is:

$$\begin{aligned} K &= \left[\frac{D_0}{P_0} \times (1 + g/2) \right] + g \\ &= [1.68 \times 1.055] + 11.03 \\ &= 12.80 \% ^5 \end{aligned}$$

B. Conclusion as to Cost of Equity Capital

The average 2001 cost of equity estimate for the composite railroad is 12.80 percent. The procedures used to obtain these estimates are identical to those used by the Board to obtain the estimates in the most recent previous proceedings. These procedures provide consistent and reliable annual average cost of equity estimates.

IV. THE COST OF DEBT IN 2001

The cost of debt calculations are presented in the separate, accompanying Verified Statement of David F. Miller. Mr. Miller found the 2001 average current cost of debt to be 6.72 percent before flotation costs and 6.88 percent after flotation costs. I have examined Mr. Miller's calculations and methods and concur in his findings. The 2001 average current cost of debt is 112 basis points less than the corresponding 2000 average.

⁵ The cost of common equity normally includes flotation costs because the net proceeds from the issues are reduced by both the underwriter's spread and the price pressure effect at the time of announcement of the stock issue. My calculation, however, does not include flotation costs. This is because the Commission has, in the past, allowed the inclusion of flotation costs for common equity only where a railroad has issued common equity capital in the year at issue -- in this case, 2001. Ex Parte No. 506, 8 I.C.C. 2d at 414-415. No new common equity capital was issued by any of the composite railroads in 2001, and therefore flotation costs were not included in my calculation.

V. THE COST OF PREFERRED STOCK IN 2001

Preferred stock has some characteristics of debt and some characteristics of equity. Investment in preferred stock is generally thought to be less risky than common stock and more risky than debt. However, the cost of preferred equity depends on its specific features. In some instances, preferred equity which is convertible into common equity has the same cost as common equity. Mr. Miller has examined the features and determined the cost of all preferred stock issued during 2001 by the firms in the sample. I have reviewed Mr. Miller's approach and calculations and agree with his determination.

Mr. Miller found the 2001 average current cost of preferred equity to be 6.26 percent.

VI. THE OVERALL COST OF CAPITAL IN 2001

A. Determination of Market Value Weights

As calculated in Mr. Miller's Verified Statement, the market value of debt, common equity, and preferred equity are \$ 28,014.5 million, \$ 38,681.8 million, and \$ 1,532.7 million, respectively. The figure for the market value of debt includes market values of bonds, notes, debentures, equipment trust certificates, and conditional sales agreements. Other debt and capitalized leases are included at their book value, because market values are difficult to determine (in some instances book values correspond to market values) and because these other instruments are a minimal portion of all railroad debt. Based on these calculations, the market value weights for debt, equity and preferred stock are 41.06 percent, 56.69 percent, and 2.25 percent, respectively.

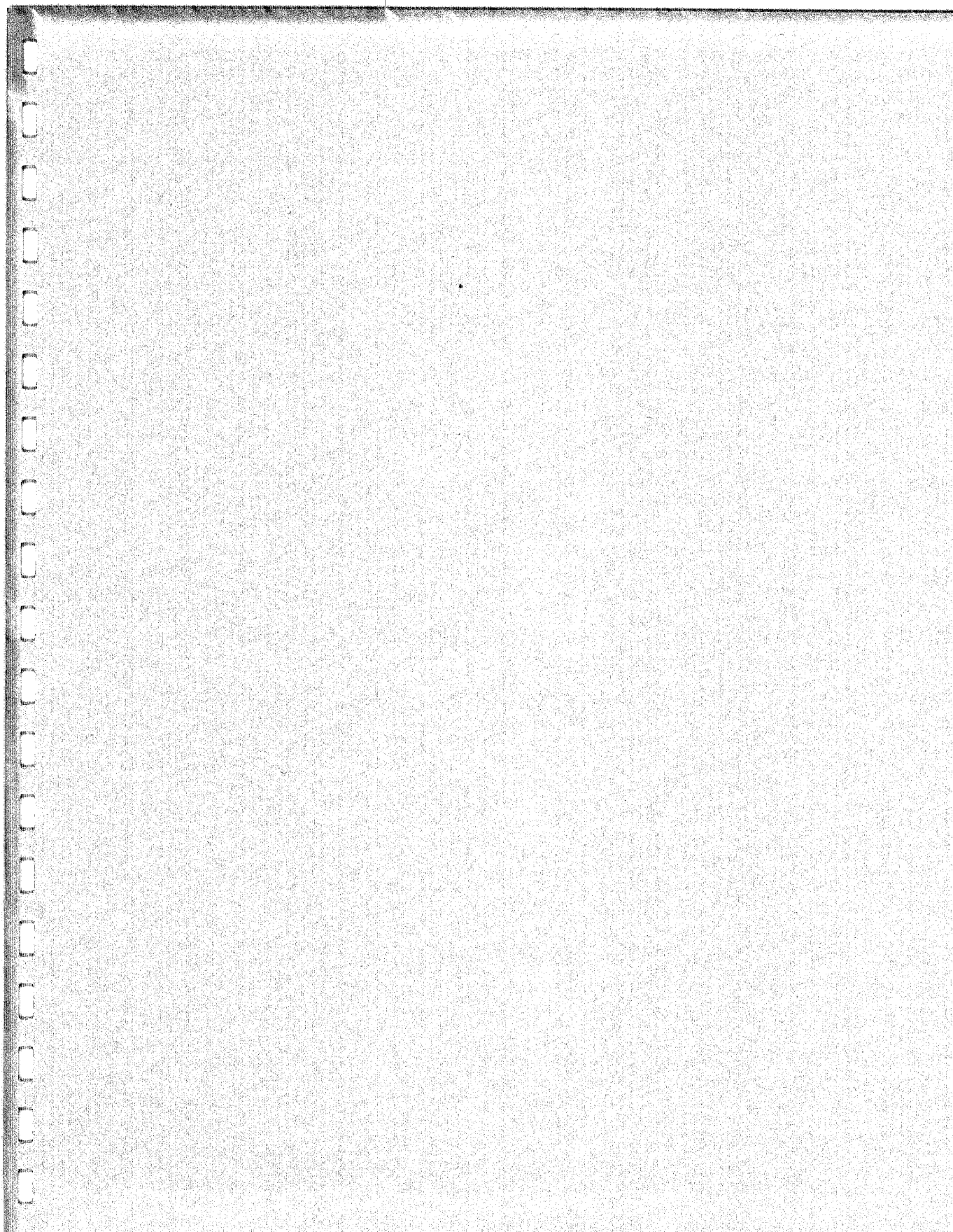
B. The Overall Cost of Capital

Multiplying the cost of debt, the cost of equity, and the cost of preferred stock by their respective

market value proportions results in a 2001 average overall cost of capital of 10.22 percent, as shown

below:

	Capital Structure <u>Weight</u>	Current <u>Cost</u>	Weighted <u>Current Cost</u>
Debt	41.06 %	6.88 %	2.82 %
Common Stock	56.69	12.80	7.26
Preferred Stock	<u>2.25</u>	6.26	<u>0.14</u>
Weighted Current Cost of Capital	100.00 %		10.22 %



VERIFICATION

WASHINGTON,)
DISTRICT OF COLUMBIA) SS

Craig F. Rockey, being duly sworn, deposes and says that he has read the foregoing statement, knows the contents thereof, and that the same are true as stated.

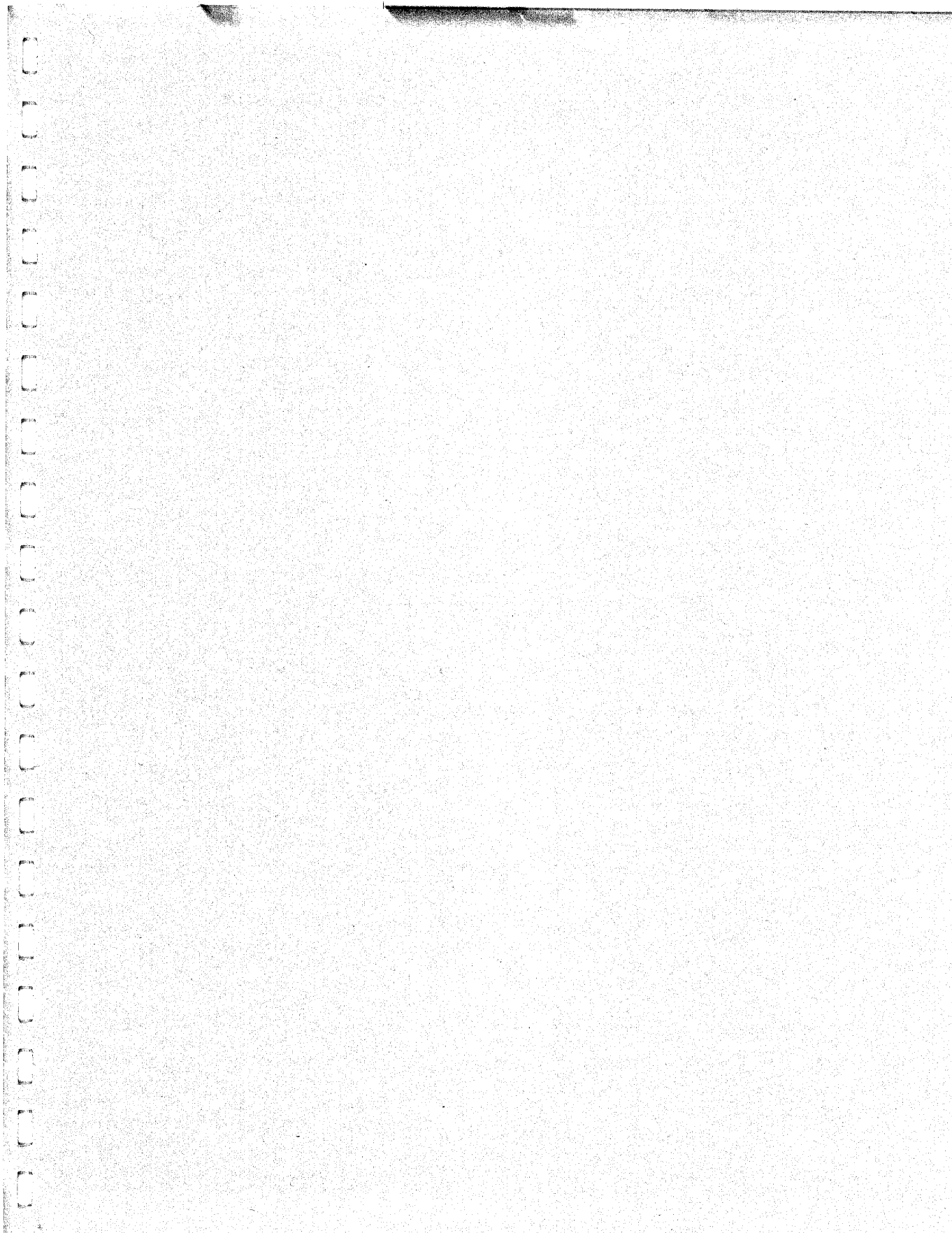
Craig F. Rockey

Subscribed and Sworn to before me

this 27th day of March 2002.

NOTARY PUBLIC

Irene C. Thompson
IRENE C. THOMPSON
Notary Public, District of Columbia
My Commission Expires December 14, 2002



DISCOUNTED CASH FLOW MODEL

The discounted cash flow (DCF) approach to the estimation of the cost of equity capital is similar to the method employed by an investor using fundamental analysis to value a common stock. The DCF approach estimates the firm's cost of equity capital as the rate that makes the discounted value of all future cash flows expected by investors equal to the current price of the firm's stock. The future cash flows expected by investors can be specified as a stream of expected dividends over a fixed investment horizon and the expected stock price at the end of that horizon.

The most familiar model used to derive the cost of equity capital is based on the simplifying assumption that the firm pays dividends annually and the next dividend is one year hence.

The subsequent analysis assumes that over a fixed investment horizon:

- (a) the firm's cost of capital, k , is constant;
- (b) the firm's annual dividends per share grow at a constant rate, g ;
- (c) annual earnings per share grow at the same rate as annual dividends per share; and
- (d) the firm's price-earnings multiple is constant.

Under assumption (a) the price of the firm's stock may be expressed as:

$$(1) \quad P_0 = \left[\sum_{t=1}^n \frac{D_t}{(1+k)^t} \right] + \frac{P_n}{1+k}$$

where:

k = the firm's cost of equity capital,

D_t = the firm's expected dividend t years hence,

P_0 = the current price per share of the firm's stock, and

g = the expected rate of growth in earnings and dividends over the investment horizon.

Under assumptions (b) and (c) the firm's dividend in year t is equal to:

$$(2) \quad D_t = D_1(1+g)^{t-1}$$

where:

D_1 = the firm's expected dividend one year hence.

Substituting the right hand side of equation (2) for D_t in equation (1), the price of the firm's stock may be expressed as:

$$(3) \quad P_0 = D_1 \left[\sum_{t=1}^{t=n} \frac{(1+g)^{t-1}}{(1+k)^t} \right] + \frac{P_n}{(1+k)^n}$$

Since the firm's expected price-earnings ratio n years from now has been assumed to equal its current price-earnings ratio the price of the firm's stock would be expected to grow at the same rate as its earnings.

$$(4) \quad P_n = P_0 (1+g)^n$$

Recall that $P_n = P_n/E_n \times E_0 (1+g_1)^n$ and $P_n/E_n = P_0/E_0$. The term in square brackets on the right hand side of equation (3) is a geometric progression which can be expressed as:

$$(5) \quad \left[\sum_{t=1}^{t=n} \frac{(1+g)^{t-1}}{(1+k)^t} \right] = \frac{1}{k-g} \left[1 - \frac{(1+g)^n}{(1+k)^n} \right]$$

Combining expression (5) with equations (3) and (4), and rearranging gives equation (6):

$$(6) \quad P_0 \left[1 - \frac{(1+g)^n}{(1+k)^n} \right] = D_0 \left(\frac{1}{k-g} \right) \left[1 - \frac{(1+g)^n}{(1+k)^n} \right]$$

Cancelling the term in square brackets on both sides of equation (6) and solving for the cost of equity capital, k , yields equation (7):

$$(7) \quad k = \frac{D_1}{P_0} + g$$

Although most firms pay quarterly dividends, the relation expressed by equation (7) is the formula most commonly used in the estimation of the firm's cost of equity capital. For the next yearly dividend term in equation (5), the Commission in Ex Parte No. 436 used an estimate of the sum of the next four expected quarterly dividends. It used the last quarter's annualized dividend rate time $(1 + 1/2 g)$.

Because railroads pay dividends quarterly, rather than annually, equation (7) gives a downward biased estimate of the cost of equity capital. Since there is a time value of money, quarterly dividends would be preferred by a shareholder to a single payment at year's end. The next three quarterly dividends would be worth $D_{11}(1+k)^{(3/4)}$, $D_{21}(1+k)^{(1/2)}$, $D_{31}(1+k)^{(1/4)}$ dollars, respectively, when reinvested until year's end at the firm's cost of equity capital. The only difference between this model and the more familiar model that assumes annual dividends is the recognition of the value of receiving a dollar earlier rather than later. This assumption is implemented by modifying assumption (b), which did not explicitly specify the quarter-to-quarter growth rate of dividends, as follows:

- (b') The firm's quarterly dividends per share grow at a constant rate from one quarter to the corresponding quarter in the following year.

Assuming that the firm pays dividends quarterly, and that for the next n years earnings and dividends grow at a constant rate, g , the firm's first quarter dividend in year one, D_{11} , will be equal to its first quarter dividend in year zero times one plus the growth rate (i.e., $D_{11} = D_{10}(1+g)$). In general, the dividend in a given quarter would be equal to the product of the corresponding quarter's dividend in the prior year and one plus the rate of growth (i.e., $D_{1t} = D_{1t-1}(1+g)$, $D_{2t} = D_{2t-1}(1+g)$, $D_{3t} = D_{3t-1}(1+g)$, and $D_{4t} = D_{4t-1}(1+g)$). Under

these conditions, the current market value of the firm's stock, P_0 , may be expressed as:

$$(8) \quad P_0 = \sum_{t=1}^n \sum_{q=1}^4 \frac{D_{ql} (1+g)^{t-1}}{(1+k)^{[t-(4-q)/4]}} + \frac{P_n}{(1+k)^n}$$

The first term on the right hand side of equation (8) is a finite geometric progression whose solution is:

$$\frac{\sum_{q=1}^4 D_{ql} (1+k)^{[(4-q)/4]}}{k-g} \left[1 - \frac{(1+g)^n}{(1+k)^n} \right]$$

Under the assumption that $P_n/E_n = P_0/E_0$ and $P_n = P_n/E_n \times E_0(1+g)^n = P_0(1+g)^n$, equation (6) reduces to:

$$(9) \quad P_0 = \frac{D_1^*}{k-g}$$

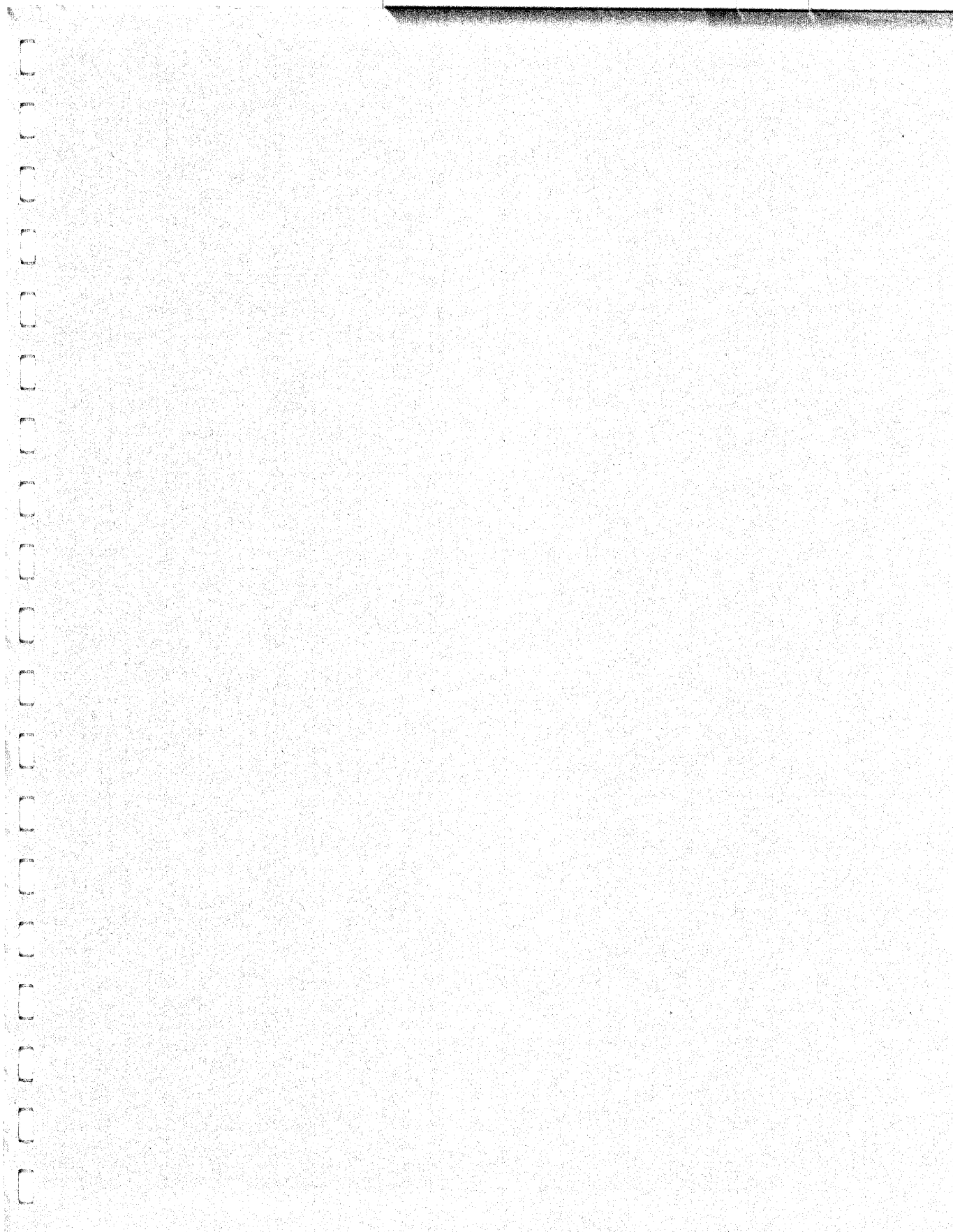
where:

$$\begin{aligned}
 D_1^* &\equiv \sum_{q=1}^4 D_{q1} (1+k)^{[4-q]/4]} \\
 &= D_{11}(1+k)^{(3/4)} + D_{21}(1+k)^{(1/2)} + D_{31}(1+k)^{(1/4)} + D_{41} \\
 &= [D_{10}(1+k)^{(3/4)} + D_{20}(1+k)^{(1/2)} + D_{30}(1+k)^{(1/4)} + D_{40}] (1+g)
 \end{aligned}$$

Under the assumption that the firm pays quarterly dividends, the firm's cost of equity capital may be expressed as:

$$(10) \quad k = \frac{D_1^*}{P_0} + g$$

For most firms $D_1^* > D_0(1 + g/2) = 4D_{40}(1 + g/2)$. That is, $4D_{40}(1 + g/2)$ is approximately equal to $[D_{10} + D_{20} + D_{30} + D_{40}](1 + g)$ which is less than D_1^* which equals $[D_{10}(1+k) + D_{20}(1+k)^{(1/2)} + D_{30}(1+k)^{(1/4)} + D_{40}](1 + g)$. Therefore, the Commission's procedure for estimating D_1 results in a slight understatement of the cost of equity capital.



IBES Monthly Long-Term Growth Rates
and Number of Analysts Estimates
2001

BURLINGTON NORTHERN INC.

	Mean <u>Est.</u>	High <u>Est.</u>	Low <u>Est.</u>	No <u>Est.</u>
JANUARY	8.88	11.00	5.00	8
FEBRUARY	9.00	12.00	5.00	8
MARCH	9.00	12.00	5.00	8
APRIL	8.50	12.00	5.00	8
MAY	9.00	12.00	5.00	8
JUNE	9.13	12.00	5.00	8
JULY	9.14	12.00	5.00	7
AUGUST	9.14	12.00	5.00	7
SEPTEMBER	9.14	12.00	5.00	7
OCTOBER	9.00	12.00	5.00	7
NOVEMBER	9.00	12.00	5.00	5
DECEMBER	8.88	12.00	5.00	5

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

IBES Monthly Long-Term Growth Rates
and Number of Analysts Estimates
2001

CSX CORPORATION

	Mean	High	Low	No
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>
JANUARY	13.57	30.00	7.00	7
FEBRUARY	13.13	30.00	7.00	8
MARCH	13.13	30.00	7.00	8
APRIL	13.13	30.00	7.00	8
MAY	14.67	30.00	8.00	6
JUNE	14.67	30.00	8.00	6
JULY	15.20	30.00	8.00	5
AUGUST	15.20	30.00	8.00	5
SEPTEMBER	15.75	30.00	8.00	4
OCTOBER	15.20	30.00	8.00	5
NOVEMBER	16.50	30.00	8.00	4
DECEMBER	13.29	30.00	8.00	7

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

IBES Monthly Long-Term Growth Rates
and Number of Analysts Estimates
2001

NORFOLK SOUTHERN CORPORATION

	Mean	High	Low	No
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>
JANUARY	12.56	30.00	7.50	8
FEBRUARY	12.64	30.00	7.50	7
MARCH	12.44	30.00	7.50	8
APRIL	12.31	30.00	7.50	8
MAY	12.67	30.00	8.00	6
JUNE	12.67	30.00	8.00	6
JULY	13.83	30.00	8.00	6
AUGUST	13.83	30.00	8.00	6
SEPTEMBER	13.83	30.00	8.00	6
OCTOBER	13.83	30.00	8.00	6
NOVEMBER	14.60	30.00	8.00	5
DECEMBER	12.00	30.00	7.00	8

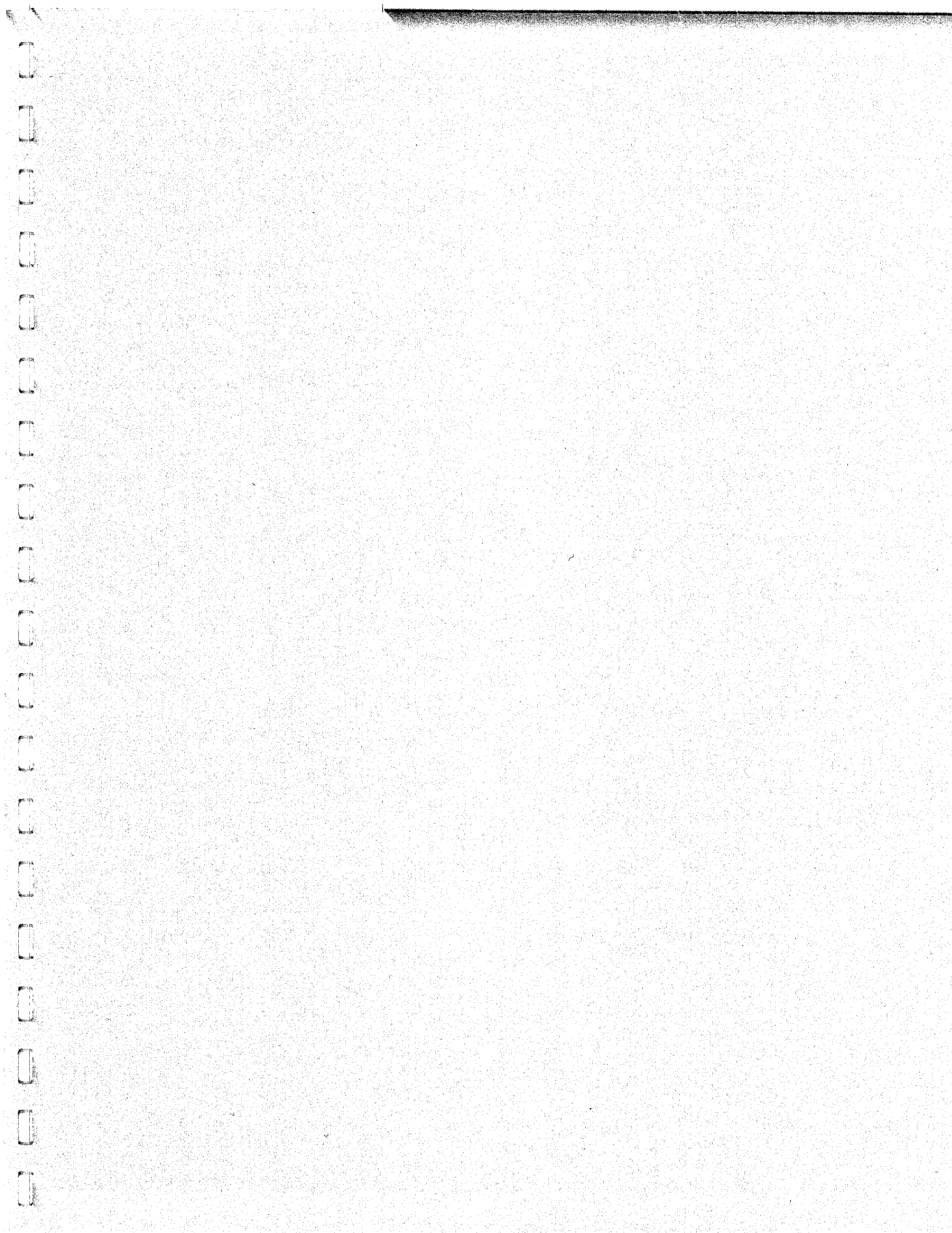
Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

IBES Monthly Long-Term Growth Rates
and Number of Analysts Estimates
2001

UNION PACIFIC CORPORATION

	Mean	High	Low	No
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>
JANUARY	12.44	20.00	9.00	9
FEBRUARY	11.94	15.00	9.00	9
MARCH	12.00	15.00	9.00	9
APRIL	12.00	15.00	9.00	9
MAY	11.86	15.00	9.00	7
JUNE	11.86	15.00	9.00	7
JULY	12.17	15.00	9.00	6
AUGUST	12.29	15.00	9.00	7
SEPTEMBER	11.83	15.00	9.00	6
OCTOBER	12.67	15.00	9.00	6
NOVEMBER	13.00	15.00	13.00	5
DECEMBER	11.86	15.00	8.00	7

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014



Computation of Simple Average
and Truncated Average
2001

BURLINGTON NORTHERN INC.

	Mean	High	Low	No	Truncated
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Average</u>
JANUARY	8.88	11.00	5.00	8	9.17
FEBRUARY	9.00	12.00	5.00	8	9.17
MARCH	9.00	12.00	5.00	8	9.17
APRIL	8.50	12.00	5.00	8	8.50
MAY	9.00	12.00	5.00	8	9.17
JUNE	9.13	12.00	5.00	8	9.33
JULY	9.14	12.00	5.00	7	9.40
AUGUST	9.14	12.00	5.00	7	9.40
SEPTEMBER	9.14	12.00	5.00	7	9.40
OCTOBER	9.00	12.00	5.00	7	9.20
NOVEMBER	9.00	12.00	5.00	5	9.33
DECEMBER	<u>8.88</u>	12.00	5.00	5	<u>9.00</u>

Simple
Average: 8.98 9.19

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

Computation of Simple Average
and Truncated Average
2001

CSX CORPORATION

	Mean	High	Low	No	Truncated
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Average</u>
JANUARY	13.57	30.00	7.00	7	11.60
FEBRUAR	13.13	30.00	7.00	8	11.33
MARCH	13.13	30.00	7.00	8	11.33
APRIL	13.13	30.00	7.00	8	11.33
MAY	14.67	30.00	8.00	6	12.50
JUNE	14.67	30.00	8.00	6	12.50
JULY	15.20	30.00	8.00	5	12.67
AUGUST	15.20	30.00	8.00	5	12.67
SEPEMBE	15.75	30.00	8.00	4	12.50
OCTOBER	15.20	30.00	8.00	5	12.67
NOVEMBE	16.50	30.00	8.00	4	14.00
DECEMBE	<u>13.29</u>	30.00	8.00	7	<u>11.20</u>

Simple

Average: 14.45

12.19

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

Computation of Simple Average
and Truncated Average
2001

NORFOLK SOUTHERN CORPORATION

	Mean	High	Low	No	Truncated
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Average</u>
JANUARY	12.56	30.00	7.50	8	10.50
FEBRUARY	12.64	30.00	7.50	7	10.20
MARCH	12.44	30.00	7.50	8	10.33
APRIL	12.31	30.00	7.50	8	10.17
MAY	12.67	30.00	8.00	6	9.50
JUNE	12.67	30.00	8.00	6	9.50
JULY	13.83	30.00	8.00	6	11.25
AUGUST	13.83	30.00	8.00	6	11.25
SEPTEMBER	13.83	30.00	8.00	6	11.25
OCTOBER	13.83	30.00	8.00	6	11.25
NOVEMBER	14.60	30.00	8.00	5	11.67
DECEMBER	<u>12.00</u>	30.00	7.00	8	<u>9.83</u>

Simple

Average: 13.10 10.56

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014

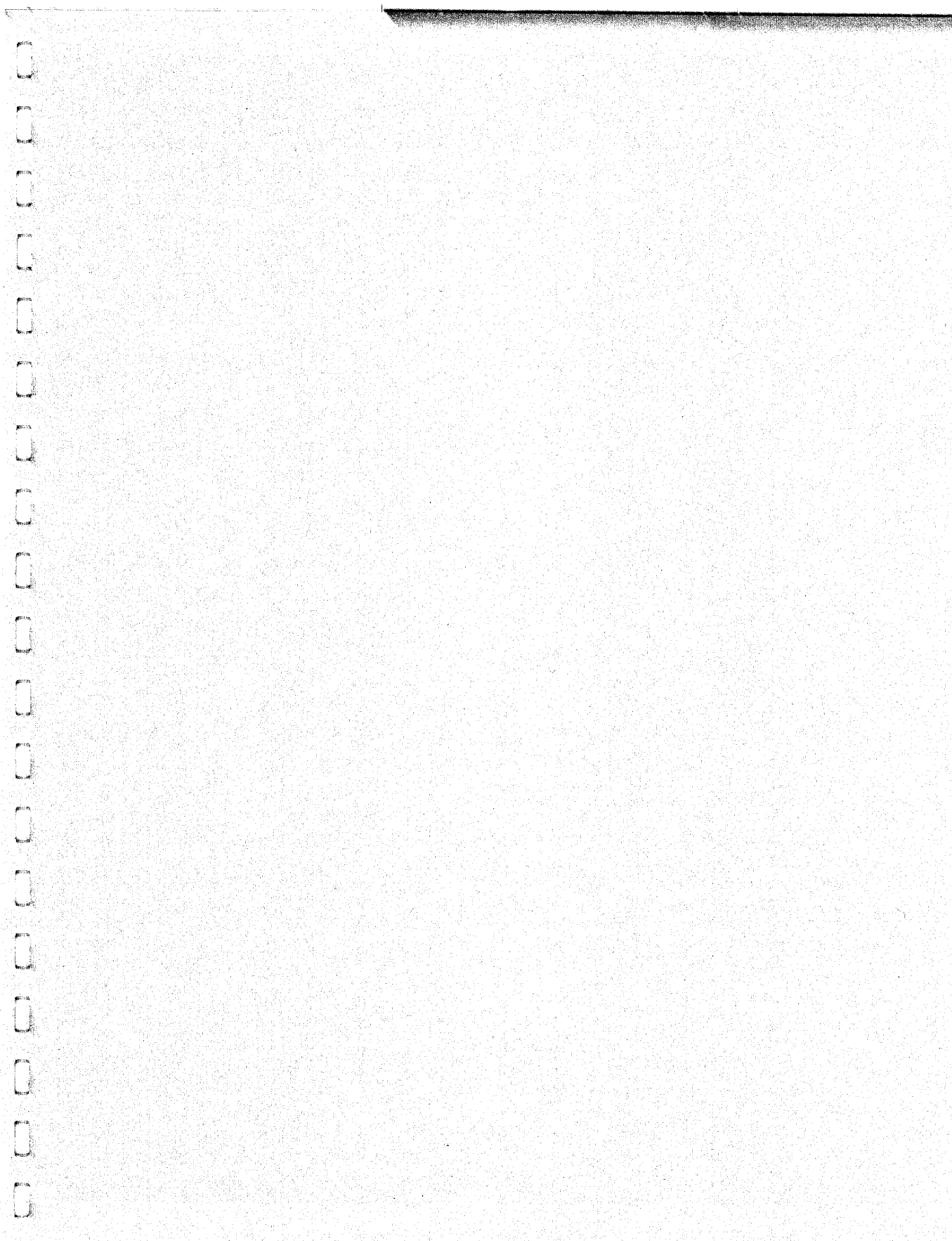
Computation of Simple Average
and Truncated Average
2001

UNION PACIFIC CORPORATION

	Mean	High	Low	No	Truncated
	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Est.</u>	<u>Average</u>
JANUARY	12.44	20.00	9.00	9	11.86
FEBRUARY	11.94	15.00	9.00	9	11.93
MARCH	12.00	15.00	9.00	9	12.00
APRIL	12.00	15.00	9.00	9	12.00
MAY	11.86	15.00	9.00	7	11.80
JUNE	11.86	15.00	9.00	7	11.80
JULY	12.17	15.00	9.00	6	12.25
AUGUST	12.29	15.00	9.00	7	12.40
SEPTEMBER	11.83	15.00	9.00	6	11.75
OCTOBER	12.67	15.00	9.00	6	13.00
NOVEMBER	13.00	15.00	13.00	5	13.33
DECEMBER	<u>11.86</u>	15.00	8.00	7	<u>12.00</u>

Simple
Average: 12.16 12.18

Source: I/B/E/S International Inc. 345 Hudson St., New York, NY 10014



APPENDIX D

QUALIFICATIONS OF CRAIG F. ROCKEY

My name is Craig F. Rockey. I am Vice President of Policy and Economics for the Association of American Railroads (AAR), with offices located at 50 F Street, N.W., Washington, D.C. 20011. Among other responsibilities, my duties include the collection, analysis, and presentation of economic data related to railroads and their economic environment. One of my principal duties is conducting and supervising economic, financial, statistical and cost studies dealing with various aspects of the rail industry.

During my employment with the AAR, I have presented testimony before the Surface Transportation Board/Interstate Commerce Commission, Public Service Commission of Indiana, New York Department of Transportation, Ohio Public Utilities Commission, Pennsylvania Public Utility Commission, the West Virginia Public Service Commission, and the Illinois Department of Revenue. I routinely prepare and provide rail industry economic, financial and cost data; oversee the creation of databases, publications, and reports; and evaluate regulatory, legislative, and internal issues.

Preceding my employment with the AAR in April 1978, I was Senior Associate with the Washington, D.C.-based economic consulting firm of Snively, King and Associates, Inc. In that capacity I was responsible for various feasibility studies, special reports, and submissions to federal, state, and private organizations.

I hold a Bachelor of Science degree in Transportation Economics for the University of Maryland and have undertaken related course work subsequently. I have articles published in transportation journals, have co-authored a book entitled Small Railroads, am a member of various professional organizations, and have consulted for railroads in Africa, Asia, and North America.

BEFORE THE
SURFACE TRANSPORTATION BOARD

EX PARTE NO. 558 (Sub-No. 5)

RAILROAD COST OF CAPITAL

2001

VERIFIED STATEMENT

OF

DAVID F. MILLER

DIRECTOR - ACCOUNTING & FINANCE

ASSOCIATION OF AMERICAN RAILROADS

March 29, 2001

I. INTRODUCTION

My name is David F. Miller. I am Director - Accounting & Finance for the Policy and Economics Department of the Association of American Railroads (AAR), with offices at 50 F Street, NW, Washington, DC 20001. A summary of my qualifications and experience appears at the end of this statement.

The Policy and Economics Department of the AAR serves the railroad industry as a central agency for collection, analysis, and reporting of information regarding the financial and economic conditions of the railroad industry.

In this proceeding, my statement addresses the computation of the railroad industry's 2001 (i) current cost of long term debt and preferred stock, (ii) market value of long term debt, preferred stock and equity, and (iii) the capital structure mix. I have presented similar testimony on behalf of the railroad industry in previous cost of capital proceedings before the Surface Transportation Board ("Board" or "STB"). In an accompanying verified statement, Craig F. Rockey, Vice President of the Association of American Railroads, estimates the cost of equity and the overall cost of capital of the composite railroad.

In preparing my statement, I relied on a number of data sources including, but not limited to, the R-1 Annual Reports to the STB, shareholders' annual reports, 10Q and 10K Reports to the Securities and Exchange Commission, the BOND GUIDE (a monthly publication of Standard & Poor's Corporation), and data provided directly by the railroads.

In Ex Parte No. 393 (Sub-No. 1), Standards For Railroad Revenue Adequacy, 3 I.C.C.2d 261 (1986), aff'd sub nom Consolidated Rail Corporation v. United States, 855 F.2d 78 (CA3 1988), the Board reaffirmed that the cost of capital is to be based upon the current cost of debt and market value weights. My analysis in this proceeding is consistent with the Ex Parte No. 393 (Sub-No. 1) decision.

In addition, my analysis focuses upon railroads which met the sample criteria set forth in Ex Parte No. 558 (Sub - No. (5), Railroad Cost of Capital-2001 (order served December 21, 2001). As explained below, four railroad corporations met the criteria for inclusion in the sample: Burlington Northern Santa Fe Corporation, CSX Corporation, Norfolk Southern Corporation, and Union Pacific Corporation.

II. FINDINGS

A. Debt

Based on my examination of existing bonds, notes, debentures, equipment trust certificates (ETC's), and conditional sales agreements (CSA's) issued by the four firms in the sample, I find:

- (1) The railroad's current cost of debt for 2001 was 6.88 percent, and
- (2) The current market value of debt for 2001 was \$28,014.5 million.

B. Preferred Stock

Based on my examination of outstanding preferred stock issued by the firms in the sample, I find:

- (1) The railroad's current cost of preferred stock for 2001 was 6.26 percent.
- (2) The current market value of preferred stock for 2001 was \$1,532.7 million.

C. Common Equity

Based on my examination of the number of common shares outstanding and monthly common stock prices for the sample railroads, I find:

The current market value of common equity for 2001 was \$38,681.8 million.

D. Capital Structure Weights

Based on my findings on the current market values of debt, preferred stock, and common equity capital, I have computed the following capital structure mix.

The market-weighted capital structure for 2001 was:

	<u>Market Weight</u>
Debt	41.06%
Preferred Stock	2.25
Equity	<u>56.69</u>
	100.00%

III. CONCEPTS USED IN MEASURING COST OF CAPITAL

A. The Cost of Capital Concept

It is generally recognized that the cost of capital for a firm is the rate that must be earned in order to satisfy the combined rates of return required by the firm's investors. In other words, to compete effectively in the marketplace for investor funds, a corporation must offer competitive returns. To do otherwise would mean that investors will not supply funds to the corporation. From the investors' perspective, the cost of capital can be viewed as the "opportunity cost" of funds. In this situation, the opportunity cost of funds to be committed to an investment is the income foregone because the funds cannot be used elsewhere. The cost of capital concept as applied herein is a forward-looking concept that measures the opportunity cost of obtaining capital.

In the following section, I apply the cost of capital concept described above in ascertaining the current cost of debt and preferred stock.

B. Measurement of the Current Cost of Debt and Preferred Stock

The current cost of debt must be determined from the current market-determined yields on all debt outstanding. This approach is necessary, and in past Board cost of capital decisions¹ has been accepted as appropriate because:

- (1) there is a lack of new issues from which to develop a representative current cost;
- (2) the stated rate of interest/dividend payment to the investor is not always the same as the cost to the railroad. For example, when securities are issued, the total amount paid by investors is seldom received by the firm. Administrative fees, such as compensation paid to investment bankers, reduce the proceeds to the firm. The effect of this is to increase the cost of the securities to the firm; and
- (3) the maturity mix and the type of security (equipment trust certificates, conditional sales agreements, long-term debt) of new security issues may be different from the average of existing securities. Because of the effect that length of maturity and type of security has on its current cost, the use of only new issues would not accurately measure the current cost.

IV. THE RAILROAD SAMPLE

The Board's order establishing this proceeding sets forth specific criteria for the inclusion of a railroad in the sample base. There are five qualifications which each railroad must meet to be included. They are as follows:

- (1) The company is a Class I line-haul railroad.

¹Ex Parte Nos. 415, 436, 452, 458, 464, 466, 473, 478, 486, 491, 506, 513, 518, 523, 523 (Sub-No. 1), 558, 558 (Sub-No. 1), 558 (Sub-No. 2) and 558 (Sub-No. 3)

- (2) If the Class I railroad is controlled by another company, the controlling company is primarily a railroad company and is not otherwise included in the study sample.
- (3) The company's bonds are rated at least BBB by Standard & Poor's and Baa by Moody's.
- (4) The company's stock is listed on either the New York or American Stock Exchange.
- (5) The company has paid dividends throughout 2001.

Appendix A shows the results of applying these criteria and the four railroad holding companies selected for inclusion in the sample. The four railroad corporations or holding companies are: Burlington Northern Santa Fe Corp., CSX Corporation, Norfolk Southern Corporation, and Union Pacific Corporation. The 2001 Sample is composed of the same railroad entities that were included in the 2000 Sample.

V. CURRENT COST AND MARKET VALUE OF DEBT

Current Cost of Bonds, Notes, and Debentures:

To determine the cost of bonds, notes and debentures, I have used information on bond prices and yields as published in Standard & Poor's monthly BOND GUIDE and a database provided by S&P.² As in previous cost of capital determinations, I calculated the cost of bonds based on all bonds, notes, and debentures for the sample railroads which were publicly traded during the year at issue. The publicly traded bonds represent 78.3 percent of the market value of the bonds issued by

²Standard & Poor's (S&P) BOND GUIDE provides monthly financial and statistical data on approximately 6,200 corporate bonds. S&P provided a database of monthly railroad bond prices and yield data extracted from the Bond Guide.

the railroads in the sample.³

Appendix B details for each of the 73 bonds the (i) monthly yield and price data, (ii) average 2001 yield and price based on a simple average of the monthly data, and (iii) book value of debt outstanding. Appendix C summarizes the yield or cost of each railroad's debt, which, when weighted by the market value of the traded debt, determines the sample composite cost of bonds, notes and debentures of 6.79 percent.

Market Value of Bonds, Notes, and Debentures:

Based on the identical methodology employed in previous cost of capital proceedings, the market value for bonds, notes, and debentures was computed using the average 2001 price for each traded bond. The average 2001 price was computed using the monthly bond price information for each bond from the BOND GUIDE.

The 2001 market value for all outstanding bonds, notes, and debentures issued by the composite railroad (comprising 132 issues) is based on Appendix D which displays for each bond the average traded price, if available from the BOND GUIDE, or the bond's "face" price. The traded prices represent what the investor is willing to pay for the bond in relation to its coupon and maturity date. For each traded bond, an average price was calculated based on the simple average of monthly prices. Where market prices were not available, I assumed them to be \$1,000, which means that investors would pay the "face value" on the bond. This assumption may slightly increase or decrease the market value of the particular issue depending upon the relationship of the instruments stated rate and the comparable market rate. However, this possible variation is not likely to significantly affect the overall estimate of the cost of debt capital because in this year 78.3 percent of the book value of

³The only bonds not included in the BOND GUIDE are bonds that are not publicly traded. There is no practical way to obtain yields and prices for bonds which are privately held.

bonds were priced at market.

The market values for bonds, notes, and debentures were derived by multiplying the average market price times the amount of debt outstanding as of December 31, 2001. Market value for bonds, notes, and debentures was \$17,188.7 million. See Appendix C.

A. Equipment Trust Certificates

Equipment Trust Certificates (ETCs) are debt obligations which are secured by the particular equipment which is acquired with the instrument's proceeds. In the event of default, creditors may repossess and resell the equipment to pay off the debt obligations. Because ETCs are not actively traded in secondary markets, it is necessary to determine their cost by examining the return on other debt securities that are actively traded.

An ETC is generally serially issued. As such, each year during its life an equal amount (typically 1/15th) of the original amount must be retired. Consequently, an ETC may be thought of as a series of individual annually-retiring bonds. In fact, when ETCs are issued, each of the maturities is sold independently from the others. A serially issued debt instrument provides an investor with the ability to purchase only the maturities that interest him. To correctly compute the composite yield on a serially issued bond, the internal rate of return on the bond's principal and interest payments must be calculated.

As mentioned earlier, ETCs are not actively traded and their cost must be estimated by comparing them to the yield on other debt. To compare ETCs to other debt instruments, I compiled the yields to maturity as detailed in Appendix E for government bills, notes, and bonds having approximately the same maturities. A government yield curve for these securities (See Appendix F) was prepared, which shows the relationship between the current costs, or yields to maturity, and maturity dates for government bonds (which, unlike ETCs, are actively traded in secondary markets).

These yield data have been adjusted by the Federal Reserve Board to reflect constant maturities. Thus, the data accurately reflect the 2001 relationships between yields and maturities. After determining the yields to maturity for government bonds of maturities similar to those of an ETC, I adjusted those yields to reflect the riskiness of the ETC as compared to government bonds. In cost of capital filings prior to Ex Parte No. 486, Railroad Cost of Capital - 1989, yield spreads between government bonds and ETCs were based on the publication Analytical Record of Yields and Yield Spreads prepared by the Bond Market Research Department of Salomon Brothers, Inc. However, since 1988, Salomon Brothers no longer compiles yields and yield spreads for ETCs. Accordingly, identical to the methodology approved by the Board for application in Ex Parte No. 486 and subsequent proceedings, yields and yield spreads used in this proceeding are based on new issues ETCs for the sample railroads as compiled by the AAR.⁴ (Identical to the methodology used in Ex Parte 486 and prior proceedings, the Salomon Brothers compilation of yields and yield spreads on comparable industrial instruments were used as a proxy for ETCs of the same rating⁵ where there were no new ETC issues of a particular rating.)

However in 2001, no new ETCs were issued by the sample railroads. Therefore, an alternative method of estimating yield spreads between government bonds and ETCs was necessary. I believe that recent historical yield spreads can be used to determine the current cost

⁴The only difference between the two methodologies is the specificity of the data base regarding the new issues. Salomon Brothers, Inc. included all new issues of ETCs (i.e., airlines, railroads, etc.) in computing yield spreads between government bonds and ETCs, while I have included only new issues of ETCs by the sample railroads in computing yield spreads between government bonds and ETCs. Use of new issues of ETCs by the sample railroads is necessarily representative of the cost of ETCs because it is all-inclusive and reflects the actual cost of new ETC issuance.

⁵ETC's are rated by Standard & Poor's, a firm which specializes in analyzing and evaluating securities, according to the likelihood of a default by the railroad responsible to pay interest and to redeem the face value. The highest available rating, AAA, indicates the least risk of default. All other things being equal, investors will pay a higher price (or accept a lower yield) for a higher rated security than for a lower rated security.

of ETCs. Consequently, I have determined the yield spread between ETCs and government bonds using an average of the spreads (government vs. BBB ETCs) used in the 1998, 1999 and 2000 Cost of Capital proceedings. The average spread between government bonds and new BBB ETCs for that period was 114 basis points. The yield spread of 114 basis points for 2001 is 57 basis points lower than the 2000 yield spread.

The methodology used is the same as the method employed and approved in previous proceedings to measure yield spread for ETC's. On average, the yield spread for A rated ETCs decreased by 57 basis point from their 2000 levels. These risk-adjusted yields provide the basis to value each ETC.

Using formulae suggested by Standard Security Calculation Methods,⁶ I determined the

⁶The formulae used to value these bonds are standards of the security industry. They are:

For bonds with less than six months to maturity:

$$DP = \left[\frac{100 + C/2}{1 + DY/360} \right] - \left[\frac{C}{2} * \frac{(180 - D)}{180} \right]$$

For bonds with six months or longer to maturity:

$$DP = \left[\frac{100}{(1 + Y/2)_{\text{EXP}}(N - 1 + D/180)} \right] + \left[\sum_{k=1}^N \frac{C/2}{(1 + Y/2)_{\text{EXP}}(K - 1 + D/180)} \right] - \left[C/2 \frac{(180 - D)}{180} \right]$$

Where: DP = Dollar price of the bond
C = Coupon rate as a percent per year
D = Number of days from settlement date to coupon date
Y = Yield to maturity as a decimal per year
EXP = Raise the term on the left to the power indicated by the term on the right
N = Whole number of coupons payable plus 1
 $\sum$
K=1 = Compute for K, values 1 to N and sum the results

market value of each maturity comprising an ETC. In effect, these formulae make it possible to determine the price investors would pay in 2001 for the contractual interest payments and price appreciation for holding the instrument. It is the best possible evidence as to the current cost of ETCs to the firm for the defined period. Computing the internal rate of return of the ETC prices and their associated cash flow streams established the current cost for ETCs. The weighted-average sum of all ETCs results in a current cost of 5.96 percent. The market value of all ETCs was \$1,952.1 million, as shown in Appendix I.

B. Conditional Sales Agreements

Conditional Sales Agreements (CSAs) are another form of railroad financing that are treated by investors as debt securities because their interest obligations are essentially the same as interest obligations on ETCs. Like ETCs, CSAs are not generally traded in secondary markets. Accordingly, as in prior proceedings, I determined their current cost from current yields on government bonds, in a similar manner to ETCs.

In cost of capital proceedings prior to Ex Parte No. 486, Railroad Cost of Capital - 1989, yield spreads for CSAs were estimated using the yield on new issues of CSAs and the Salomon Brothers, Inc. publication Analytical Record of Yield and Yield Spreads to determine the yields and yield spreads between government bonds, ETCs, and CSAs of similar rating.

However in 2001, as in 1989-1995, there were no issues of CSAs by the sample railroads. Therefore, an alternative method of estimating yield spreads was required. I believe that historical yield spread data can be used to determine the current cost of CSAs. Consequently, I have determined the yield spread for A rated CSAs based on the yield-spread relationship between ETCs and CSAs issued in 1997 and used in the 1997, 1998 and 1999 Cost of Capital proceedings. This is the most practical and accurate method available for determining the cost of CSA's. This alternative method of estimating yield spreads has been used and approved in prior proceedings.

In 1997, a new CSA was issued, the first since 1987. The yield spread of the new CSA over ETCs in 1997 was 32bp. I have used that yield spread and added it to the current ETC yield spread over government bonds of 146bp to estimate the 2001 CSA yield spread over government bonds

Using this methodology, the current cost of CSAs is 6.26 percent. Using the same method as I used to compute the market value of ETCs, I determined the market value of CSAs to be \$185.8 million. The total market value for all outstanding CSAs is set forth in Appendix I.

C. Capital Leases and Miscellaneous Debt

Capital leases are contracts between two parties and as such take many forms.⁷ Since leases are not traded in the marketplace, their current cost is not directly observable. The lack of complete information with respect to leases necessitates that many assumptions be made to estimate their current cost and their values. While the cost of this form of debt is typically higher than that of more senior debt, I have elected to exclude computation of its specific cost from the overall cost of debt for the reasons stated above. For market value purposes, capital leases have been included at book value. This is the only practical option available.

Miscellaneous debt, such as commercial paper, demand deposits, and various instruments with extremely small amounts outstanding were also excluded from the current cost computations. The book value (assumed market value) of both capital leases and miscellaneous debt is \$3,936.7 million; as a percent of the total outstanding debt of the composite railroad it is 14.1 percent. My treatment of capitalized leases and miscellaneous debt is the same approach accepted in prior Cost of Capital proceedings.

D. Flotation Costs On Debt Capital

When new debt is issued by a negotiated offering or a competitive bid, the issuing firm

⁷See generally 49 C.F.R. 1201, 2-20 for definitions.

pays a fee to the investment banking firm or firms handling the offer. These fees, typically referred to as flotation costs, cover the banker's administrative costs in handling the sale (e.g., sales costs, taxes, and profits). Flotation costs generally vary by type of security. For ETCs and CSAs the fees are extremely small, but costs increase as the administrative burden and underwriting risk increase (i.e., in order of increasing cost — ETCs and CSAs, bonds and notes, convertible bonds, and preferred stock and common stock). As discussed below, flotation costs directly reduce the gross proceeds available to the issuing firm.

An example helps to illustrate how flotation costs permanently increase the cost of debt to the railroad. If a railroad sells a 10-year bond with an annual coupon of 15 percent and investors are willing to pay \$98 for each \$100 in face value, the effective yield on the bond is 15.40 percent. Because the investment banker requires compensation (flotation costs) for his work, the railroad does not receive the full \$98 from the investors. If flotation costs reduce the net proceeds to say \$96, the effective cost to the railroad over the life of the bond is 15.82 percent. Therefore, flotation costs have increased the cost of debt from 15.40 to 15.82, or by 42 basis points. Proper accounting treatment requires the four dollars per \$100 (\$100-\$96) to be amortized on a straight line basis over the life of the bond. In addition, the Uniform System of Accounts requires the annual amortization to be charged directly to Account No. 548, Amortization of Discount on Funded Debt, a fixed charge item. This results in fixed charges for the year totaling \$15.40 (\$15.00 coupon payment + amortization of \$0.20 discount + \$0.20 flotation costs). It is important to note that these flotation costs are not recovered through operating costs but are fixed charges each year during the life of the bond. Also, it is evident that in order to reflect the total current cost of debt, flotation costs must be included.

A regulated firm requires the opportunity to cover flotation costs before it will have an incentive to make future capital expenditures. Before creditors will lend their funds, they must be

assured that the railroad will have the opportunity to earn returns sufficient to cover all costs.

Due to the low volume of railroad bonds, notes, and debentures issued during the last several years, current flotation costs cannot be accurately determined by relying on recent railroad-specific data. However, the SEC's most recent study of flotation costs⁸ provides data for 659 debt issues. It concludes that flotation costs as a percent of gross proceeds are 1.59 percent. On a 20-year bond, this equates to an increased yield of 0.16 percent. For purposes of measuring the flotation cost of bonds, I have used 0.16 percent.

Based on data supplied by Salomon Brothers Inc. and the sample railroads, flotation costs for ETCs were computed. Appendix J summarizes flotation costs for ETCs issued between 1981-1997. A simple average of all issues from 1981 to 1997 results in an increase of the yield by (.10) percent. These data are comparable to the findings of the Securities and Exchange Commission (SEC) using railroad ETC data for the years 1951, 1952 and 1955.⁹ In that study, the SEC determined that ETC flotation costs averaged 0.89 percent of gross proceeds. This SEC result equates to a 0.13 percent yield increase. For CSA's neither recent nor historical data are publicly available. I have therefore adopted a 0.13 percent, which is the same flotation cost for CSA's used in previous cost of capital proceedings.

To compute the overall effect of flotation cost on debt, the market value weight of the debt outstanding is multiplied by the respective flotation cost. As shown below, the effect of flotation cost increases the cost of debt by percent.

⁸"Cost of Flotation of Registered Securities 1971-1972," Securities and Exchange Commission, December 1974.

⁹"Cost of Flotation of Corporate Securities 1951-1955," Securities and Exchange Commission, June 1957.

<u>Type of Debt</u>	<u>Market Weight</u>	<u>Current Cost</u>	<u>Weighted Average</u>
Bonds, Notes, Etc.	91.12%	.16	.146
ETCs	8.11	.13	.011
CSAs	<u>0.77</u>	.13	<u>.001</u>
Total	100.00%		.160

VI. SUMMARY: COMPOSITE CURRENT COST OF DEBT

To determine the overall composite current cost of debt, I multiplied the cost of each category of debt times its market value proportion. Market values are properly used in this connection because they represent the amounts on which the current cost must be paid. This resulted in an overall current cost of debt for 2001 of percent (see Appendix I), as computed below:

<u>Type of Debt</u>	<u>Market Weight</u>	<u>Current Cost</u>	<u>Weighted Average</u>
Bond, Notes, Etc.	91.12%	6.79%	6.19%
ETCs	8.11	5.96	0.48
CSAs	<u>0.77</u>	6.26	<u>0.05</u>
Subtotal	<u>100.00%</u>		6.72
Flotation Cost			<u>.16</u>
Total	100.00%		6.88%

VII. PREFERRED STOCK

A. Overview of Preferred Stock

Preferred stock is a hybrid security which has some characteristics of debt and some characteristics of equity. The general characteristics of preferred stock are as follows:

1. It is an equity security similar to common stock in that it represents

ownership in the corporation.

2. It has dividend preference over common stock in that it has prior claim on the corporation's earnings before dividends are paid to holders of common stock.
3. It is a security which typically has a stated rate of return or fixed dividend. (If the stock has a par value, it will state the annual dividend payments in terms of percentage of par value -- for example, a 6 percent preferred. No-par value preferred stock has a dividend stated in a dollar amount, for example, a \$6 preferred.)
4. It is a security that pays dividends only if they are declared by the board of directors. (If there are no earnings, the dividends may be paid out of earned surplus. In any event, dividends must be declared by the board.)
5. It has prior claim over assets at dissolution. If the corporation is liquidated, the holders of preferred stock, like bondholders, have a prior claim on assets over common stock shareholders. Therefore, preferred stock is also referred to as a senior security.
6. Ownership privileges are limited. (Preferred stock usually carries no voting right. In most instances, it does not participate in earnings above a set amount. The preemptive right to buy new securities is limited.)
7. It generally has no maturity date or maturity value. (The exception is sinking fund preferred issues which effectively must be retired at some future date.)

There are numerous types of preferred stock. The chief distinction among different types of preferred stock is the method and amount of dividend payment to the investor. In addition, there are specific privileges related to each type.

a. Cumulative Preferred

Occasionally, a board will decide not to pay dividends. If the stock is cumulative, unpaid dividends accumulate and the total accumulated (in arrears) must be paid to the holder of cumulative preferred stock before any dividends can be paid to the common stockholders. Most preferred stocks are cumulative.

b. Noncumulative Preferred

When business is such that the corporation's board of directors decides not to pay dividends, holders of noncumulative preferred stock lose their dividends. These dividends cannot be claimed in the future.

c. Participating Preferred

Owners of participating preferred stock receive -- in addition to their fixed dividend -- a share in the earnings remaining after all senior securities have been paid. If any additional dividend is declared, it is generally declared along with the common stock dividend. Participating preferred stock may also be cumulative, noncumulative or convertible.

d. Redeemable Preferred

Preferred stock is usually callable immediately. This means that the issuer can retire the stock at any time, if the company has the necessary cash. In some instances, as with so-called sinking fund preferred, the issuer is required to redeem the stock over a specified period of time. Generally, when redemption occurs, the firm must pay a premium price to the holder of the instrument.

e. Auction Market Preferred

This stock represents a new variety of variable-rate preferred stock. This security is generally appropriate for corporations with "temporary" idle corporate funds. The dividends, payable every seven weeks in the case of most issues, are determined by bids from current holders and potential buyers. The Auction Market Preferred shares are redeemable at the issuer's option, in whole or in

part, on or near the interest payment date.

f. Convertible Preferred

A preferred stock is convertible if the holder has the privilege of converting the preferred stock into common stock at specified prices. This is an advantage to the holder if the market price of common stock increases. Often the convertible preferred will sell at a premium (above conversion parity) because of the conversion feature, especially as the selling price of common issues increase. Dividends of convertible preferred stock can also be cumulative or noncumulative.

B. Measurement of the Current Cost of Preferred Stock

The cost of preferred depends, in large part, on its specific features. I have reviewed the features and determined the current cost of all publicly traded preferred stock of the railroads in the sample. These determinations are summarized in Appendices K and L, and are based on the following methodologies:

- (1) The Dividend Yield Method is used when the preferred is not convertible and there is no specific requirement to redeem the preferred. It is also used to cost preferred issues retired or redeemed during the year. The current cost in this instance is computed by dividing the stated dividend by the current market price.
- (2) The Internal Rate of Return Method (IRR) is used for preferred stocks which are not convertible but are subject to a mandatory redemption schedule providing a premium over the stated/par value. The current cost is equal to rate of return which equates the current price with the present value of dividends plus the redemption price.
- (3) The Discounted Cash Flow Method (DCF) is used when the preferred is convertible at the option of the holder, and the market values of the

preferred and common indicate that conversion is likely to occur or the conversion right is influencing the price of the preferred; the preferred has the same cost as an equity issue. In this instance, the (DCF) method used to determine the current cost of convertible preferred results in the current cost of equity as set forth in Mr. Rockey's statement in this proceeding.

VIII. SUMMARY: COMPOSITE CURRENT COST OF PREFERRED

Based on my analyses of outstanding preferred issues, I have determined, as summarized in Appendix K and analyzed in Appendices L through O, the current cost of preferred issues (excluding flotation costs) for the sample railroads to be 6.26 percent.¹⁰ This compares to a preferred stock cost of 6.28 percent in 2000. In my view, the low cost of preferred reflects the favorable tax treatment granted to corporate holders of preferred. Under the tax law in effect in 2001, a corporation holding preferred stock could exclude at least 70 percent of dividends on preferred from taxation.

As in prior years, preferred stock accounts for only a very small percentage of the industry's capital structure.

IX. MARKET VALUES OF DEBT, PREFERRED STOCK AND EQUITY

As required by the Ex Parte No. 558 (Sub-No.5) Notice, the market values of debt, preferred stock, and equity have been compiled to compute the 2001 capital structure of the railroad industry.

The market value of debt is computed by summing the component market values as shown in Appendix I. The 2001 market value of debt is \$28,014.5 million.

¹⁰Flotation costs are defined as the underwriter's spread and issuing costs associated with the issuance and marketing of new preferred issues. The net effect of flotation costs on the firm is to reduce the proceeds of the initial preferred stock sale and, therefore, increase the effective cost of capital to the firm.

The computation of the market value of preferred stock is computed by summing the component market values as shown in Appendix K. The 2001 market value of preferred stock is \$ 1,532.7 million. The computation of the 2001 market value of equity as detailed in Appendix P, is \$ 38,681.8 million.

The 2001 capital structure of the railroad composite is 41.06 percent debt, 2.25 percent preferred stock, and 56.69 percent equity as indicated by the market values of debt, preferred, and equity. See Table No. 1 below.

Table No. 1

2001 Composite Capital

	<u>Structure</u>	
	<u>Millions</u>	<u>Weight</u>
Debt	\$28,014.5	41.06 %
Preferred Stock	1,532.7	2.25
Equity	<u>38,681.8</u>	<u>56.69</u>
Total	\$68,229.0	100.00 %

Source: Appendices I, K and P

QUALIFICATIONS OF DAVID F. MILLER

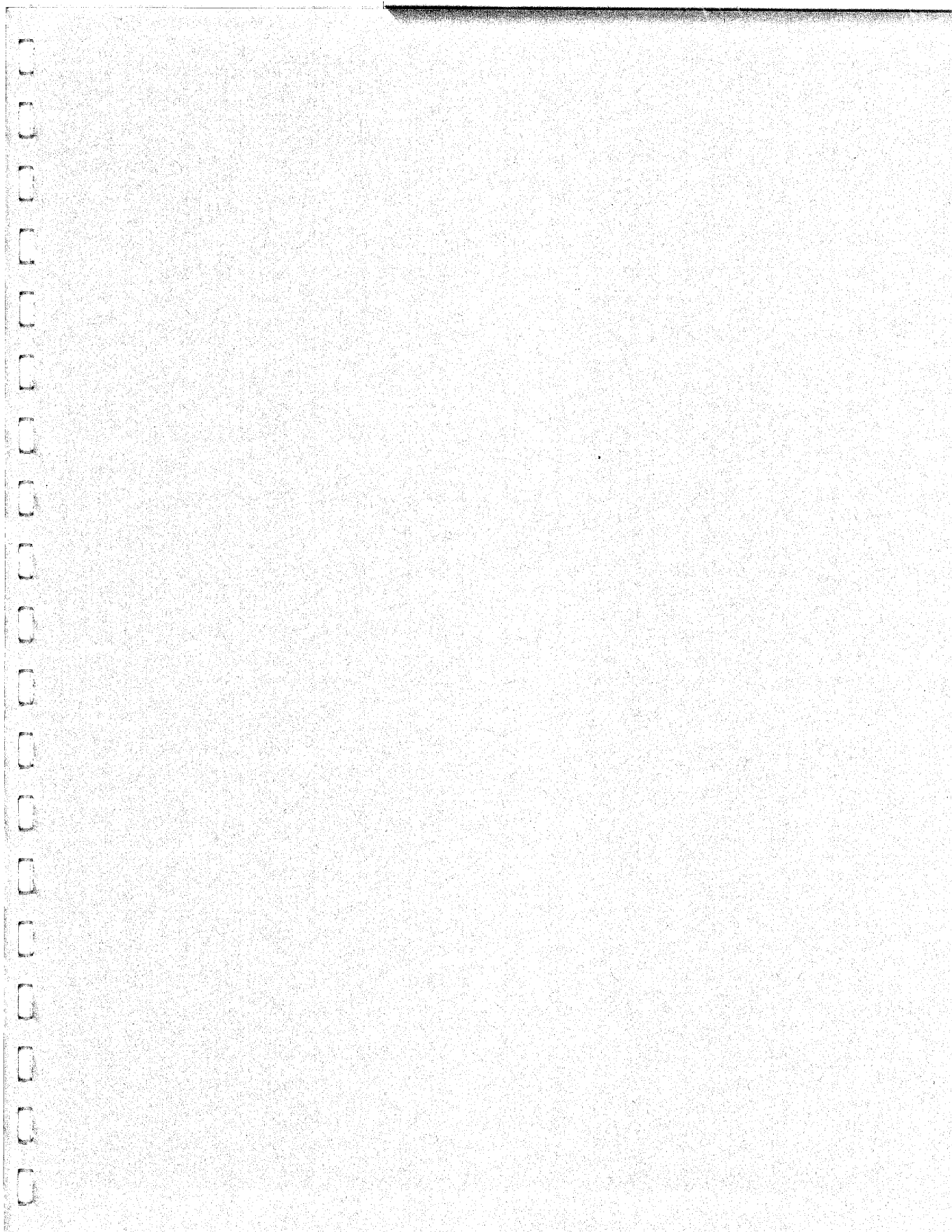
I am Director - Accounting & Finance in the Policy and Economics Department of the Association of American Railroads with offices at 50 F Street, N.W., Washington, D.C. 20001.

I received my degree of Bachelor of Arts in Accounting/Finance from the University of Maryland in 1967. In 1976, I received the degree of Master of Business Administration with concentration in Accounting from the George Washington University. Currently, I am a Certified Public Accountant licensed since 1976 in the State of Maryland. I also hold the following professional designations of (i) Certified Fraud Examiner (CFE) issued by the National Association of Certified Fraud Examiners, (ii) Certified Valuation Analyst issued by the National Association of Certified Valuation Analysts and (iii) Certified Rate of Return Analyst issued by The National Society of Rate of Return Analysts.

From 1974 until September 1986, I was employed by the consulting firm of R. L. Banks and Associates, Inc. as Senior Transportation Economist. At R. L. Banks and Associates, Inc., I conducted economic studies of the transit and railroad industries.

In addition to my consulting experience, I have taught at the college level during the period of 1976 to 2000. Currently, I am an Adjunct Associate Professor with the University of Maryland, and have taught courses in Auditing, Cost Accounting, Corporate Finance, and Investments. I am currently an active member in the Washington Chapter of Certified Fraud Examiners and a Vice President of the Maryland Chapter of Certified Valuation Analysts.

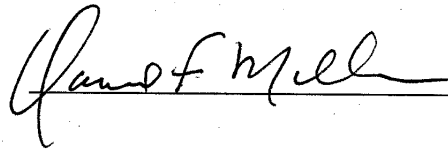
In the past I have testified and submitted verified statements in proceedings before the Surface Transportation Board, State of Delaware Chancery Court, and railroad industry arbitration panels.



VERIFICATION

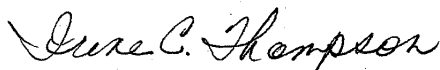
WASHINGTON,)
DISTRICT OF COLUMBIA) SS

David F. Miller, being duly sworn, deposes and says that he has read the foregoing statement, knows the contents thereof, and that the same are true as stated.



Subscribed and Sworn to before me
this 27th day of March 2002.

NOTARY PUBLIC


IRENE C. THOMPSON
Notary Public, District of Columbia
My Commission Expires December 14, 2002

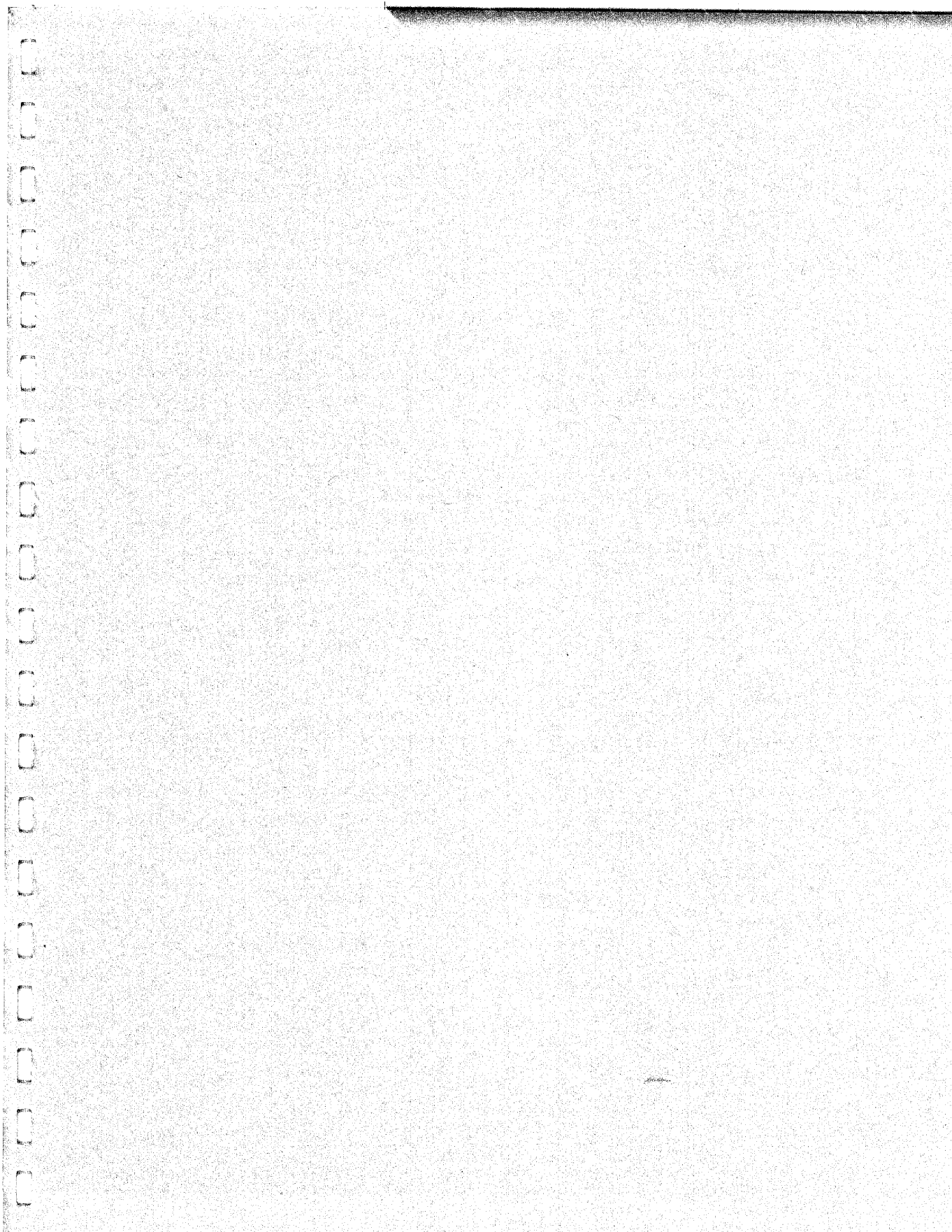
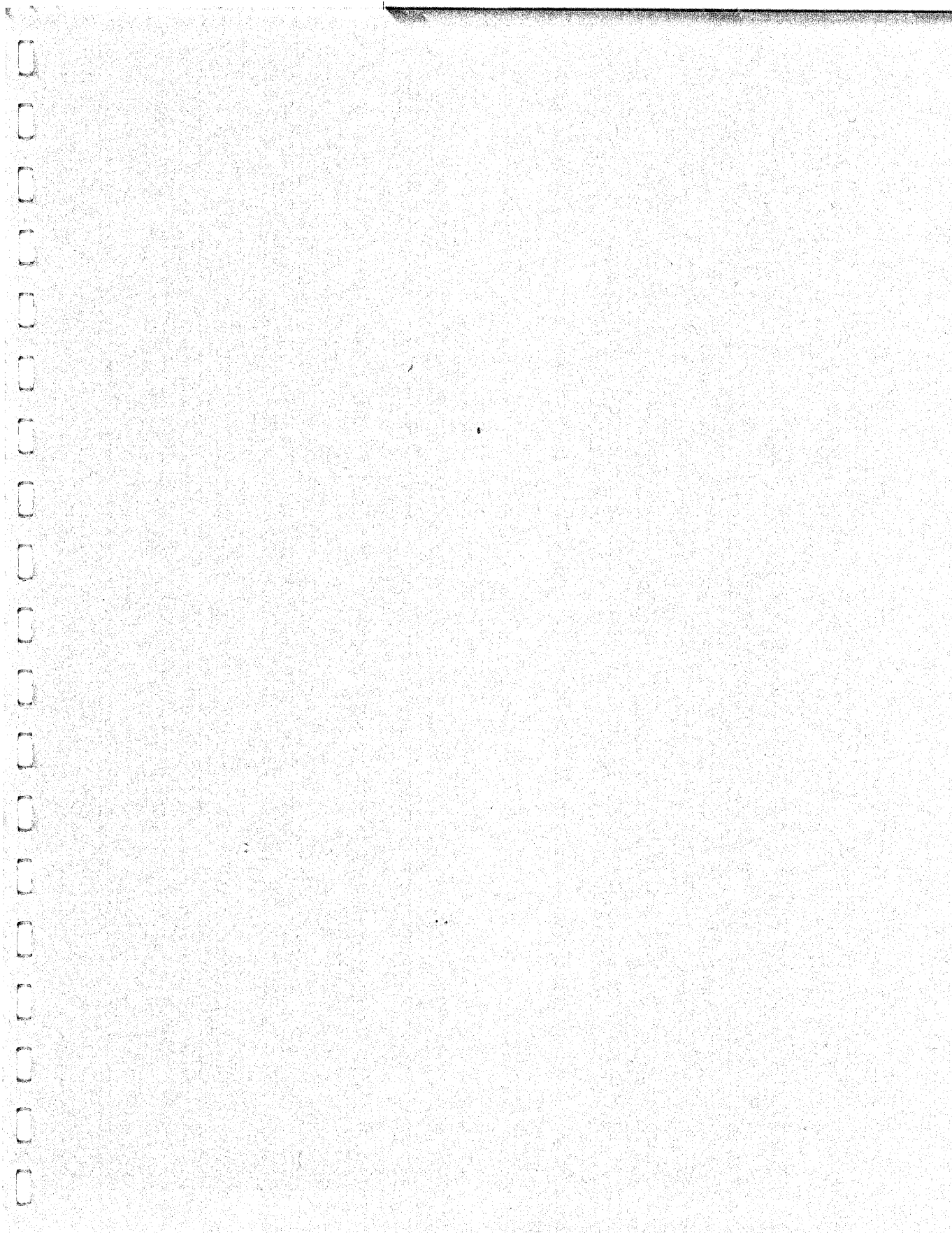


Table No. 1

**EVALUATION OF CLASS I RAILROADS
UNDER STB SELECTION CRITERIA**

Class I Railroad	Parent	Listed NYSE/ASE	Dividends Throughout 2001	Rail Assets Account For At Least 50% of Parent	Adequate Debt Rating
BNSF	BNSF	YES	YES	YES	YES
CRC	CSX and NSC	NO	NO	YES	YES
CSXT	CSX	YES	YES	YES	YES
GTW*	CN	YES	YES	NO	YES
IC*	CN	YES	YES	NO	YES
KCS	KCSI	YES	NO	YES	YES
NS	NSC	YES	YES	YES	YES
SOO *	CP Ltd.	YES	YES	NO	YES
UP	UPC	YES	YES	YES	YES

* Following STB precedent, CN (parent of GTW and IC) and CP Ltd. (parent of SOO during the majority of 2001) were not included in the Sample because both CN and CP Ltd. are Canadian corporations and the cost of capital proceeding is concerned with determining costs for U.S. railroads under STB jurisdiction.



APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2006 Series H

COUPON: 9.250

AMOUNT OUTSTANDING: \$275.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 112.00	6.96 %
1 0228	115.00	6.42
1 0330	110.37	7.22
1 0430	110.37	7.20
1 0531	112.00	6.87
1 0629	110.37	7.15
1 0731	111.00	7.01
1 0831	114.55	6.32
1 0928	114.00	6.40
1 1031	114.10	6.05
1 1130	113.00	6.53
1 1231	111.62	6.77
AVERAGE	112.37	6.74 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2020

COUPON: 6.550 Con Mtg O

AMOUNT OUTSTANDING: \$15.378 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>	
1 0131	\$	82.50	8.36	%
1 0228		92.00	7.31	
1 0330		90.00	7.52	
1 0430		86.00	7.96	
1 0531		88.54	7.69	
1 0629		88.00	7.75	
1 0731		87.00	7.86	
1 0831		91.00	7.43	
1 0928		92.00	7.33	
1 1031		92.75	7.24	
1 1130		95.00	7.02	
1 1231		92.00	7.33	
AVERAGE	\$	89.73	7.57	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2020 Con Mkt L

COUPON: 3.800

AMOUNT OUTSTANDING: \$6.195 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	57.00	8.22
1 0228		63.57	7.30
1 0330		59.50	7.87
1 0430		60.92	7.68
1 0531		60.82	7.70
1 0629		62.86	7.43
1 0731		63.62	7.34
1 0831		64.96	7.17
1 0928		61.12	7.70
1 1031		61.25	7.60
1 1130		65.00	7.20
1 1231		64.00	7.34
AVERAGE	\$	62.05	7.55 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN
 MATURITY YEAR: 2045
 COUPON: 3.200 Con. Mtg. M
 AMOUNT OUTSTANDING: \$12.998 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	43.00	7.78
1 0228		43.50	7.70
1 0330		42.00	7.96
1 0430		42.25	7.92
1 0531		44.00	7.62
1 0629		43.50	7.71
1 0731		45.00	7.47
1 0831		46.37	7.26
1 0928		44.00	7.63
1 1031		44.12	7.60
1 1130		47.00	7.18
1 1231		46.00	7.33
AVERAGE		\$ \$44.23	7.60 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2020 Con Mkt N

COUPON: 8.150

AMOUNT OUTSTANDING: \$2.506 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 108.27	7.35
1 0228	108.75	7.30
1 0330	105.45	7.60
1 0430	106.00	7.55
1 0531	109.37	7.23
1 0629	109.00	7.26
1 0731	101.00	8.04
1 0831	101.62	7.98
1 0928	100.50	8.09
1 1031	114.00	6.85
1 1130	102.25	7.91
1 1231	107.00	7.45
AVERAGE	\$ \$106.10	7.55 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2020 Con Mkt K

COUPON: 6.550

AMOUNT OUTSTANDING: \$3.978 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	91.02	7.41 %
1 0228		92.00	7.31
1 0330		91.45	7.37
1 0430		88.90	7.64
1 0531		88.54	7.69
1 0629		91.00	7.43
1 0731		92.12	7.31
1 0831		93.60	7.16
1 0928		92.00	7.33
1 1031		90.00	7.52
1 1130		93.50	7.18
1 1231		92.00	7.33
AVERAGE	\$	91.34	7.39 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2030

COUPON: 7.950

AMOUNT OUTSTANDING: \$275.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 107.50	7.33
1 0228	107.74	7.31
1 0330	106.67	7.39
1 0430	104.80	7.54
1 0531	106.98	7.36
1 0629	106.88	7.37
1 0731	108.30	7.26
1 0831	108.91	7.21
1 0928	105.49	7.48
1 1031	113.84	6.86
1 1130	108.37	7.25
1 1231	<u>111.31</u>	<u>7.03</u>
AVERAGE	\$108.07	7.28 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2002

COUPON: 7.000

AMOUNT OUTSTANDING: \$150.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	102.29	5.99
1 0228	102.67	5.79
1 0330	102.76	5.71
1 0430	102.86	5.62
1 0531	102.95	5.52
1 0629	103.04	5.43
1 0731	102.85	5.47
1 0831	102.85	5.40
1 0928	103.21	5.14
1 1031	102.55	5.89
1 1130	102.86	5.17
1 1231	102.62	5.24
AVERAGE	\$102.79	5.53 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2022

COUPON: 8.750

AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>	
1 0131	\$	111.48	7.66	%
1 0228		112.36	7.58	
1 0330		111.08	7.69	
1 0430		108.87	7.88	
1 0531		110.37	7.75	
1 0629		110.79	7.71	
1 0731		111.01	7.69	
1 0831		112.37	7.57	
1 0928		106.61	8.09	
1 1031		114.98	7.36	
1 1130		108.22	7.94	
1 1231		111.37	7.65	

AVERAGE \$ \$110.79 7.71 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN

MATURITY YEAR: 2023

COUPON: 7.500

AMOUNT OUTSTANDING: \$150.000 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	91.46	8.33 %
1 0228		92.13	8.26
1 0330		91.14	8.36
1 0430		89.45	8.55
1 0531		90.62	8.42
1 0629		91.02	8.38
1 0731		91.20	8.36
1 0831		97.43	7.73
1 0928		92.50	8.23
1 1031		98.92	7.59
1 1130		93.78	8.10
1 1231		96.79	7.80
AVERAGE	\$	93.04	8.18 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN SANTA FE

MATURITY YEAR: 2025

COUPON: 7.000

AMOUNT OUTSTANDING: \$350.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 96.32	7.31 %
1 0228	95.75	7.36
1 0330	95.70	7.37
1 0430	94.28	7.50
1 0531	96.07	7.34
1 0629	96.09	7.34
1 0731	97.52	7.21
1 0831	98.27	7.14
1 0928	94.10	7.52
1 1031	102.00	6.83
1 1130	96.96	7.26
1 1231	99.83	7.01
AVERAGE	\$ 96.91	7.27 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BURLINGTON NORTHERN SANTA FE

MATURITY YEAR: 2005

COUPON: 6.375

AMOUNT OUTSTANDING: \$300.929 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	101.05	6.15 %
1 0228		101.32	6.09
1 0330		102.01	5.95
1 0430		101.24	6.10
1 0531		102.05	5.93
1 0629		101.98	5.94
1 0731		102.02	5.92
1 0831		102.56	5.80
1 0928		104.11	5.45
1 1031		103.60	5.64
1 1130		102.47	5.80
1 1231		103.04	5.65
AVERAGE	\$	\$102.29	5.87 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2016
 COUPON: 6.875
 AMOUNT OUTSTANDING: \$175.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 99.91	6.88 %
1 0228	100.55	6.81
1 0330	102.34	6.63
1 0430	99.51	6.92
1 0531	101.38	6.72
1 0629	101.01	6.76
1 0731	101.57	6.71
1 0831	102.36	6.62
1 0928	102.89	6.57
1 1031	103.81	6.48
1 1130	101.48	6.71
1 1231	102.73	6.58
AVERAGE	\$ 101.63	6.70 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF

MATURITY YEAR: 2009

COUPON: 6.125

AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 96.07	6.70 %
1 0228	96.63	6.62
1 0330	97.37	6.51
1 0430	95.90	6.74
1 0531	97.10	6.56
1 0629	97.33	6.52
1 0731	97.81	6.45
1 0831	98.78	6.31
1 0928	99.71	6.16
1 1031	100.30	6.07
1 1130	98.51	6.35
1 1231	99.46	6.20
AVERAGE	\$ 97.91	6.43 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2036
 COUPON: 7.290
 AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 103.07	7.05 %
1 0228	104.02	6.98
1 0330	103.87	6.99
1 0430	102.18	7.12
1 0531	102.99	7.05
1 0629	102.97	7.06
1 0731	103.72	7.00
1 0831	104.30	6.96
1 0928	104.80	6.92
1 1031	106.19	6.82
1 1130	103.36	7.03
1 1231	105.51	6.87
AVERAGE	\$ 103.92	6.99 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

MATURITY YEAR: 2097
COUPON: 7.250
AMOUNT OUTSTANDING: \$200.000 Million
NAME: BNSF

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 91.64	7.91 %
1 0228	90.80	7.98
1 0330	90.39	8.01
1 0430	89.46	8.10
1 0531	91.44	7.92
1 0629	91.08	7.95
1 0731	91.43	7.92
1 0831	92.78	7.81
1 0928	88.99	8.14
1 1031	96.20	7.53
1 1130	92.15	7.86
1 1231	93.87	7.72
AVERAGE	\$ 91.69	7.90 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2027
 COUPON: 6.875
 AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 94.70	7.32 %
1 0228	93.68	7.41
1 0330	94.06	7.38
1 0430	92.72	7.50
1 0531	94.54	7.33
1 0629	94.42	7.34
1 0731	95.75	7.23
1 0831	96.62	7.15
1 0928	92.50	7.52
1 1031	100.39	6.84
1 1130	95.38	7.26
1 1231	98.29	7.01
AVERAGE	\$ 95.25	7.27 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2028
 COUPON: 6.700
 AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 92.41	7.94 %
1 0228	92.28	7.97
1 0330	92.01	8.03
1 0430	90.37	8.33
1 0531	92.27	8.00
1 0629	92.39	7.99
1 0731	93.63	7.78
1 0831	94.15	7.69
1 0928	90.40	8.39
1 1031	98.28	6.97
1 1130	93.17	7.90
1 1231	96.18	7.36
AVERAGE	\$ 93.13	7.86 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
MATURITY YEAR: 2029
COUPON: 7.082
AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	93.25	7.66
1 0228	92.93	7.69
1 0330	97.29	7.30
1 0430	94.70	7.53
1 0531	96.57	7.36
1 0629	96.45	7.37
1 0731	97.49	7.29
1 0831	98.39	7.21
1 0928	94.72	7.53
1 1031	102.95	6.84
1 1130	97.65	7.27
1 1231	100.77	7.01
AVERAGE	\$96.93	7.34 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2029
 COUPON: 6.750
 AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	92.91	7.34
1 0228	92.80	7.35
1 0330	92.52	7.37
1 0430	90.85	7.53
1 0531	92.76	7.35
1 0629	92.87	7.34
1 0731	94.21	7.23
1 0831	94.52	7.20
1 0928	90.97	7.52
1 1031	98.80	6.84
1 1130	94.78	7.18
1 1231	96.69	7.01
AVERAGE	\$93.72	7.27 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2007
 COUPON: 7.875
 AMOUNT OUTSTANDING: \$300.307 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	107.19	6.60
1 0228	106.57	6.69
1 0330	107.92	6.45
1 0430	106.86	6.62
1 0531	107.82	6.44
1 0629	107.40	6.50
1 0731	108.31	6.33
1 0831	108.85	6.22
1 0928	110.49	5.91
1 1031	109.75	6.17
1 1130	108.56	6.22
1 1231	109.73	5.99
AVERAGE	\$108.29	6.35 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
MATURITY YEAR: 2020
COUPON: 8.125
AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	107.95	7.36
1 0228	107.70	7.38
1 0330	108.41	7.31
1 0430	106.79	7.46
1 0531	108.65	7.29
1 0629	107.99	7.35
1 0731	109.83	7.18
1 0831	110.01	7.16
1 0928	106.50	7.48
1 1031	113.38	6.88
1 1130	109.10	7.24
1 1231	111.42	7.03
AVERAGE	\$108.98	7.26 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2037
 COUPON: 6.530
 AMOUNT OUTSTANDING: \$175.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	101.13	6.44
1 0228	101.97	6.39
1 0330	102.39	6.36
1 0430	102.38	6.36
1 0531	102.70	6.33
1 0629	102.99	6.31
1 0731	103.05	6.31
1 0831	103.28	6.29
1 0928	104.07	6.24
1 1031	104.64	6.20
1 1130	103.87	6.25
1 1231	104.41	6.22
AVERAGE	\$103.07	6.31 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2047
 COUPON: 3.000
 AMOUNT OUTSTANDING: \$34.479 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	74.00	4.29
1 0228	72.00	4.42
1 0330	72.00	4.42
1 0430	74.12	4.28
1 0531	74.25	4.28
1 0629	74.25	4.28
1 0731	74.25	4.25
1 0831	75.00	4.23
1 0928	75.00	4.23
1 1031	78.00	4.05
1 1130	75.00	4.23
1 1231	75.00	4.24
AVERAGE	\$74.41	4.27 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF

MATURITY YEAR: 2004

COUPON: 8.625

AMOUNT OUTSTANDING: \$100.116 Million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>
1 0131	\$	108.45	6.52
1 0228		106.41	6.98
1 0330		106.88	6.84
1 0430		106.33	6.96
1 0531		106.87	6.79
1 0629		107.28	6.65
1 0731		107.46	6.57
1 0831		107.89	6.43
1 0928		109.29	6.02
1 1031		109.35	6.31
1 1130		108.73	6.08
1 1231		108.82	6.00
AVERAGE		\$107.81	6.51 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF

MATURITY YEAR: 2010 Series Q
Great Northern

COUPON: 2.650

AMOUNT OUTSTANDING: \$28.805 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	69.00	7.01
1 0228	73.74	6.23
1 0330	75.26	6.01
1 0430	72.25	6.54
1 0531	71.60	6.68
1 0629	72.25	6.60
1 0731	72.25	6.60
1 0831	76.00	6.02
1 0928	75.75	6.08
1 1031	75.70	6.06
1 1130	74.75	6.31
1 1231	74.62	6.37
AVERAGE	\$73.60	6.38 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: BNSF
 MATURITY YEAR: 2011
 COUPON: 6.750
 AMOUNT OUTSTANDING: \$400.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131		
1 0228		
1 0330	New Issue	
1 0430		
1 0531		
1 0629		
1 0731	100.96	6.62
1 0831	101.64	6.53
1 0928	102.18	6.46
1 1031	103.25	6.34
1 1130	100.72	6.65
1 1231	<u>102.51</u>	<u>6.41</u>
AVERAGE	\$101.88	6.50 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2006
COUPON: 9.000
AMOUNT OUTSTANDING: \$300.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 110.58	6.95 %
1 0228	111.15	6.83
1 0330	111.99	6.65
1 0430	110.84	6.84
1 0531	111.56	6.68
1 0629	111.59	6.66
1 0731	111.90	6.57
1 0831	112.31	6.47
1 0928	114.79	5.97
1 1031	114.20	6.31
1 1130	112.48	6.35
1 1231	113.54	6.11
AVERAGE	112.24	6.53 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2022
COUPON: 8.625
AMOUNT OUTSTANDING: \$200.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 110.05	7.67 %
1 0228	110.70	7.61
1 0330	110.23	7.65
1 0430	108.70	7.79
1 0531	110.20	7.65
1 0629	112.08	7.49
1 0731	112.62	7.44
1 0831	114.49	7.28
1 0928	111.03	7.57
1 1031	117.77	7.03
1 1130	113.45	7.36
1 1231	116.12	7.14
AVERAGE	112.29	7.47 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
 MATURITY YEAR: 2022
 COUPON: 8.100
 AMOUNT OUTSTANDING: \$150.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 104.07	7.71 %
1 0228	105.43	7.59
1 0330	104.84	7.64
1 0430	103.57	7.75
1 0531	105.04	7.62
1 0629	106.66	7.47
1 0731	107.22	7.42
1 0831	109.04	7.26
1 0928	105.71	7.56
1 1031	106.00	7.40
1 1130	108.02	7.35
1 1231	110.87	7.10
AVERAGE	106.37	7.49 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
 MATURITY YEAR: 2002
 COUPON: 7.000
 AMOUNT OUTSTANDING: \$100.000 million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>	
1 0131	\$	101.56	6.34	%
1 0228		101.86	6.19	
1 0330		101.95	6.12	
1 0430		102.19	5.99	
1 0531		102.31	5.89	
1 0629		102.48	5.77	
1 0731		102.36	5.79	
1 0831		102.44	5.71	
1 0928		103.18	5.27	
1 1031		102.85	5.81	
1 1130		102.90	5.27	
1 1231		102.90	5.18	
AVERAGE		102.42	5.78	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
 MATURITY YEAR: 2008
 COUPON: 6.250
 AMOUNT OUTSTANDING: \$400.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 96.00	6.86 %
1 0228	96.99	6.71
1 0330	97.45	6.64
1 0430	96.55	6.79
1 0531	97.52	6.63
1 0629	98.45	6.49
1 0731	98.97	6.41
1 0831	100.00	6.24
1 0928	102.15	5.90
1 1031	99.61	6.30
1 1130	98.64	6.47
1 1231	100.44	6.17
AVERAGE	98.56	6.47 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
 MATURITY YEAR: 2028
 COUPON: 6.800
 AMOUNT OUTSTANDING: \$200.000 million

<u>DATE</u>		<u>PRICE</u>	<u>YIELD</u>	
1 0131	\$	87.78	7.87	%
1 0228		90.63	7.60	
1 0330		90.51	7.61	
1 0430		88.64	7.79	
1 0531		90.01	7.66	
1 0629		91.86	7.49	
1 0731		92.30	7.45	
1 0831		93.65	7.33	
1 0928		90.00	7.66	
1 1031		97.47	7.00	
1 1130		94.36	7.27	
1 1231		95.61	7.16	
AVERAGE		91.90	7.49	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2008
COUPON: 6.590
AMOUNT OUTSTANDING: \$50.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 96.92	7.08 %
1 0228	98.81	6.77
1 0330	99.47	6.67
1 0430	98.20	6.88
1 0531	99.10	6.73
1 0629	100.29	6.53
1 0731	100.71	6.46
1 0831	101.41	6.35
1 0928	103.35	6.03
1 1031	104.00	5.96
1 1130	102.28	6.20
1 1231	102.79	6.11
AVERAGE	100.61	6.48 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2008
COUPON: 6.500
AMOUNT OUTSTANDING: \$40.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 96.35	7.08 %
1 0228	98.22	6.78
1 0330	98.94	6.66
1 0430	97.64	6.88
1 0531	98.54	6.73
1 0629	99.76	6.53
1 0731	100.19	6.46
1 0831	100.89	6.34
1 0928	102.83	6.03
1 1031	103.49	5.96
1 1130	101.76	6.20
1 1231	102.28	6.11
AVERAGE	100.07	6.48 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2009
COUPON: 5.860
AMOUNT OUTSTANDING: \$3.000 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	\$ 91.99	7.10	%
1 0228	93.80	6.82	
1 0330	94.91	6.65	
1 0430	93.40	6.90	
1 0531	94.27	6.76	
1 0629	95.55	6.56	
1 0731	96.05	6.48	
1 0831	96.93	6.34	
1 0928	98.80	6.04	
1 1031	99.61	5.91	
1 1130	97.85	6.20	
1 1231	98.40	6.11	
AVERAGE	95.96	6.49	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
MATURITY YEAR: 2003
COUPON: 3.375
AMOUNT OUTSTANDING: \$28.730 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 91.37	6.42 %
1 0228	91.37	6.50
1 0330	96.06	4.79
1 0430	93.75	5.73
1 0531	94.12	5.64
1 0629	93.50	5.96
1 0731	93.50	5.96
1 0831	94.75	5.58
1 0928	98.50	4.00
1 1031	98.75	3.90
1 1130	98.92	3.86
1 1231	96.12	5.22
AVERAGE	95.06	5.30 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: CSX CORPORATION
 MATURITY YEAR: 2003
 COUPON: 2.875
 AMOUNT OUTSTANDING: \$26.131 million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	\$ 93.00	5.30 %
1 0228	94.44	4.83
1 0330	92.75	5.53
1 0430	93.50	5.30
1 0531	92.50	5.78
1 0629	92.50	5.85
1 0731	92.50	5.86
1 0831	92.50	6.05
1 0928	94.00	5.46
1 1031	98.00	3.54
1 1130	97.12	4.17
1 1231	95.00	5.26
AVERAGE	93.98	5.24 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NSC 2001 Bonds Appendix B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2031

COUPON: 7.250

AMOUNT OUTSTANDING: \$700.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131		New Issue
1 0228	97.04	7.49
1 0330	96.86	7.51
1 0430	95.35	7.64
1 0531	97.94	7.41
1 0629	97.71	7.43
1 0731	99.14	7.32
1 0831	99.82	7.26
1 0928	97.55	7.45
1 1031	104.39	6.90
1 1130	100.73	7.18
1 1231	102.14	7.07
AVERAGE	\$98.97	7.33

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN (Norfolk & Western)
MATURITY YEAR: 2006
COUPON: 7.400 %
AMOUNT OUTSTANDING: \$100.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	103.99	6.64
1 0228	105.18	6.41
1 0330	104.66	6.50
1 0430	103.53	6.70
1 0531	104.20	6.56
1 0629	105.48	6.31
1 0731	105.61	6.27
1 0831	106.06	6.18
1 0928	107.67	5.85
1 1031	107.09	6.08
1 1130	105.75	6.19
1 1231	105.88	6.15
AVERAGE	\$105.43	6.32

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2006

COUPON: 7.220 %

AMOUNT OUTSTANDING: \$100.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	103.15	6.62
1 0228	104.35	6.39
1 0330	103.83	6.48
1 0430	102.71	6.68
1 0531	103.39	6.55
1 0629	104.68	6.29
1 0731	104.82	6.25
1 0831	105.29	6.15
1 0928	106.89	5.83
1 1031	106.37	6.03
1 1130	105.01	6.17
1 1231	105.15	6.13
AVERAGE	\$104.64	6.30

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2011

COUPON: 6.750

AMOUNT OUTSTANDING: \$300.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131		New Issue
1 0228	98.67	6.92
1 0330	100.45	6.68
1 0430	98.44	6.95
1 0531	99.87	6.76
1 0629	99.73	6.78
1 0731	100.79	6.64
1 0831	101.52	6.54
1 0928	101.69	6.52
1 1031	103.10	6.35
1 1130	100.31	6.70
1 1231	101.42	6.55
AVERAGE	\$100.54	6.67

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2002

COUPON: 6.950

AMOUNT OUTSTANDING: \$500.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	101.15	6.38
1 0228	101.50	6.19
1 0330	101.61	6.11
1 0430	101.79	5.98
1 0531	101.84	5.91
1 0629	101.95	5.80
1 0731	101.78	5.85
1 0831	101.76	5.81
1 0928	102.06	5.57
1 1031	101.25	6.34
1 1130	101.69	5.68
1 1231	101.43	5.80
AVERAGE	\$101.65	5.95

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2007

COUPON: 7.350

AMOUNT OUTSTANDING: \$750.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	103.77	6.68
1 0228	104.95	6.47
1 0330	104.73	6.50
1 0430	103.75	6.67
1 0531	104.51	6.53
1 0629	105.53	6.34
1 0731	105.74	6.29
1 0831	106.09	6.22
1 0928	107.99	5.87
1 1031	106.00	5.95
1 1130	105.99	6.20
1 1231	107.15	5.98
AVERAGE	\$105.52	6.31

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2017

COUPON: 7.700

AMOUNT OUTSTANDING: \$550.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	103.98	7.28
1 0228	104.66	7.22
1 0330	103.19	7.36
1 0430	102.26	7.46
1 0531	103.45	7.34
1 0629	104.03	7.27
1 0731	106.01	7.08
1 0831	107.65	6.91
1 0928	106.76	7.00
1 1031	111.65	6.56
1 1130	108.00	6.87
1 1231	109.15	6.76
AVERAGE	\$105.90	7.09

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2027

COUPON: 7.800

AMOUNT OUTSTANDING: \$800.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	105.39	7.33
1 0228	104.41	7.41
1 0330	103.17	7.52
1 0430	101.66	7.65
1 0531	103.68	7.47
1 0629	104.13	7.44
1 0731	105.43	7.33
1 0831	106.11	7.27
1 0928	102.92	7.54
1 1031	105.50	7.38
1 1130	107.40	7.17
1 1231	109.05	7.03
AVERAGE	\$104.90	7.38

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2037

COUPON: 7.050

AMOUNT OUTSTANDING: \$750.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	102.10	6.89
1 0228	102.79	6.84
1 0330	103.40	6.79
1 0430	103.20	6.81
1 0531	103.32	6.80
1 0629	103.55	6.78
1 0731	103.64	6.77
1 0831	104.33	6.72
1 0928	105.93	6.61
1 1031	106.41	6.58
1 1130	106.13	6.60
1 1231	106.16	6.59
AVERAGE	\$104.25	6.73

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2097

COUPON: 7.900

AMOUNT OUTSTANDING: \$350.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	101.10	7.81
1 0228	101.97	7.74
1 0330	100.61	7.85
1 0430	98.82	7.99
1 0531	100.39	7.86
1 0629	100.87	7.83
1 0731	101.12	7.81
1 0831	102.50	7.70
1 0928	98.17	8.04
1 1031	101.50	7.70
1 1130	102.31	7.72
1 1231	103.28	7.64
AVERAGE	\$101.05	7.81

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN CORP.

MATURITY YEAR: 2021

COUPON: 9.000

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	115.28	7.54
1 0228	115.65	7.50
1 0330	114.41	7.61
1 0430	112.60	7.76
1 0531	114.66	7.58
1 0629	115.08	7.54
1 0731	115.62	7.49
1 0831	117.00	7.37
1 0928	112.89	7.73
1 1031	119.90	7.15
1 1130	115.29	7.51
1 1231	117.91	7.28
AVERAGE	\$115.52	7.51

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2004

COUPON: 7.875

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	104.51	6.58
1 0228	105.33	6.33
1 0330	105.47	6.25
1 0430	105.30	6.27
1 0531	105.74	6.11
1 0629	106.07	5.98
1 0731	106.09	5.93
1 0831	106.32	5.82
1 0928	107.79	5.32
1 1031	107.69	5.72
1 1130	107.00	5.46
1 1231	107.26	5.31
AVERAGE	\$106.21	5.92

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2009

COUPON: 6.200

AMOUNT OUTSTANDING: \$400.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	96.51	6.71
1 0228	97.92	6.50
1 0330	97.12	6.62
1 0430	95.71	6.84
1 0531	97.20	6.62
1 0629	97.47	6.58
1 0731	98.06	6.49
1 0831	98.67	6.40
1 0928	99.81	6.22
1 1031	101.05	6.04
1 1130	99.50	6.27
1 1231	99.57	6.26
AVERAGE	\$98.22	6.46

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2005

COUPON: 8.375

AMOUNT OUTSTANDING: \$300.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	107.61	6.63
1 0228	107.87	6.56
1 0330	108.24	6.45
1 0430	107.30	6.64
1 0531	107.82	6.50
1 0629	108.37	6.34
1 0731	108.57	6.27
1 0831	108.99	6.14
1 0928	110.68	5.71
1 1031	106.13	7.44
1 1130	109.51	5.91
1 1231	110.06	5.73
AVERAGE	\$108.43	6.36

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2010

COUPON: 8.625

AMOUNT OUTSTANDING: \$300.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	112.07	6.95
1 0228	113.57	6.76
1 0330	113.05	6.81
1 0430	110.97	7.07
1 0531	111.96	6.93
1 0629	111.93	6.93
1 0731	112.86	6.80
1 0831	113.54	6.70
1 0928	113.89	6.64
1 1031	115.09	6.58
1 1130	112.49	6.81
1 1231	113.80	6.62
AVERAGE	\$112.94	6.80

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2008

COUPON: 6.000

AMOUNT OUTSTANDING: \$4.466 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	94.50	6.86
1 0228	90.50	7.54
1 0330	95.36	6.73
1 0430	93.50	7.05
1 0531	93.76	7.01
1 0629	95.82	6.67
1 0731	100.00	5.99
1 0831	95.37	6.76
1 0928	96.62	6.55
1 1031	97.25	6.42
1 1130	99.00	6.16
1 1231	99.00	6.16
AVERAGE	\$95.89	6.66

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: NORFOLK SOUTHERN

MATURITY YEAR: 2015

COUPON: 4.850

AMOUNT OUTSTANDING: \$1.550 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	72.00	8.00
1 0228	72.12	7.99
1 0330	72.12	8.00
1 0430	72.12	8.01
1 0531	72.12	8.03
1 0629	78.00	7.24
1 0731	78.12	7.23
1 0831	80.12	6.99
1 0928	83.00	6.64
1 1031	81.12	6.81
1 1130	83.00	6.66
1 1231	81.12	6.89
AVERAGE	\$77.08	7.37

Source: Standard & Poor's Bond Guide Database

APPENDIX B

2001 UPC BONDS

NAME: UNION PACIFIC
 MATURITY YEAR: 2006
 COUPON: 6.700
 AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	101.29	6.46	%
1 0228	102.12	6.30	
1 0330	102.31	6.26	
1 0430	101.13	6.48	
1 0531	102.10	6.30	
1 0629	102.47	6.22	
1 0731	102.58	6.19	
1 0831	103.70	5.97	
1 0928	105.28	5.67	
1 1031	105.65	5.69	
1 1130	103.60	5.97	
1 1231	104.64	5.76	
AVERAGE	\$103.07	6.11	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC
 MATURITY YEAR: 2011
 COUPON: 6.650
 AMOUNT OUTSTANDING: \$400.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	99.20	6.75	%
1 0228	98.51	6.84	
1 0330	100.64	6.56	
1 0430	98.43	6.85	
1 0531	99.79	6.67	
1 0629	99.74	6.68	
1 0731	100.86	6.53	
1 0831	101.60	6.43	
1 0928	102.05	6.37	
1 1031	103.06	6.25	
1 1130	100.27	6.61	
1 1231	101.79	6.40	
AVERAGE	\$100.50	6.58	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2023

COUPON: 7.875

AMOUNT OUTSTANDING: \$150.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	100.56	7.82	%
1 0228	100.13	7.86	
1 0330	99.16	7.95	
1 0430	97.30	8.13	
1 0531	99.09	7.96	
1 0629	99.10	7.95	
1 0731	99.19	7.95	
1 0831	100.09	7.86	
1 0928	95.44	8.32	
1 1031	96.74	8.19	
1 1130	96.59	8.20	
1 1231	95.77	8.29	
AVERAGE	\$98.26	8.04	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2006

COUPON: 6.400

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	100.60	6.27	%
1 0228	101.11	6.17	
1 0330	101.30	6.12	
1 0430	100.27	6.33	
1 0531	101.13	6.15	
1 0629	101.78	6.01	
1 0731	101.59	6.05	
1 0831	102.33	5.88	
1 0928	103.80	5.56	
1 1031	103.72	5.66	
1 1130	102.26	5.88	
1 1231	102.89	5.73	
AVERAGE	\$101.90	5.98	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2008

COUPON: 7.250

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	103.18	6.76	%
1 0228	104.50	6.55	
1 0330	104.26	6.59	
1 0430	102.84	6.80	
1 0531	104.12	6.60	
1 0629	104.82	6.49	
1 0731	105.28	6.41	
1 0831	106.25	6.25	
1 0928	106.68	6.18	
1 1031	104.46	6.76	
1 1130	105.23	6.39	
1 1231	105.78	6.30	
AVERAGE	\$104.78	6.51	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2002

COUPON: 9.625

AMOUNT OUTSTANDING: \$100.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	106.63	7.02	%
1 0228	106.79	6.90	
1 0330	106.78	6.82	
1 0430	106.65	6.80	
1 0531	106.88	6.62	
1 0629	106.72	6.61	
1 0731	106.37	6.66	
1 0831	106.30	6.60	
1 0928	106.78	6.28	
1 1031	105.78	7.36	
1 1130	106.19	6.34	
1 1231	105.86	6.37	
AVERAGE	\$106.48	6.70	%

Source: Standard & Poor's Bond Guide

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2002

COUPON: 7.875

AMOUNT OUTSTANDING: \$200.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	101.80	6.90	%
1 0228	101.92	6.80	
1 0330	101.93	6.75	
1 0430	102.03	6.64	
1 0531	102.09	6.54	
1 0629	102.00	6.54	
1 0731	101.73	6.66	
1 0831	101.59	6.70	
1 0928	101.59	6.63	
1 1031	100.31	7.70	
1 1130	101.01	6.96	
1 1231	100.58	7.31	
AVERAGE	\$101.55	6.84	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2022

COUPON: 8.625

AMOUNT OUTSTANDING: \$150.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	111.35	7.56	%
1 0228	112.84	7.43	
1 0330	113.30	7.39	
1 0430	112.51	7.45	
1 0531	112.92	7.42	
1 0629	113.06	7.40	
1 0731	102.99	8.32	
1 0831	102.78	8.34	
1 0928	103.06	8.31	
1 1031	105.58	8.07	
1 1130	102.42	8.37	
1 1231	105.85	8.04	
AVERAGE	\$108.22	7.84	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2025

COUPON: 8.350

AMOUNT OUTSTANDING: \$275.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	110.00	7.46	%
1 0228	113.05	7.21	
1 0330	113.42	7.18	
1 0430	111.18	7.36	
1 0531	112.61	7.24	
1 0629	112.93	7.22	
1 0731	113.28	7.19	
1 0831	115.09	7.04	
1 0928	117.24	6.88	
1 1031	115.08	7.06	
1 1130	114.21	7.11	
1 1231	113.77	7.14	
AVERAGE	\$113.49	7.17	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2008

COUPON: 6.625

AMOUNT OUTSTANDING: \$300.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>	
1 0131	100.08	6.61	%
1 0228	100.90	6.47	
1 0330	101.35	6.39	
1 0430	100.13	6.60	
1 0531	101.25	6.41	
1 0629	101.40	6.38	
1 0731	101.73	6.33	
1 0831	102.91	6.12	
1 0928	103.76	5.98	
1 1031	104.16	5.96	
1 1130	102.76	6.13	
1 1231	103.00	6.09	
AVERAGE	\$101.95	6.29	%

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2009

COUPON: 7.375

AMOUNT OUTSTANDING: \$150.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	104.20	6.77
1 0228	104.88	6.67
1 0330	105.08	6.64
1 0430	103.18	6.90
1 0531	104.43	6.72
1 0629	104.82	6.66
1 0731	105.60	6.54
1 0831	106.28	6.44
1 0928	106.41	6.42
1 1031	107.91	6.26
1 1130	105.69	6.51
1 1231	105.98	6.46
AVERAGE	\$105.37	6.58 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2005

COUPON: 7.600

AMOUNT OUTSTANDING: \$425.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	104.97	6.46
1 0228	105.39	6.35
1 0330	105.43	6.33
1 0430	104.61	6.50
1 0531	105.40	6.30
1 0629	105.77	6.19
1 0731	106.14	6.08
1 0831	106.69	5.93
1 0928	107.90	5.62
1 1031	108.29	5.74
1 1130	107.24	5.71
1 1231	107.61	5.59
AVERAGE	\$106.29	6.07 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2016

COUPON: 7.000

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	101.62	6.83
1 0228	100.98	6.89
1 0330	100.61	6.93
1 0430	97.27	7.29
1 0531	99.05	7.09
1 0629	100.80	6.91
1 0731	100.89	6.90
1 0831	102.13	6.77
1 0928	102.10	6.77
1 1031	103.64	6.62
1 1130	100.53	6.94
1 1231	103.88	6.58
AVERAGE	\$101.13	6.88 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

PROBLEM

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2028

COUPON: 7.125

AMOUNT OUTSTANDING: \$250.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	97.85	7.30
1 0228	96.01	7.46
1 0330	96.95	7.38
1 0430	95.24	7.53
1 0531	97.66	7.32
1 0629	98.34	7.26
1 0731	99.74	7.14
1 0831	100.16	7.11
1 0928	96.78	7.39
1 1031	104.46	6.76
1 1130	99.48	7.16
1 1231	101.66	6.98
AVERAGE	\$98.69	7.23 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2029

COUPON: 6.625

AMOUNT OUTSTANDING: \$600.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	91.95	7.29
1 0228	89.86	7.48
1 0330	91.09	7.37
1 0430	89.44	7.52
1 0531	91.78	7.31
1 0629	91.56	7.33
1 0731	93.69	7.14
1 0831	93.99	7.11
1 0928	91.05	7.38
1 1031	97.66	6.81
1 1130	94.94	7.03
1 1231	96.15	6.93
AVERAGE	\$92.76	7.23 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2007

COUPON: 6.790

AMOUNT OUTSTANDING: \$300.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	100.21	6.75
1 0228	101.73	6.49
1 0330	102.23	6.41
1 0430	101.03	6.61
1 0531	101.84	6.47
1 0629	102.02	6.43
1 0731	102.46	6.35
1 0831	103.10	6.24
1 0928	104.27	6.04
1 1031	104.47	6.05
1 1130	102.99	6.25
1 1231	103.22	6.20
AVERAGE	102.46	6.36 %

Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION

MATURITY YEAR: 2003

COUPON: 6.340

AMOUNT OUTSTANDING: \$180.000 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	99.99	6.33
1 0228	100.82	6.08
1 0330	101.43	5.89
1 0430	101.35	5.91
1 0531	101.63	5.81
1 0629	102.28	5.59
1 0731	102.43	5.52
1 0831	102.70	5.41
1 0928	103.88	4.99
1 1031	104.00	5.17
1 1130	103.50	5.06
1 1231	103.55	5.00
AVERAGE	102.30	5.56 %

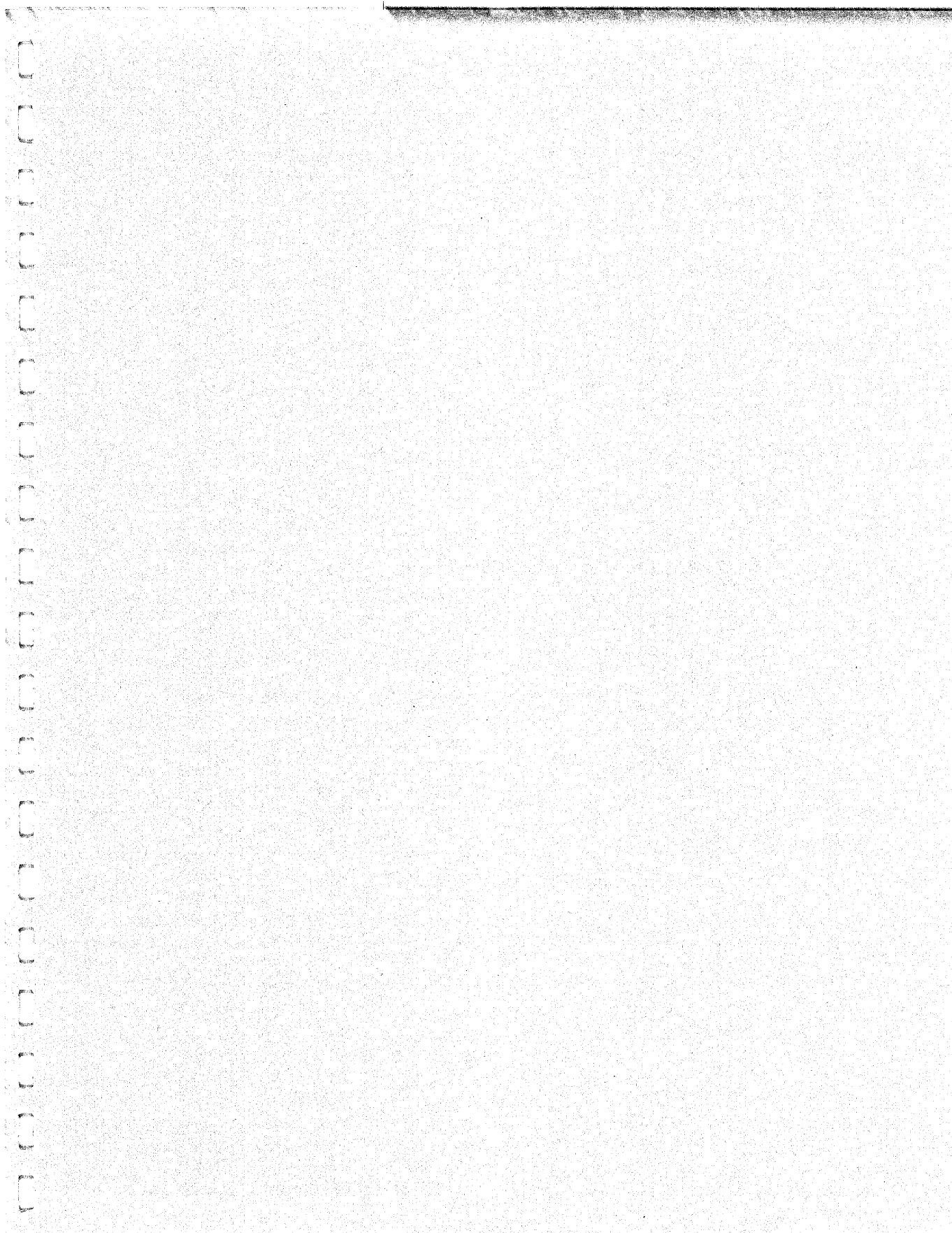
Source: Standard & Poor's Bond Guide Database

APPENDIX B

NAME: UNION PACIFIC CORPORATION
 (MP Mortgage Bonds & Debentures)
MATURITY YEAR: 2005
COUPON: 4.250
AMOUNT OUTSTANDING: \$92.985 Million

<u>DATE</u>	<u>PRICE</u>	<u>YIELD</u>
1 0131	91.00	6.41
1 0228	90.37	6.60
1 0330	91.25	6.41
1 0430	91.50	6.38
1 0531	93.00	6.02
1 0629	93.50	5.91
1 0731	93.00	6.07
1 0831	94.25	5.76
1 0928	94.50	5.72
1 1031	95.25	5.35
1 1130	95.00	5.63
1 1231	94.37	5.84
AVERAGE	93.08	6.01 %

Source: Standard & Poor's Bond Guide Database

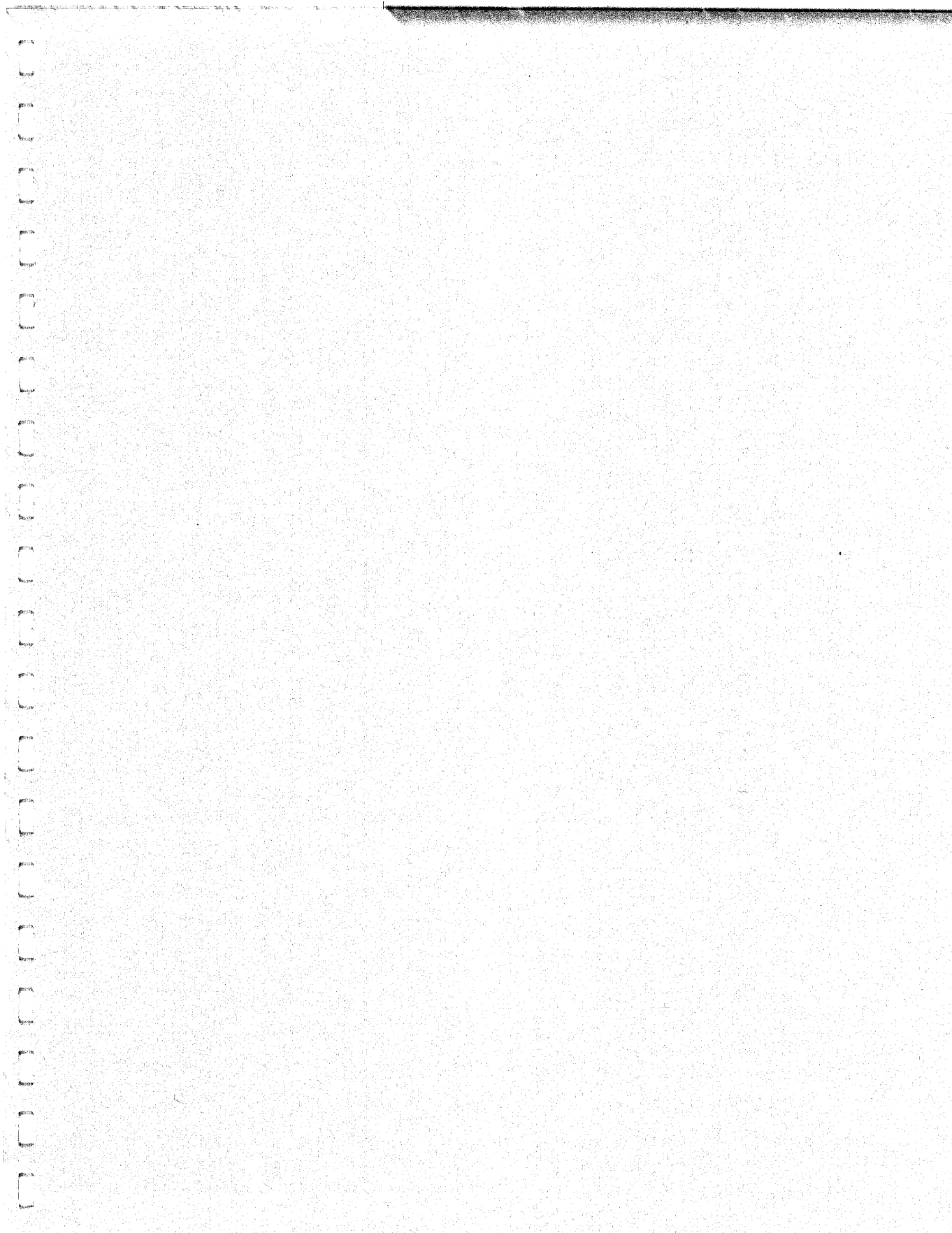


**SUMMARY OF LONG TERM DEBT
FOR THE YEAR ENDING 2001**

<u>Railroad</u>	<u>Market Value (Millions)</u>	<u>Current Cost</u>
BNSF	\$4,386.1	6.926%
CSX	1,546.4	6.770%
NSC	6,597.3	6.805%
UNP	<u>4,657.6</u>	<u>6.655%</u>
TOTAL MARKET VALUE:	<u>\$17,187.4</u>	
WEIGHTED AVERAGE CURRENT INTEREST COST:		<u>6.792%</u>

Note: Market value and current cost includes debt issued in 2001.

Source: (i) Appendix D.
(ii) Appendix B.



BURLINGTON NORTHERN SANTA FE

<u>DESCRIPTION (\$000)</u>	<u>AMOUNT</u>	<u>COUPON</u>	<u>DATE OF MATURITY</u>	<u>AVERAGE 2001 PRICE</u>
<u>Mortgage Bonds :</u>				
Ser H	\$275,000	9.250%	10-1-2006	1.12370
Ser K	3,978	6.550%	1-01-2020	0.91340
Ser L	6,195	3.800%	1-01-2020	0.62050
Ser M	12,998	3.200%	1-01-2045	0.44230
Ser N	2,506	8.150%	1-01-2020	1.06100
Ser O	15,378	6.550%	1-01-2020	0.89730
Ser P	5,566	8.150%	1-01-2020	1.00000
Ser Q (Great Northern)	28,805	2.650%	1-01-2010	0.73600
NP Gen Lien	34,479	3.000%	1-01-2047	0.74410
Emp. AM	6,242	8.625%	1-01-2014	1.00000
Lin. Nat. Life	6,784	8.625%	7-01-2009	1.00000
GOB MORTGAGE	<u>26,954</u>	10.320%	1-01-2014	1.00000
	\$424,885			

Debentures

BNSF	\$350,000	7.000%	12-15-2025	0.96910
BNSF	175,000	6.875%	02-15-2016	1.01630
BNSF	200,000	7.290%	06-01-2036	1.03920
BNSF	200,000	7.250%	08-01-2097	0.91690
BNSF	200,000	6.875%	12-01-2027	0.95250
BNSF	200,000	6.700%	08-01-2028	0.93130
BNSF	200,000	6.750%	03-15-2029	0.93720
BNSF	200,000	7.082%	05-13-2029	0.96930
BNSF	200,000	8.125%	04-7-2020	1.08980
BNSF	<u>275,000</u>	7.950%	08-15-2030	1.08070
Total BNSF	\$2,200,000			

Source: Debt description, amount outstanding, coupon and date of maturity
based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

BURLINGTON NORTHERN SANTA FE (Page 2 of 2)

<u>DESCRIPTION (\$000)</u>	<u>AMOUNT</u>	<u>COUPON</u>	<u>DATE OF MATURITY</u>	<u>AVERAGE 2001 PRICE</u>
SFP				
San Francisco Income Debentures	\$8,025	5.000%	1-01-2006	1.00000
(BNI)-Debenture	200,000	8.750%	2-25-2022	1.10790
(BNI)-Debenture	<u>150,000</u>	7.500%	7-15-2023	0.93040
TOTAL SFP:	\$358,025			
 BNSF				
NOTES:				
Notes	\$300,929	6.375%	12-15-2005	1.02290
Notes	400,000	6.750%	07/15/2011	1.01880
Medium Term Notes	175,000	6.530%	07-15-2037	1.03070
Medium Term Notes	300,307	7.875%	04-17-2007	1.08290
Medium Term Notes	7,750	5.960%	04-01-2004	1.00000
Medium Term Notes	300,000	7.125%	12-15-2010	1.00000
Medium Term Notes	<u>200,000</u>	6.125%	03-15-2009	0.97910
Total Notes	\$1,683,986			
 BNSF Railway				
Notes	\$150,000	7.000%	08-01-2002	1.02790
Notes	100,116	8.625%	11-01-2004	1.07810
Washington State DOT Note	382	0.00	10-01-2011	1.00000
BNSF Railway--Hartford	<u>7,672</u>	3.020%	12-01-2004	1.00000
Sub-Total:	\$258,170			
 Total Notes:	\$1,942,156			
 GRAND TOTAL:	\$4,925,066			

The \$400 million Note was issued 07/15/01 and the \$7.75 Note was issued 3/30/01.
The valuation of these bonds were adjusted to reflect that these bonds were not outstanding for the full Year 2001.

Source: Debt description, amount outstanding, coupon and date of maturity
based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

CSX - THE CHESAPEAKE AND OHIO RAILROAD COMPANY

Page 1 of 3

DESCRIPTION (\$000)	OUTSTANDING AMOUNT	COUPON	DATE OF MATURITY	AVERAGE PRICE
Miscellaneous Obligations:				
Port Authority Revenue Bonds	\$17,100	Various	12-15-2012	1.00000
Port Authority Revenue Bonds	<u>29,700</u>	Various	11-01-2021	1.00000
TOTAL:	\$46,800			

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

CSX CORPORATION

Page 2 of 3

DESCRIPTION (\$000)	OUTSTANDING AMOUNT	COUPON	DATE OF MATURITY	AVERAGE PRICE
Mortgage Bonds:				
CSX Corp. Debentures	\$300,000	9.000%	8-15-2006	1.12240
CSX Corp. Debentures	200,000	8.625%	5-15-2022	1.12290
CSX Corp. Debentures	150,000	8.100%	9-15-2022	1.06370
CSX Corp. Debentures	100,000	7.000%	9-15-2002	1.02420
CSX Corp. Debentures	350,000	7.050%	5-01-2002	1.00000
CSX Corp. Debentures	300,000	7.250%	5-01-2004	1.00000
CSX Corp. Debentures	450,000	7.450%	5-01-2007	1.00000
CSX Corp. Debentures	400,000	7.900%	5-01-2017	1.00000
CSX Corp. Debentures	500,000	7.950%	5-01-2017	1.00000
CSX Corp. Debentures	100,000	6.950%	5-01-2027	1.00000
CSX Corp. Debentures	250,000	7.250%	5-01-2027	1.00000
CSX Corp. Debentures	150,000	8.300%	5-01-2032	1.00000
CSX Corp. Debentures	400,000	6.250%	10-15-2009	0.98560
CSX Corp. Notes	10,000	9.870%	3/1/2021	1.00000
CSX Corp. Notes	7,500	9.780%	3-01-11	1.00000
CSX Corp. Notes	150,000	5.850%	12/1/2003	1.00000
CSX Corp. Notes	200,000	6.800%	12-01-28	0.91900
CSX Corp. Notes	50,000	6.590%	5-19-08	1.00610
CSX Corp. Notes	40,000	6.500%	6-02-08	1.00070
CSX Corp. Notes	50,000	6.460%	6-22-05	1.00000
CSX Corp. Notes	20,000	6.350%	9-17-07	1.00000
CSX Corp. Notes	3,000	5.860%	10/6/2009	0.95960
CSX Corp. Notes	25,000	6.400%	9/16/08	1.00000
CSX Corp. Notes	500,000	6.750%	3/13/11	1.00000
CSX Corp. Debentures	<u>462,000</u>	Zero Coupon	10/30/21	1.00000
Total This Page:	\$5,167,500			

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

CSX - THE CHESAPEAKE AND OHIO RAILROAD COMPANY

Page 3 of 3

DESCRIPTION (\$000)	OUTSTANDING AMOUNT	COUPON	DATE OF MATURITY	AVERAGE PRICE
Mortgage Bonds With Fixed Interest L&N Ry				
1st Consol AK&N	\$371	4.000%	3-01-2002	
1st & Rfd Ser F	28,730	3.375%	4-01-2003	0.95059
1st & Rfd Ser G	26,131	2.875%	4-01-2003	0.93980
Monon RR Inc Debentures	3,134	6.000%	1-01-2007	
NCT-NS protion -Advance	1,089	zero	never	
TOTAL : (This Page)	\$59,455			
GRAND TOTAL: (all CSX)	\$5,273,755			

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

NORFOLK SOUTHERN - NORFOLK AND WESTERN RAILWAY COMPANY **(Page 1)**

<u>DESCRIPTION</u> (\$ 000's)	<u>OUTSTANDING</u> <u>AMOUNT</u>	<u>COUPON</u>	<u>DATE OF</u> <u>MATURITY</u>	<u>AVERAGE</u> <u>2001 PRICE</u>
<u>Norfolk Southern Corporation</u>				
<u>Medium Term Notes</u>				
Note Series A	\$250,000	9.000%	3-01-2021	1.15520
Note Series B	250,000	7.875%	2-15-2004	1.06210
Note Series A	100,000	7.400%	9-15-2006	1.05430
Note Series A	100,000	7.220%	9-15-2006	1.04640
Senior Note:	400,000	6.200%	4-15-2009	0.98220
Senior Note:	300,000	8.375%	5-15-2005	1.08430
Senior Note:	300,000	8.625%	5-15-2010	1.12940
Senior Note: *(New Issue)	276,000	6.750%	2-15-11	1.00540
Senior Note: *(New Issue)	644,000	7.250%	2-15-31	0.98970
Senior Note: *(New Issue)	<u>125,000</u>	<u>Floating</u>	<u>7-7-03</u>	1.00000
	\$2,745,000			

<u>Norfolk Southern Corporation</u>				
<u>Medium Term Notes (Conrail)</u>				
NSC 2002	\$500,000	6.950%	5-01-2002	1.01650
NSC 2007	750,000	7.350%	5-15-2007	1.05520
NSC 2017	550,000	7.700%	5-15-2017	1.05900
NSC 2027	800,000	7.800%	5-15-2027	1.04900
NSC 2037	750,000	7.050%	5-15-2037	1.04250
NSC 2097	<u>350,000</u>	7.900%	5-15-2097	1.01050
	\$3,700,000			

Page Total: **\$6,445,000**

Note: * **New issues were prorated based on the months outstanding in 2001.**

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

NORFOLK SOUTHERN CORPORATION

(Page 2)

<u>DESCRIPTION</u> (\$ 000's)	<u>OUTSTANDING AMOUNT</u>	<u>COUPON</u>	<u>DATE OF MATURITY</u>	<u>AVERAGE 2001 PRICE</u>
<u>Income Debentures</u>				
VGN Rwy Sub	\$4,466	6.000%	8-01-2008	0.95890
NW Rwy Sub	<u>1,550</u>	4.850%	11-15-2015	0.77080
Sub Total:	\$6,016			
<u>Bonds:</u>				
Bond	\$75,734	8.25%	10-01-2019	1.00000
Zero Coupon Bonds	<u>2,184</u>	8.25%	10-01-2019	1.00000
Sub Total:	\$77,918			
<u>Virginia & Southwestern Rwy Co</u>				
1st Mtge	\$1,332	5.000%	1-1-2003	1.00000
Marine Terminal	27,200	--	--	1.00000
TOTAL: (This Page)	<u>\$112,466</u>			
GRAND TOTAL: (NSC)	\$6,557,466			

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

UNION PACIFIC CORPORATION

(Page 1)

<u>DESCRIPTION</u>	<u>OUTSTANDING AMOUNT</u>	<u>COUPON</u>	<u>DATE OF MATURITY</u>	<u>AVERAGE 2001 PRICE</u>
<u>Notes and Debentures</u>				
IDCCA	\$1,000	4.000%	11-08-2008	1.00000
FRA1	1,345	4.000%	6-30-2005	1.00000
FRA2	1,701	4.000%	6-30-2006	1.00000
IDOT	25,072	3.000%	12-31-2018	1.00000
ITCF 1999	<u>38,755</u>	5.450%	11-01-2014	1.00000
Sub Total:	\$67,873			

1st Mtge Ser C	\$92,985	4.250%	1-01-2005	0.93080
Gen Mtge Ser A	30,096	4.750%	1-01-2020	1.00000
Gen Mtge Ser B	30,122	4.750%	1-01-2030	1.00000
Inc Debenture C&EI	1,704	5.000%	1-01-2054	1.00000
Inc Debenture	<u>96,265</u>	5.000%	1-01-2045	1.00000
Sub Total :	\$251,172			

Page Total: **\$319,045**

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

APPENDIX D

UNION PACIFIC CORPORATION (Page 2)

<u>DESCRIPTION (\$ 000)</u>	<u>OUTSTANDING AMOUNT</u>	<u>COUPON</u>	<u>DATE OF MATURITY</u>	<u>AVERAGE PRICE</u>
Income Debenture	\$11,258	5.50%	1-01-2033	1.00000
Income Certificate	<u>10,398</u>	Various	Various	1.00000
Total MKT	\$21,656			
CNW-Track Reh Loans:				
Illinois	\$1,329	2.00%	7-01-2006	1.00000
Illinois/Belvedere	400	3.00%	9-01-2006	1.00000
Iowa DOT	216	N.A.	5-02-2002	1.00000
Iowa/AGP Trk Upgrade	633	3.00%	2-1-2007	1.00000
Total	\$2,578			
KFW Loan	\$118,946	5.860%	2012	1.00000
Port of Portland	3,700	Variable	12-1-2006	1.00000
Albany County	<u>8,000</u>	Variable	12-1-2015	1.00000
Total:	<u>\$130,646</u>			

Page Total: \$154,880

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.

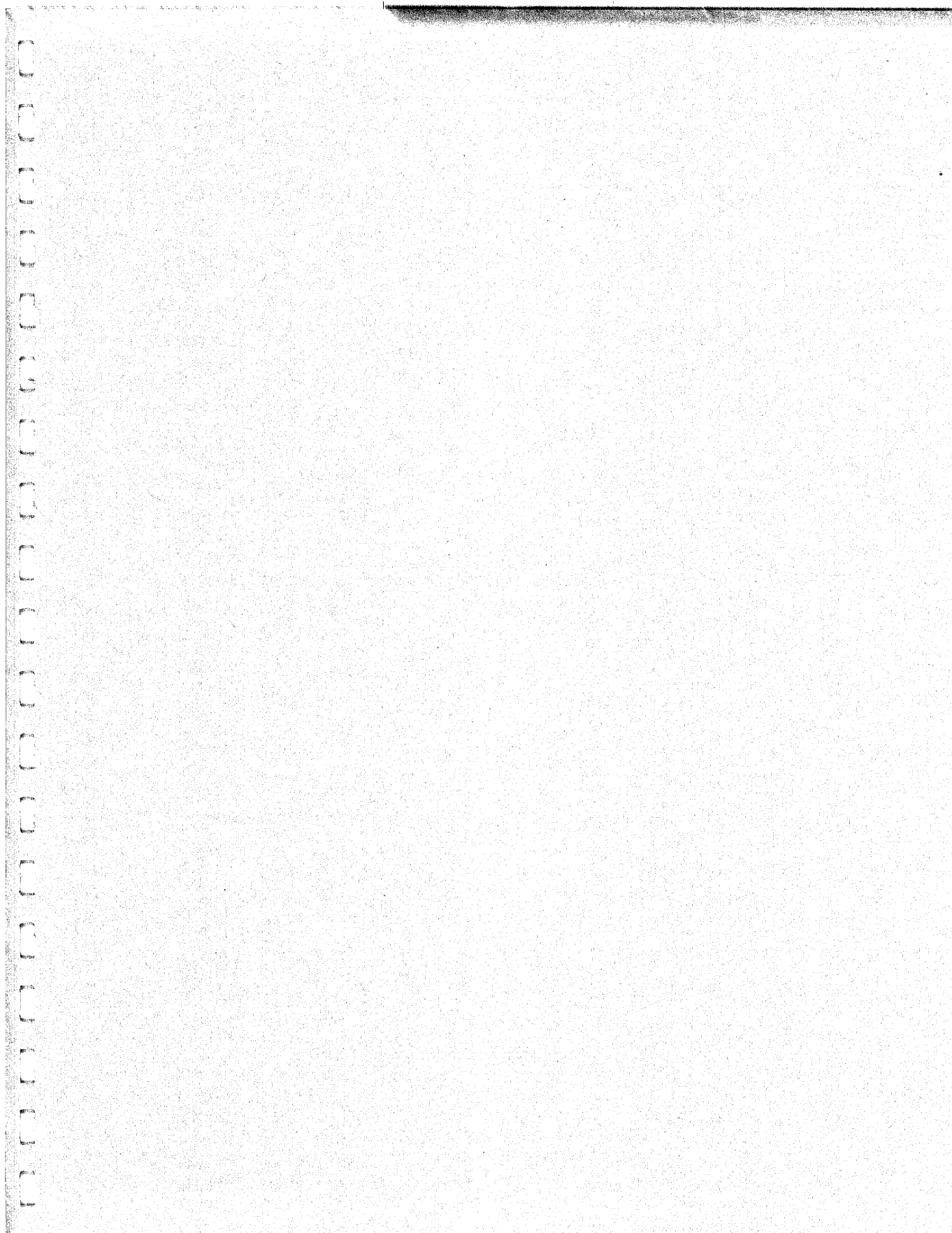
APPENDIX D

UNION PACIFIC CORPORATION - UNION PACIFIC RAILROAD COMPANY (Page 3)

DESCRIPTION	OUTSTANDING AMOUNT	COUPON	DATE OF MATURITY	AVERAGE PRICE
(\$ 000's)				
Debentures	\$150,000	8.625%	5-15-2022	1.08220
Debentures	150,000	7.875%	2-01-2023	0.98260
Debentures	600,000	6.625%	2-01-2029	0.92760
Debentures	275,000	8.350%	5-01-2025	1.13490
Notes	250,000	7.000%	2-01-2016	1.01130
Notes	\$250,000	7.125%	2-01-2028	0.98690
Notes	425,000	7.600%	5-01-2005	1.06290
Notes	250,000	6.400%	2-01-2006	1.01900
Notes	250,000	6.700%	12-01-2006	1.03070
Notes	250,000	7.250%	11-01-2008	1.04780
Notes	100,000	9.625%	12-15-2002	1.06480
Notes	200,000	7.875%	12-15-2002	1.01550
Notes	300,000	6.625%	2-01-2008	1.01950
Notes	400,000	6.650%	1-15-2011	1.00500
Notes	150,000	7.375%	9-15-2009	1.05370
Notes	300,000	5.750%	10-15-2007	
Notes	200,000	5.840%	5-25-2004	
Tax Exempt	156,540	Various	Various	
IBJ Loan	50,000	Variable	2002	
Series B Medium Term Notes	38,710	Various	Various	
Series C	54,125	Various	Various	
Series D	40,000	Various	Various	
Series E	117,500	6.390%	11-9-2004	
Series E	180,000	6.340%	11-25-2003	1.02300
Series E	300,000	6.790%	11-9-2007	1.02460
<u>Floating Rate Notes</u>	<u>250,000</u>	<u>Variable</u>	<u>7-01-2002</u>	
Page Total:	<u>\$5,686,875</u>			

GRAND TOTAL: (UPC) **\$6,160,800**

Source: Debt description, amount outstanding, coupon and date of maturity based on data provided for the STB's 2001 Cost of Capital Proceeding.



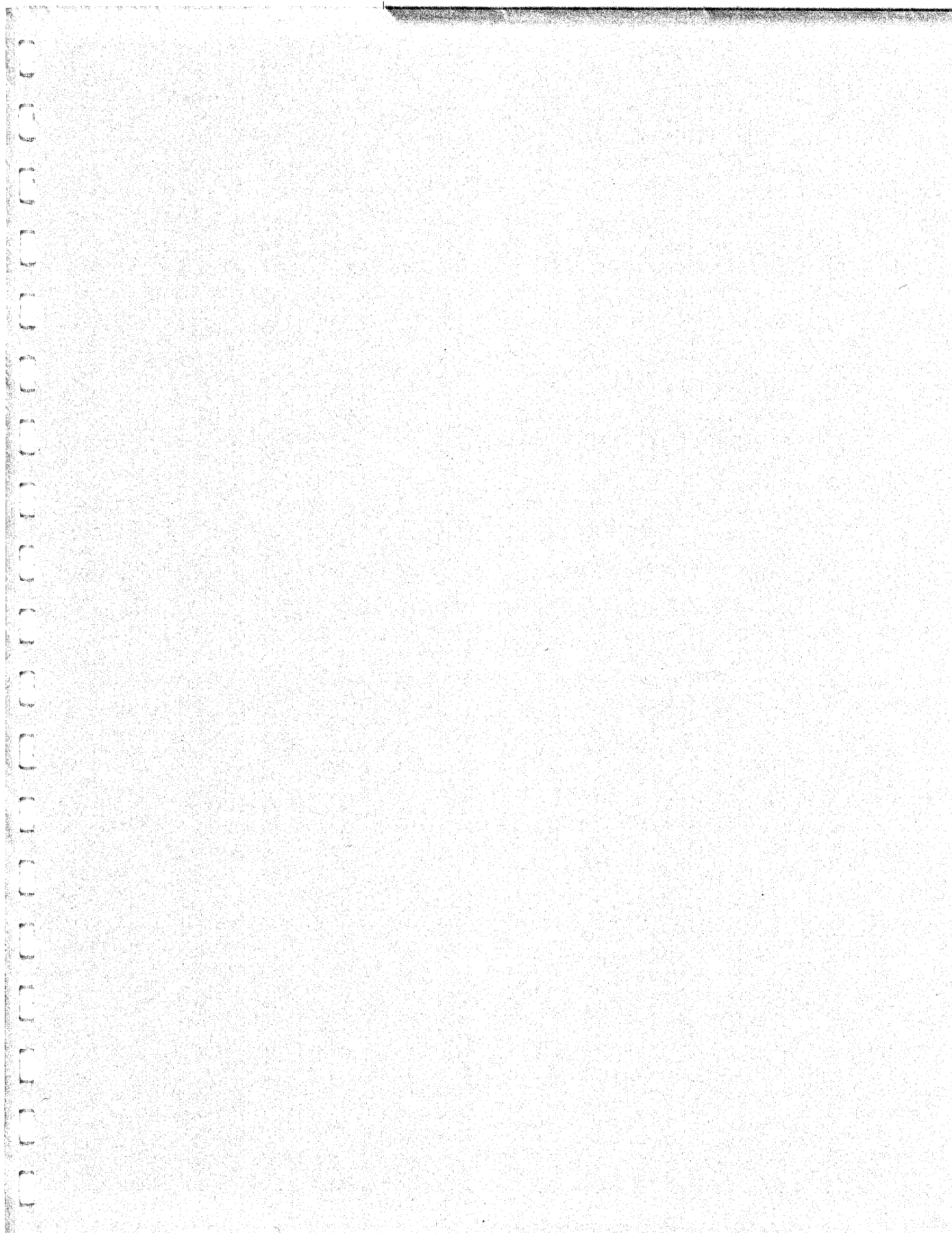
APPENDIX E

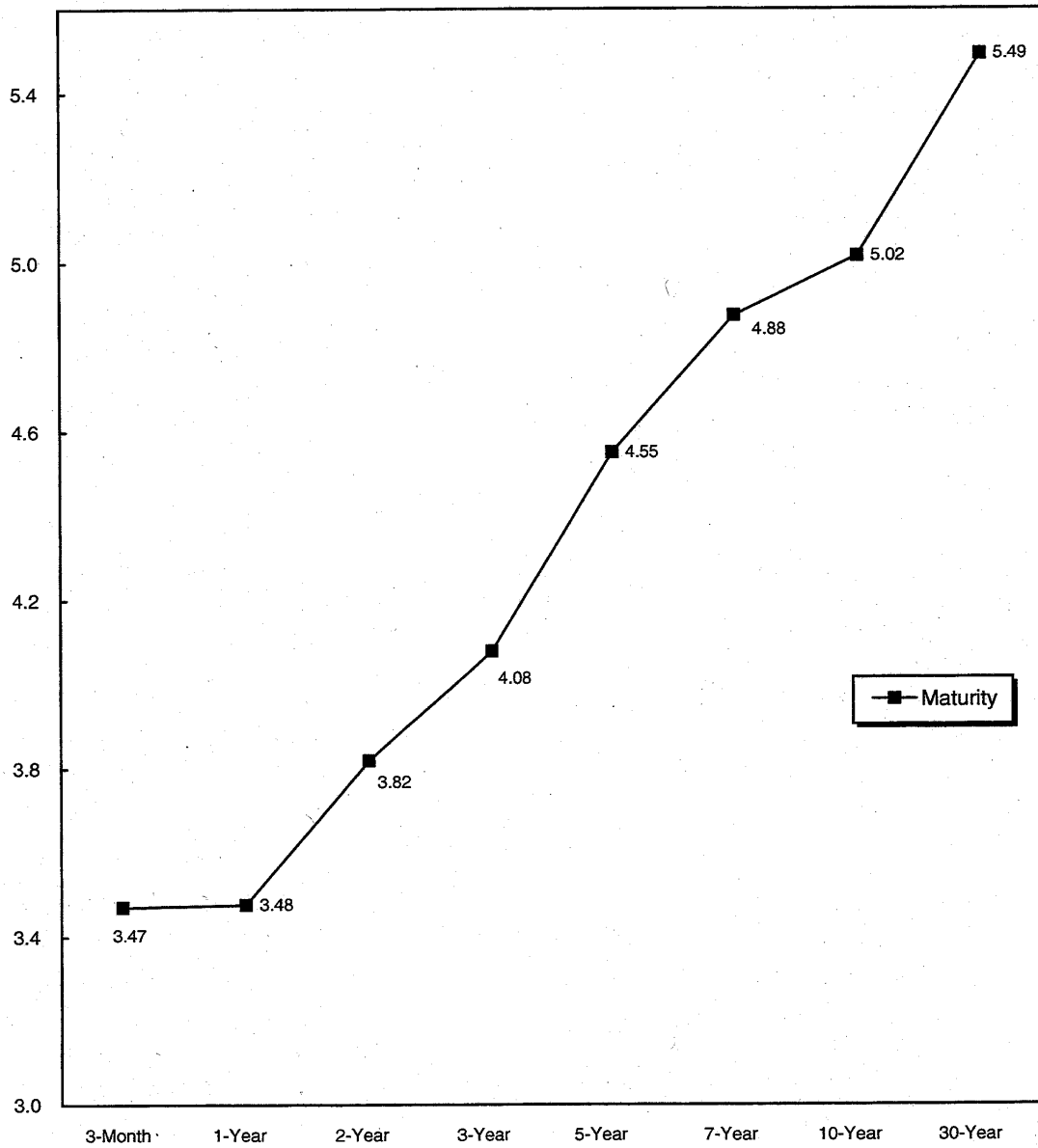
INTEREST RATES ON SELECTED GOVERNMENT INSTRUMENTS

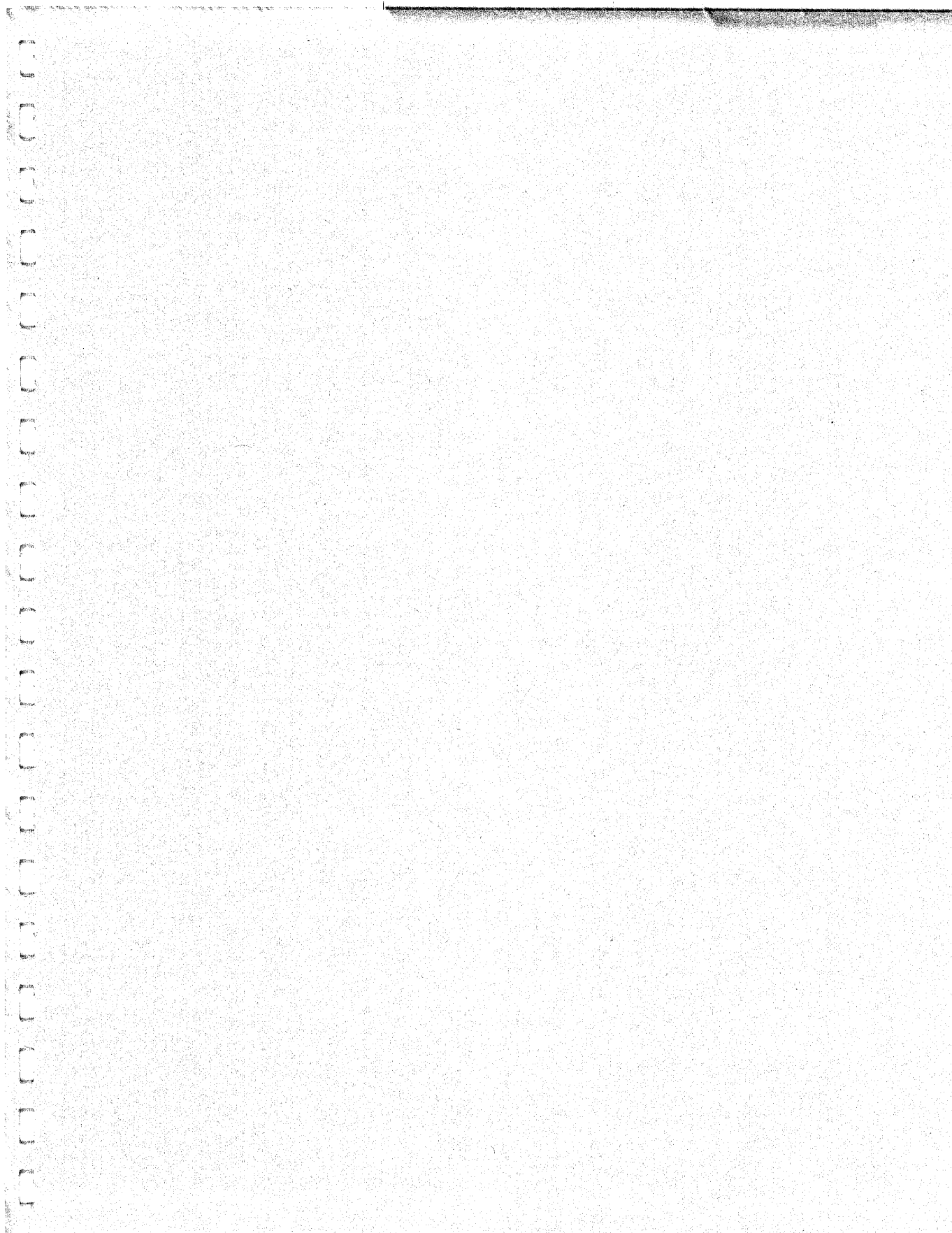
OK FOR 2001

2001
(Yield in Percent Per Annum)

Months	3 Month	1 Year	2 Year	3 Year	5 Year	7 Year	10 Year	30 Year
January	5.29	4.81	4.76	4.77	4.86	5.13	5.16	5.54
February	5.01	4.68	4.66	4.71	4.89	5.10	5.10	5.45
March	4.54	4.30	4.34	4.43	4.64	4.88	4.89	5.34
April	3.97	3.98	4.23	4.42	4.76	5.03	5.14	5.65
May	3.70	3.78	4.26	4.51	4.93	5.24	5.39	5.78
June	3.57	3.58	4.08	4.35	4.81	5.14	5.28	5.67
July	3.59	3.62	4.04	4.31	4.76	5.06	5.24	5.61
August	3.44	3.47	3.76	4.04	4.57	4.84	4.97	5.48
September	2.69	2.82	3.12	3.45	4.12	4.51	4.73	5.48
October	2.20	2.33	2.73	3.14	3.91	4.31	4.57	5.32
November	1.91	2.18	2.78	3.22	3.97	4.42	4.65	5.12
December	1.74	2.17	3.07	3.59	4.38	4.84	5.07	5.48
Average:	3.47	3.48	3.82	4.08	4.55	4.88	5.02	5.49



**GOVERNMENT INTEREST RATES FOR
BILLS, NOTES AND BONDS FOR 2001**



1983 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
01/01/83	05/01/97	BO	14,910	10.75	10.57	10.73
01/15/83	11/15/97	CO	16,500	10.75	10.58	10.76
04/01/83	04/01/98	BN	13,200	10.5	10.62	10.68
05/15/83	05/15/98	BN	50,000	10.97	11.05	11.19
07/14/83	07/14/98	CO	35,490	VAR	11.64	11.77
07/15/83	09/15/95	SBD	15,717	11.5	11.62	11.78
11/17/83	11/17/98	CO	21,345	11.625	11.87	11.95
12/01/83	11/01/88- 1989	ATSF	2,000	11.75- 11.9	N/A	N/A
12/01/83	12/01/98	SBD	19,335	11.75	11.82	11.98

1984 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
11/13/84	03/15/99	SBD	26,025	11.75	11.88	11.96
11/29/84	08/15/99	C&O	18,600	11.50	11.84	11.90

1985 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
02/04/85	11/15/99	SBD	11,730	11.375	11.57	11.66
05/05/85	03/01/00	SBD	33,630	11.25	11.34	11.37
05/30/85	04/01/00	SBD	33,960	11.125	11.23	11.30
05/29/85	12/01/99	ATSF	23,175	10.75	10.81	10.89
07/09/85	05/15/00	SBD	33,960	10.00	9.94	10.03
07/01/85	07/01/00	NW	24,375	10.125	10.47	10.53
07/15/85	07/15/00	SRS	25,650	10.00	10.03	10.10
09/01/85	09/01/00	NW	24,375	10.25	10.18	10.25
09/18/85	09/15/00	SRS	27,000	10.125	10.17	10.24
11/15/85	11/15/00	CO	22,800	10.25	10.28	10.39
12/19/85	12/15/00	MP	37,500	VAR	9.14	9.20

N/A - Data on yield not available.

1986 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
03/15/86	03/15/01	SRS	34,500	8.00	7.89	7.96
06/01/86	06/01/01	SRS	27,000	8.25	8.44	8.51
08/06/86	08/15/01	UP	35,055	VAR	7.68	7.75
07/23/86	08/01/01	SRS	27,225	7.75	7.86	7.93

1987 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
01/18/87	01/15/02	UP	33,750	VAR	7.48	N/A
04/01/87	04/01/02	SRS	20,550	7.25	7.48	N/A

1988 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
05/15/88	05/15/03	NW	18,000	8.75	9.23	9.47
10/15/88		SRS	27,075	8.75	9.12	9.38

1989 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
02/15/89	02/15/99	UP	102,400	9.50	9.50	9.68
06/15/89	06/15/99	UP	105,300	9.00	9.00	9.25
11/15/89	11/15/04	NW	51,300	8.125	8.35	8.41
12/15/89	12/15/99	NW	70,800	8.35	8.35	8.46

N/A - Data on yield not available.

1990 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
02/01/90	02/01/05	NW	34,950	8.75	8.99	9.07
03/14/90	03/15/02	UP	60,800	9.63	9.63	9.75

1991 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
03/01/91	03/01/06	NS	54,000	8.00	8.18	8.18
05/01/91	05/15/03	KCSI	32,156	Various	9.11	N/A
08/15/91	08/15/06	NS	63,000	7.75	8.02	8.02
09/17/91	10/01/06	UP	56,520	Various	7.83	7.89
10/24/91	03/01/06	CSX	93,568	8.41	8.41	8.51

1992 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
01/14/92	07/14/13	BN	58,590	Various	7.15	7.16
01/31/92	02/31/12	UP	83,000	Various	7.39	7.44
03/04/92	03/01/07	CSX	57,000	Various	7.55	7.55
08/01/92	08/01/07	NS	63,300	6.5	6.61	6.67
08/15/92	08/15/07	CSX	60,750	Various	6.58	6.58
12/01/92	12/01/07	CSX	30,000	Various	6.91	6.91

N/A - Data on yield not available.

1993 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
03/15/93	03/15/08	CSX	73,500	Various	6.10	N/A
03/16/93	04/01/03	UP	57,400	6.15	6.15	6.20
11/04/93	11/15/08	CR	102,000	Various	5.53	5.59
11/15/93	11/15/08	NS	38,550	Various	5.70	5.74
12/21/93	01/02/12	BN	78,126	Various	6.32	6.42

1994 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost to Company</u>
01/03/94	02/01/2001	UP	87,900	6.12	6.12	6.19
06/21/94	07/01/2009	CR	48,750	Various	7.37	7.37
09/15/94	09/15/2009	NS	41,400	Various	7.44	7.49
11/15/94	11/15/2009	CSX	39,000	Various	8.18	8.18
12/15/94	12/15/2006	KCS	54,700	Various	8.56	8.68

1995 EQUIPMENT TRUST CERTIFICATE ISSUES

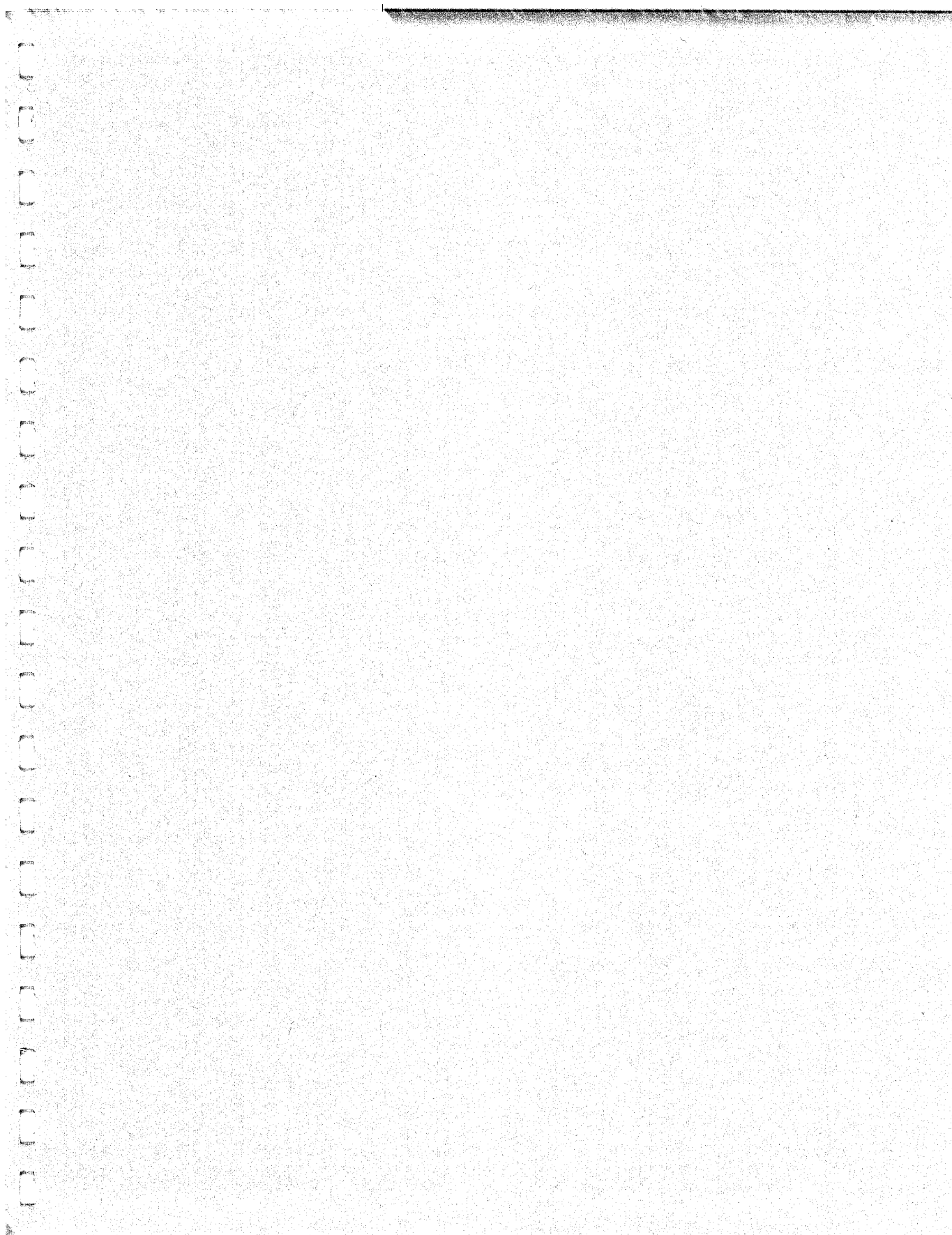
<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost of Company</u>
03/15/95	03/15/10	CSX	58,500	Various	7.48	7.59
06/01/95	06/01/10	CSX	57,000	Various	6.61	6.69

1996 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Maturity Date</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Coupon Rate</u>	<u>Composite Yield</u>	<u>Cost of Company</u>
03/15/96	03/15/11	CSX	57,000	Various	6.71	6.76
05/27/96	06/01/11	UP	81,500	Various	7.06	7.08
06/01/96	06/01/11	CSX	60,000	Various	7.29	7.36
07/01/96	07/01/11	CR	25,900	Various	7.06	7.11
09/24/96	09/24/11	BN	33,500	Various	7.21	7.24
11/19/96	12/01/11	UP	70,500	Various	6.50	6.50

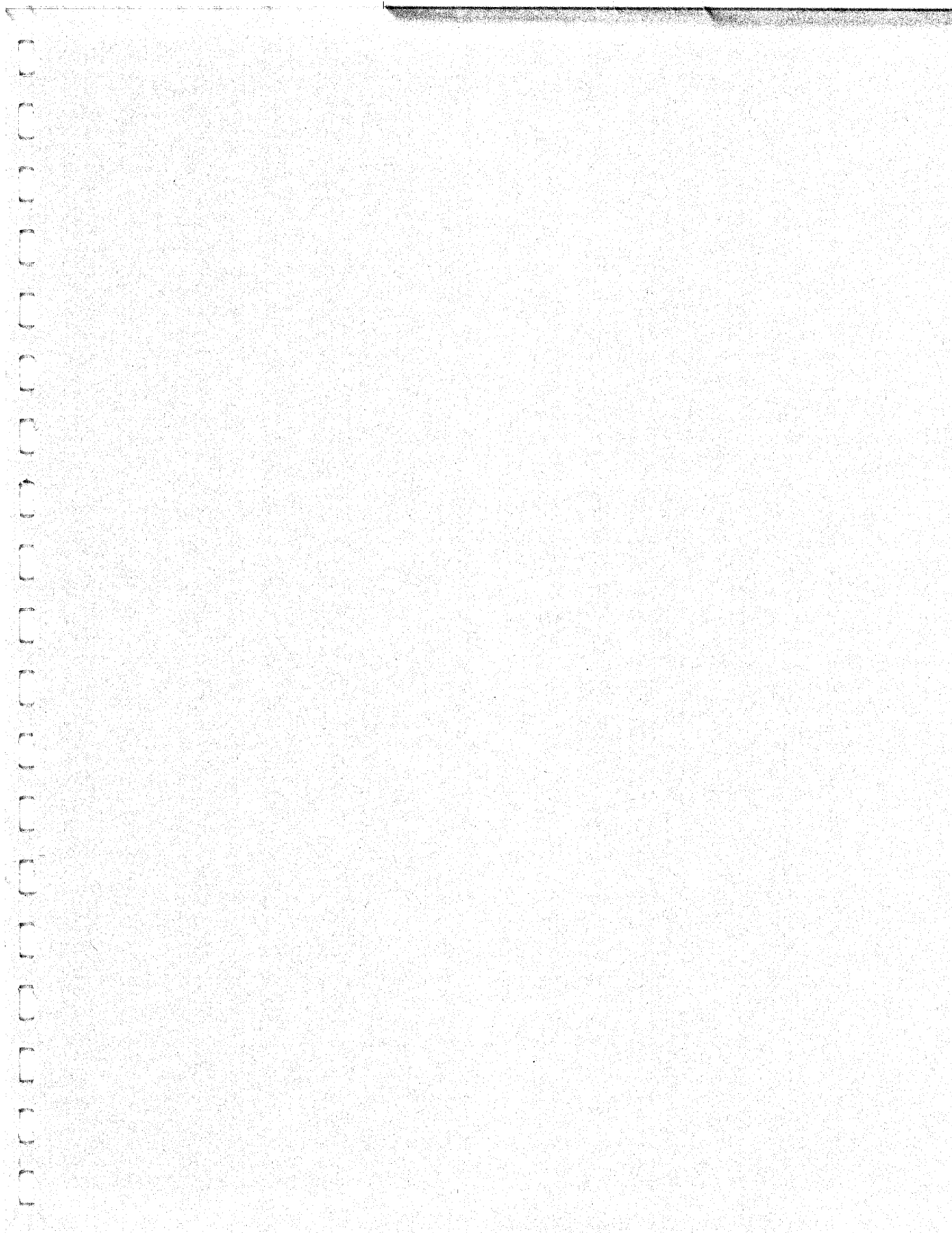
N/A - Data on yield not available.

SOURCE: Information provided (1981-1986) by Salomon Brothers Inc.'s "Special Report to Railroad Officers" and data provided by individual railroads.



**SUMMARY OF YIELD SPREADS FOR ETC'S AND CSA'S VERUS GOVERNMENT BONDS
2001**

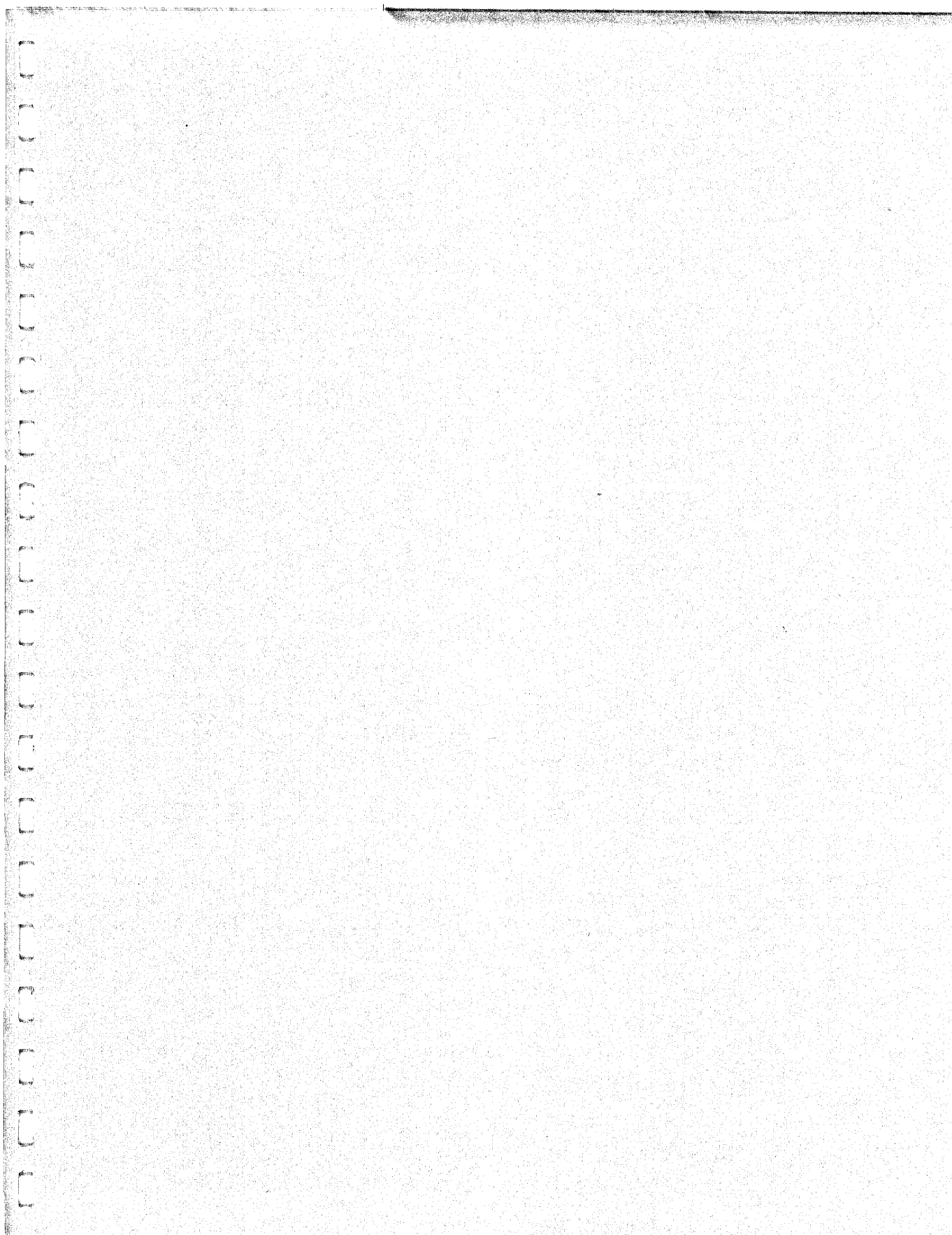
In 2001 there were no ETC's or CSA's issued by the Sample Railroads



APPENDIX I

MARKET VALUE AND CURRENT COST DEBT
2001

Type of Debt	Market Value	Market Weight	Current Cost	Weighted Cost of Debt
Bonds, Notes & Debentures	\$21,939.8	91.12%	6.79%	6.19%
Equipment Trust Certificates	1,952.1	8.11%	5.96%	0.48%
Conditional Sales Agreements	185.8	0.77%	6.26%	0.05%
Sub Total:	\$24,077.7	100.0%		6.72%
Miscellaneous Debt:				
Commercial Paper	\$702.4			
Other Misc Debt	634.4			
Sub Total:	\$1,336.8			
Capital Leases:	\$2,599.9			
Floatation Costs				0.16%
Total Market Value:	\$28,014.4			
Weighted Cost Current Cost of Debt for Year 2001:				6.88%



FLOTATION COSTS FOR
1981 - 1997 EQUIPMENT TRUST CERTIFICATE ISSUES

<u>Date of Issue</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Composite Yield</u>	<u>Cost to Company</u>	<u>Flotation Costs</u>
01/01/81	BN	\$26,250	14.31%	14.44%	0.13%
02/01/81	ATSF	13,200	13.76	13.88	0.12
02/01/81	ATSF	26,250	15.31	15.41	0.10
02/01/81	MP	27,600	12.72	12.83	0.11
02/01/81	SOU	21,919	13.26	13.37	0.11
02/01/81	AGS	2,215	13.26	13.37	0.11
02/01/81	CAR & NW	566	13.26	13.37	0.11
02/01/81	GN	566	13.26	13.37	0.11
02/01/81	INTERSTATE	271	13.26	13.37	0.11
02/24/81	UP	25,500	13.28	13.32	0.04
04/15/81	SOU	22,740	13.55	13.67	0.12
04/15/81	AGS	1,458	13.55	13.67	0.12
04/15/81	CAR & NW	1,569	13.55	13.67	0.12
04/15/81	GN	359	13.55	13.67	0.12
04/15/81	INTERSTATE	166	13.55	13.67	0.12
04/28/81	UP	25,500	13.22	13.33	0.11
05/01/81	LN	17,250	14.05	14.21	0.16
05/15/81	MP	26,700	13.67	13.79	0.12
06/01/81	SOU	12,854	14.43	14.53	0.10
06/01/81	CNOTP	8,398	14.43	14.53	0.10
06/01/81	AGS	839	14.43	14.53	0.10
06/01/81	GS&F	839	14.43	14.53	0.10
06/01/81	CAR & NW	767	14.43	14.53	0.10
06/01/81	GN	302	14.43	14.53	0.10
06/01/81	INTERSTATE	101	14.43	14.53	0.10
07/01/81	SCL	24,750	14.19	14.33	0.14
08/01/81	AGS	2,494	14.73	14.86	0.13
08/01/81	CGA	842	14.73	14.86	0.13
08/01/81	SOU	9,216	14.73	14.86	0.13
08/01/81	CNOTP	5,325	14.73	14.86	0.13
08/01/81	GS&F	4,171	14.73	14.86	0.13
08/01/81	CAR & NW	552	14.73	14.86	0.13
08/01/81	GN	1,399	14.73	14.86	0.13
09/15/81	MP	26,700	15.50	15.62	0.12
11/01/81	SCL	24,750	13.60	13.76	0.16

APPENDIX J
Page 2 of 4

<u>Date of Issue</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Composite Yield</u>	<u>Cost to Company</u>	<u>Flotation Costs</u>
12/15/81	MP	\$ 22,200	15.01%	15.17%	0.16%
01/15/82	MP	28,200	15.14	15.27	0.13
02/01/82	ATSF	15,900	14.47	14.60	0.13
03/15/82	MP	12,300	14.13	14.27	0.14
08/24/82	UP	102,800	13.03	13.20	0.17
01/01/83	B&O	14,910	10.57	10.73	0.16
01/15/83	C&O	16,500	10.58	10.76	0.18
04/01/83	BN	13,200	10.62	10.68	0.06
05/15/83	BN	50,000	11.05	11.19	0.14
07/15/83	SBD	15,717	11.62	11.78	0.16
07/15/83	C&O	35,490	11.64	11.77	0.13
11/17/83	C&O	21,345	11.87	11.95	0.08
12/06/83	SBD	19,335	11.82	11.98	0.16
11/13/84	SBD	26,025	11.88	11.96	0.08
11/29/84	C&O	18,600	11.84	11.90	0.06
02/04/85	SBD	11,730	11.57	11.66	0.09
05/05/85	SBD	33,630	11.34	11.37	0.03
05/30/85	SBD	33,960	11.23	11.30	0.07
05/29/85	ATSF	23,175	10.81	10.89	0.08
07/09/85	SBD	33,960	9.94	10.03	0.09
07/01/85	NW	24,375	10.47	10.53	0.06
07/15/85	SRS	25,650	10.03	10.10	0.07
09/01/85	NW	24,375	10.18	10.25	0.07
09/18/85	SRS	27,000	10.17	10.24	0.07
11/15/85	CO	22,800	10.28	10.39	0.11
12/19/85	MP	37,500	9.14	9.20	0.06
12/19/85	MP	37,500	8.54	8.60	0.06
03/15/86	SRS	34,500	7.89	7.96	0.07
06/01/86	SRS	27,000	8.44	8.51	0.07
08/06/86	UP	35,055	7.68	7.75	0.07
07/23/86	SRS	27,225	7.86	7.93	0.07
04/01/87	SRS	20,550	9.12	N/A	N/A
05/15/88	NW	18,000	9.23	9.47	0.24
10/15/88	SRS	27,075	9.12	9.38	0.26
01/15/89	UP	102,400	9.50	9.68	0.18

N/A - Not available.

APPENDIX J

Page 3 of 4

<u>Date of Issue</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Composite Yield</u>	<u>Cost to Company</u>	<u>Flotation Costs</u>
06/15/89	UP	\$105,300	9.00%	9.25%	0.25%
11/15/89	NW	51,300	8.35	8.41	0.06
12/15/89	NW	70,800	8.35	8.46	0.11
02/01/90	NW	34,950	8.99	9.07	0.08
03/14/90	UP	60,800	9.63	9.75	0.12
03/01/91	NS	54,000	8.18	8.18	0.00
03/01/91	NS	250,000	9.00	N.A	N/A
08/15/91	NS	63,000	8.0	8.02	0.00
09/17/91	UP	56,520	7.83	7.89	0.06
10/24/91	CSX	93,568	8.41	8.51	0.10
01/14/92	BN	58,590	7.15	7.16	0.01
01/31/92	UP	83,000	7.39	7.44	0.05
03/04/92	CSX	57,000	7.55	7.55	0.00
08/01/92	NS	63,300	6.61	6.67	0.06
08/15/92	CSX	60,750	6.58	6.58	0.00
12/01/92	CSX	30,000	6.91	6.91	0.00
03/15/93	CSX	73,500	6.10	N.A	N/A
03/16/93	UP	57,400	6.15	6.20	0.05
11/04/93	CR	102,000	5.53	5.59	0.06
11/15/93	NS	38,500	5.70	5.74	0.0
12/21/93	BN	78,126	6.32	6.42	0.10
01/03/94	UP	87,900	6.12	6.19	0.07
06/21/94	CR	48,750	7.37	7.37	0.00
09/15/94	NS	41,400	7.44	7.49	0.05
11/15/94	CSX	39,000	8.18	8.18	0.00

N/A - Not available.

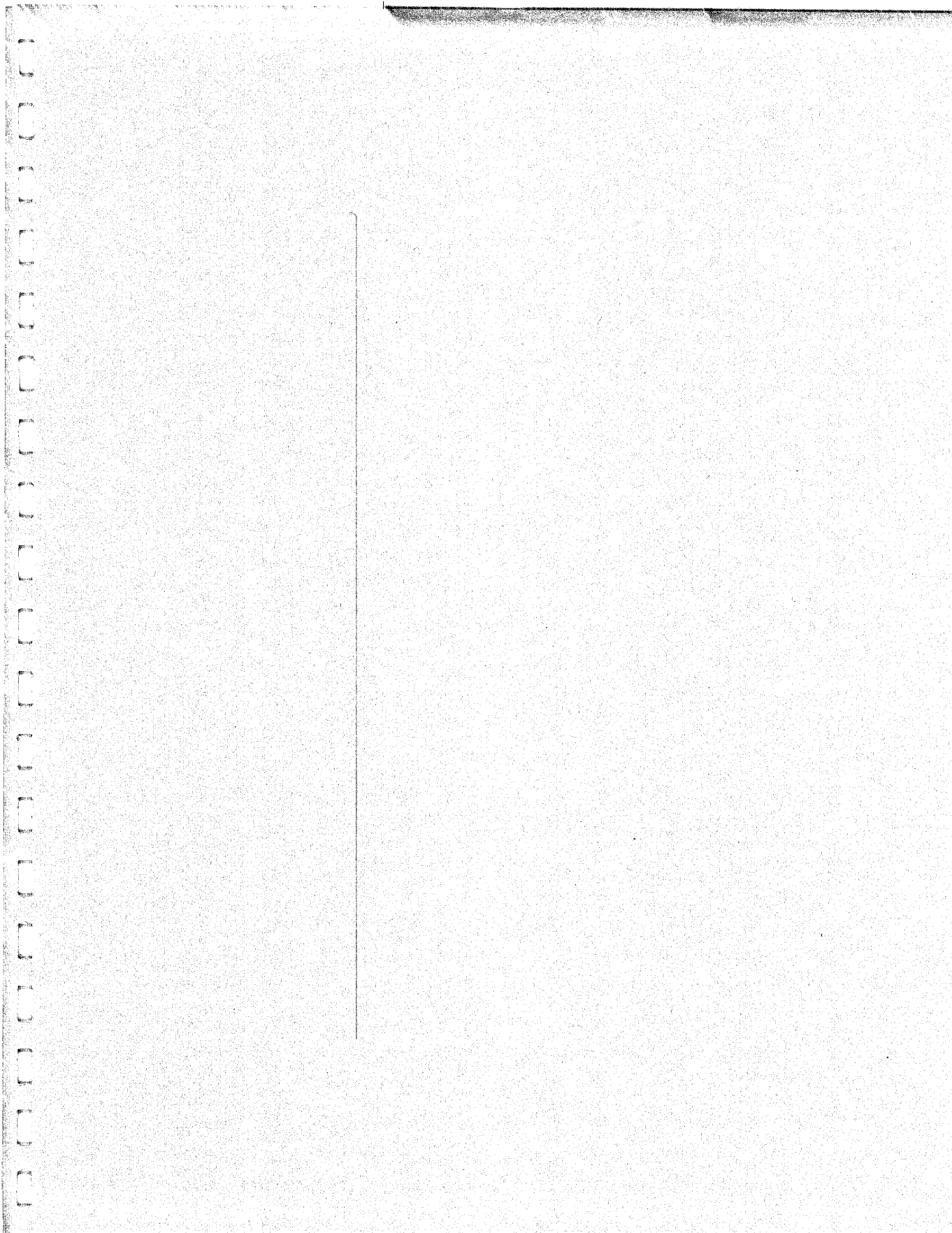
APPENDIX J
Page 4 of 4

<u>Date of Issue</u>	<u>Railroad</u>	<u>Amount (\$000)</u>	<u>Composite Yield</u>	<u>Cost to Company</u>	<u>Flotation Costs</u>
12/15/94	KCS	\$54,700	8.56%	8.68%	0.12%
03/15/95	CSX	58,500	7.48	7.59	0.11
06/01/95	CSX	57,000	6.61	6.69	0.08
03/15/96	CSX	57,000	6.71	6.76	0.05
05/27/96	UPC	81,500	7.06	7.08	0.02
06/01/96	CSX	60,000	7.29	7.36	0.07
07/01/96	CR	25,900	7.06	7.11	0.05
09/24/96	BN	33,500	7.21	7.24	0.03
11/19/96	UP	70,500	6.50	6.50	0.00

1997 No Equipment Trust Certificates Issued.

Simple Average
1981 - 1997 = .10%

SOURCE: Information provided (1981-1986) by Salomon Brothers Inc.'s "Special Report to Railroad Officers" and data provided by individual railroads. See Appendix G for detail on each ETC.



APPENDIX K

CURRENT COST OF PUBLICLY TRADED PREFERRED STOCK ISSUES FOR 2001

<u>Issue(1)</u>	<u>Method Used To Determine Current Cost</u>	<u>Current Cost(2)</u>	<u>Market Value(3) (\$000)</u>	<u>Market Weight(4)</u>	<u>Weighted Current Cost(5)</u>
NSC (Sou) \$2.60	Dividend Yield	6.77%	\$32,655.2	2.13%	0.14%
UPC 6.25% Conv.	Dividend Yield	6.25%	<u>\$1,500,000.0</u>	<u>97.87%</u>	<u>6.12%</u>
TOTAL:		Total:	\$1,532,655.2	100.00%	6.26%

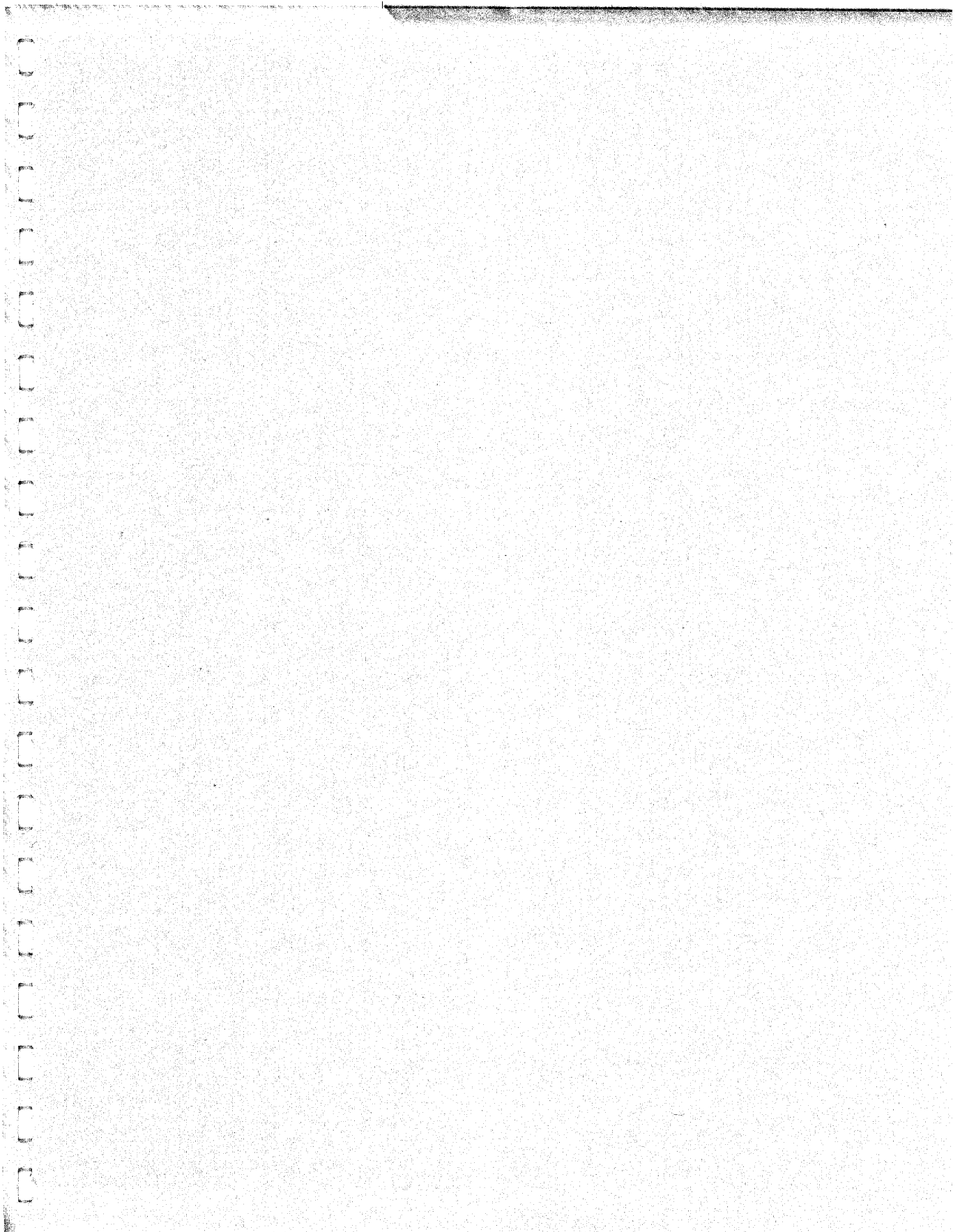
1 Appendix L details the provisions for each preferred.

2 Appendix M details the current cost of issues using the dividend yield method.

3 Market value based on the average closing monthly preferred stock price (Appendix N) times the average number of shares outstanding each quarter in 2001 (Appendix O).

4 Market value per issue divided by total market value.

5 Market weight times current cost.

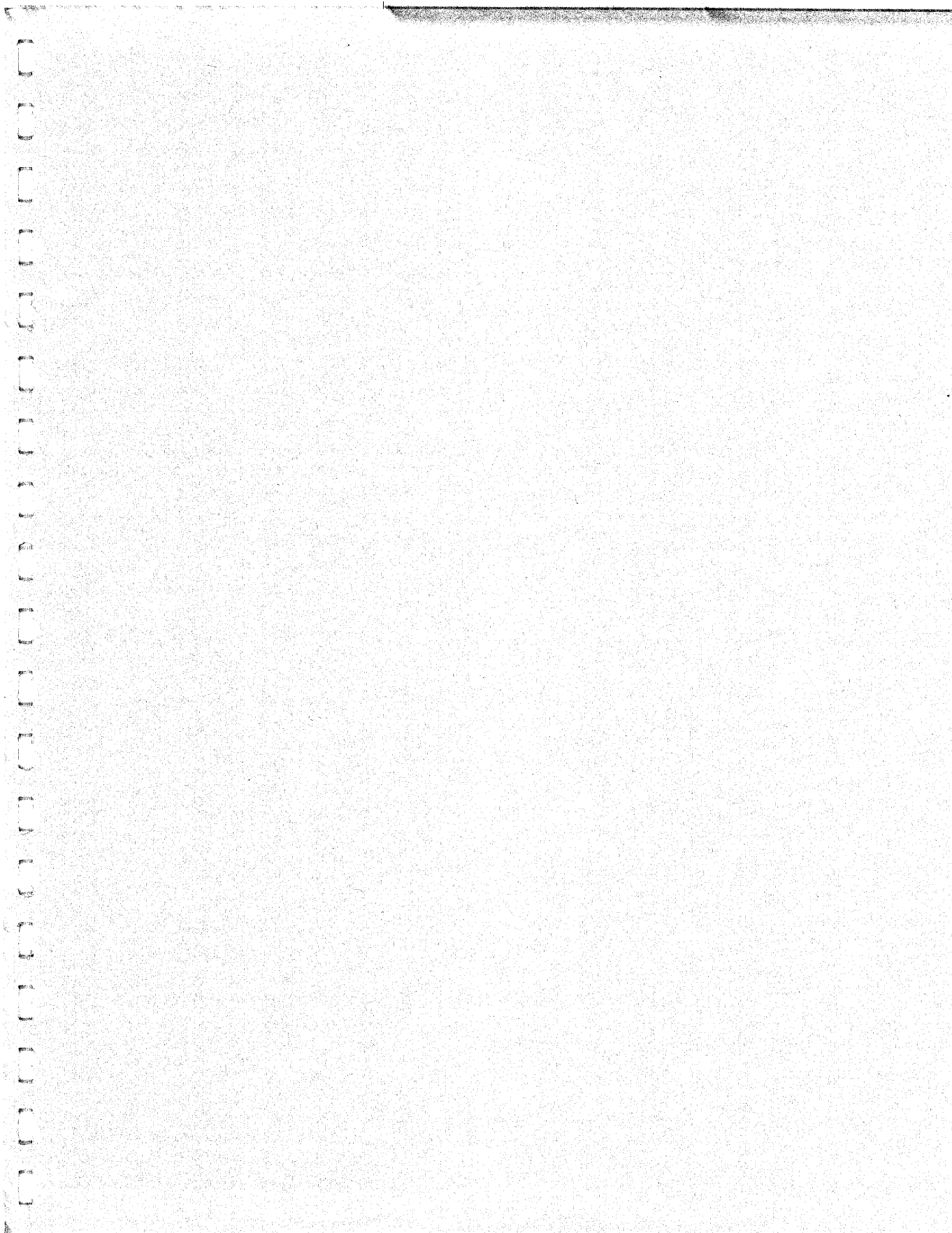


APPENDIX L

LISTING OF PREFERRED STOCK ISSUES OUTSTANDING FOR SAMPLE RAILROADS 2001

<u>Railroad Company</u>	<u>Issue</u>	<u>Special Features(s)</u>	<u>Method Used To Determine Current Cost</u>
NSC (Sou)	\$2.60 STATED VALUE \$50.00	None	Dividend Yield
UPC	6.25% Convertible	The UPC preferred shares are convertible into UPC common stock at an initial conversion price of \$68.90. The liquidated value of the preferred was set at \$50.00 per share at time of issue.	Dividend Yield

SOURCE: Corporate Annual Reports; Moody's Transportation Manual.



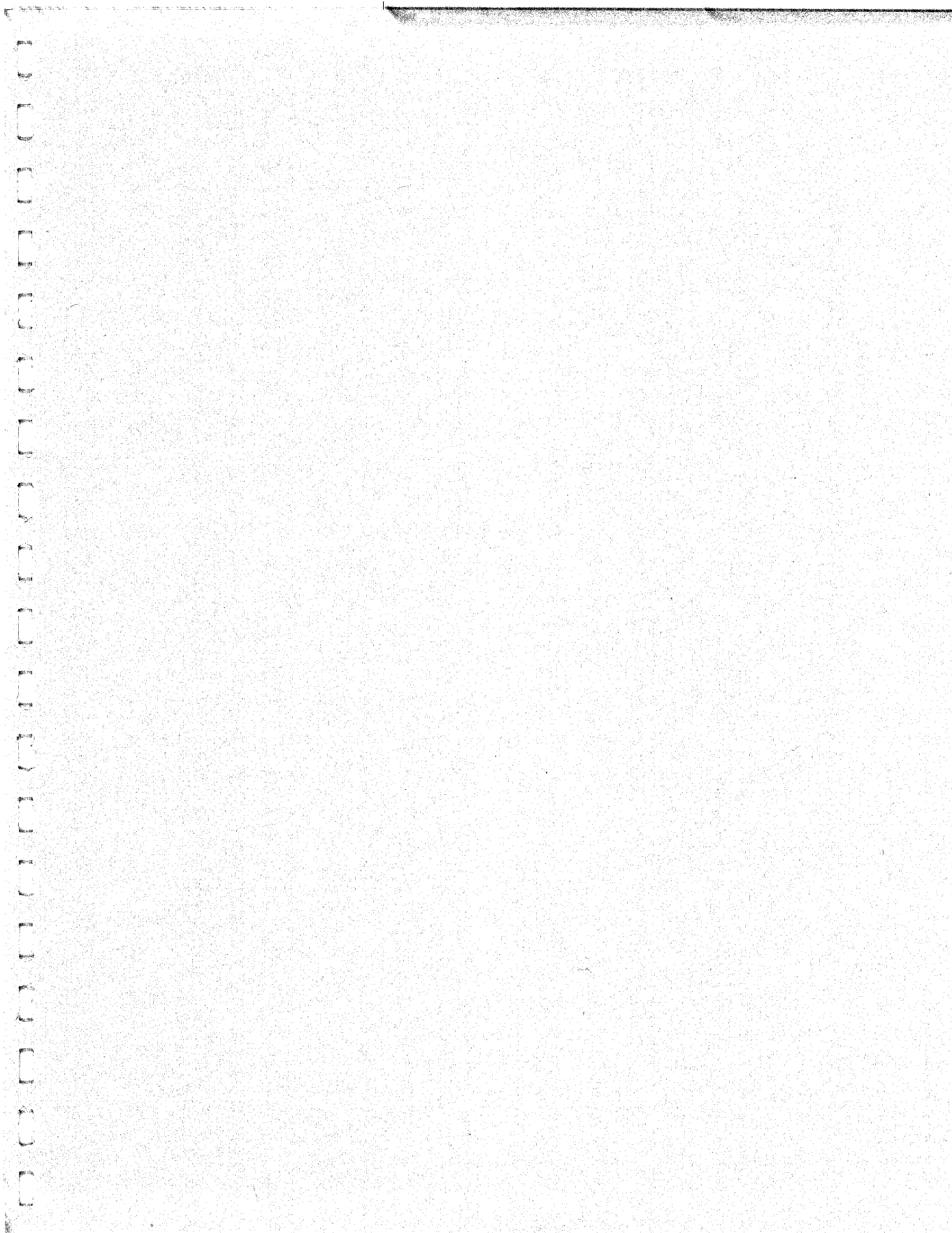
APPENDIX M

CURRENT COST OF PREFERRED STOCK ISSUES USING THE DIVIDEND YIELD METHOD 2001

<u>Railroad</u>	<u>Preferred Issue</u>	<u>Annual Dividend</u>	<u>Par (Stated) Value</u>	<u>Average Market Price</u>	<u>Dividend Yield</u>
NCS(Sou)	\$2.60	\$2.60	\$50.00	\$38.39	6.77%
UPC	6.25%	\$3.125	\$50.00	\$50.00	6.25%

* Annual Dividend divided by Average Market Price.

SOURCE: APPENDICIES N and O.



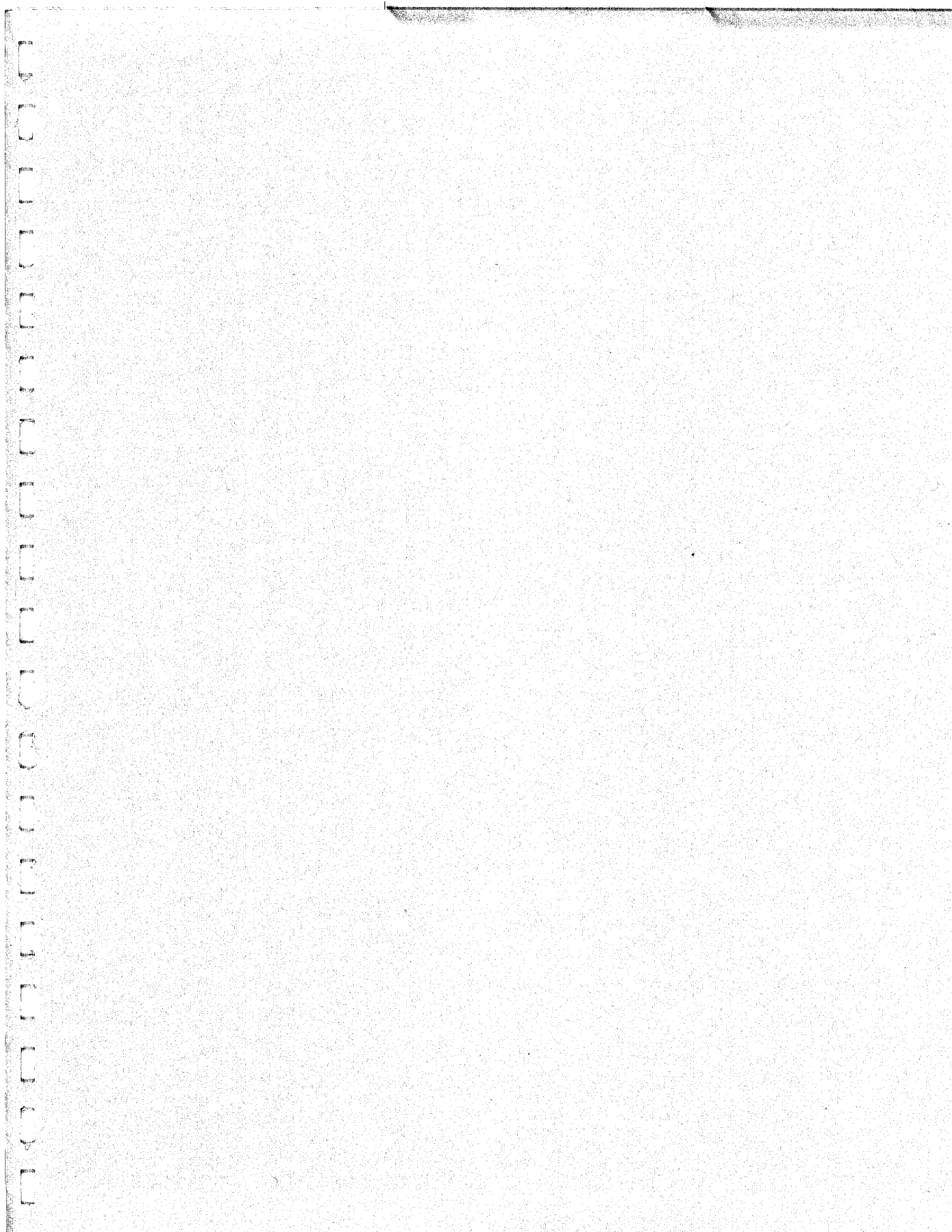
APPENDIX N

2001 PRICES OF PREFERRED STOCK ISSUES

<u>Issues</u>	<u>Method Used To Determine Current Cost</u>	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
NCS(Sou) \$2.60	Dividend Yield	\$37.000	\$36.510	\$36.000	\$37.000	\$40.000	\$38.010
UPC *	Dividend Yield	\$50.000	\$50.000	\$50.000	\$50.000	\$50.000	\$50.000
	<u>Method Used To Determine Current Cost</u>	<u>July</u>	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>
NCS(Sou) \$2.60	Dividend Yield	\$38.200	\$39.000	\$39.000	\$38.900	\$41.800	\$39.300
UPC *	Dividend Yield	\$50.000	\$50.000	\$50.000	\$50.000	\$50.000	\$50.000

* Not publicly traded ; price based on initial issue price of \$50.00.

Source: Based on monthly summaries of stock prices from Dow Jones/Retrival Service.

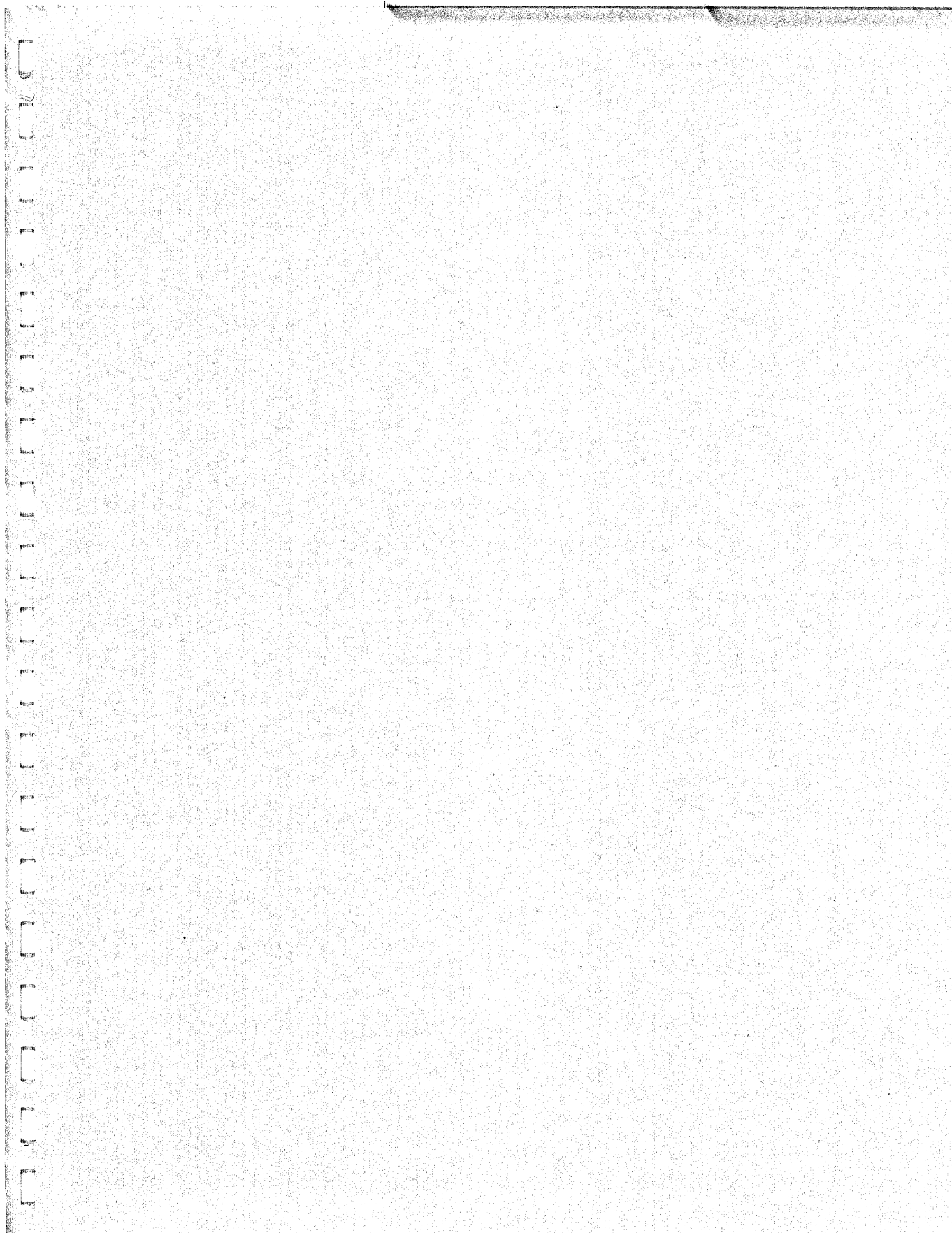


APPENDIX O

SHARES OUTSTANDING
2001 PREFERRED STOCK EQUITY

<u>Issues</u>	<u>January-December 2001</u>
NCS(Sou) \$2.60	850,552
UPC, 6.25%	29,999,986

Source: Individual Railroad Cost of Capital Submissions.



**CALCULATION OF COMPOSITE CURRENT DIVIDEND YIELD
FOR EACH MONTH OF 2001 AND FOR THE YEAR**

JANUARY							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$28.5200	391,591,647	\$11,168,193,772	0.3120	0.120	1.68%	0.53%
CSX	27.4600	212,737,613	5,841,774,853	0.1632	0.300	4.37%	0.71%
NSC	15.7000	384,057,473	6,029,702,326	0.1685	0.060	1.53%	0.26%
UPC	51.6600	246,820,492	12,750,746,617	0.3563	0.200	1.55%	0.55%
Total:	N. A.	1,235,207,225	\$35,790,417,568	1.0000			2.05%

MAY							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$30.9000	391,811,340	\$12,106,970,406	0.2852	0.120	1.55%	0.44%
CSX	36.5800	213,395,907	7,806,022,278	0.1839	0.300	3.28%	0.60%
NSC	21.6200	384,549,683	8,313,964,146	0.1958	0.060	1.11%	0.22%
UPC	57.4600	247,633,896	14,229,043,664	0.3351	0.200	1.39%	0.47%
Total:	N. A.	1,237,390,826	\$42,456,000,495	1.0000			1.73%

SEPTEMBER							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$25.6400	387,502,954	\$9,935,575,741	0.2814	0.120	1.87%	0.53%
CSX	31.5200	213,162,313	6,718,876,106	0.1903	0.100	1.27%	0.24%
NSC	16.9200	385,473,232	6,522,207,085	0.1848	0.060	1.42%	0.26%
UPC	48.8200	248,385,281	12,126,169,418	0.3435	0.200	1.64%	0.56%
Total:	N. A.	1,234,523,780	\$35,302,828,350	1.0000			1.59%

Note: The simple average of the above 12 monthly dividend yields is 1.68 percent.

Source: Dividend yields and stock prices were obtained from financial databases. Individual railroad weights were based on the month market values of individual railroads divided by the total monthly value of all railroads. Shares of stock outstanding were obtained from SEC 10 Q Report

CALCULATION OF COMPOSITE CURRENT DIVIDEND YIELD FOR EACH MONTH OF 2001 AND FOR THE YEAR							
FEBRUARY							
Railroad	Common Stock Prices	No. Shares o/s	Market Value	Weight	Dividend Paid	Dividend Yield	Weighted Yield
BNSF	\$29.6900	391,591,647	\$11,626,355,999	0.3040	0.120	1.62%	0.49%
CSX	31.2200	212,737,613	6,641,668,278	0.1737	0.300	3.84%	0.67%
NSC	17.4900	384,057,473	6,717,165,203	0.1756	0.060	1.37%	0.24%
UPC	53.7100	246,820,492	13,256,728,625	0.3467	0.200	1.49%	0.52%
Total:	N. A.	1,235,207,225	\$38,241,918,105	1.0000			1.92%
JUNE							
Railroad	Common Stock Prices	No. Shares o/s	Market Value	Weight	Dividend Paid	Dividend Yield	Weighted Yield
BNSF	\$29.5100	391,124,474	\$11,542,083,228	0.2855	0.120	1.63%	0.46%
CSX	35.0300	213,072,061	7,463,914,297	0.1846	0.100	1.14%	0.21%
NSC	20.6600	385,240,782	7,959,074,556	0.1969	0.060	1.16%	0.23%
UPC	54.2000	248,304,630	13,458,110,946	0.3329	0.200	1.48%	0.49%
Total:	N. A.	1,237,741,947	\$40,423,183,027	1.0000			1.40%
OCTOBER							
Railroad	Common Stock Prices	No. Shares o/s	Market Value	Weight	Dividend Paid	Dividend Yield	Weighted Yield
BNSF	\$26.4300	387,502,954	\$10,241,703,074	0.2883	0.120	1.82%	0.52%
CSX	32.9300	213,162,313	7,019,434,967	0.1976	0.100	1.21%	0.24%
NSC	16.2300	385,473,232	6,256,230,555	0.1761	0.060	1.48%	0.26%
UPC	48.3600	248,385,281	12,011,912,189	0.3381	0.200	1.65%	0.56%
Total:	N. A.	1,234,523,780	\$35,529,280,786	1.0000			1.58%

Source: Dividend yields and stock prices were obtained from financial databases. Individual railroad weights were based on the month market values of individual railroads divided by the total monthly value of all railroads. Shares of stock outstanding were obtained from SEC 10 Q Report

CALCULATION OF COMPOSITE CURRENT DIVIDEND YIELD FOR EACH MONTH OF 2001 AND FOR THE YEAR							
MARCH							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$28.7700	391,811,340	\$11,272,412,252	0.2996	0.120	1.67%	0.50%
CSX	31.0500	213,395,907	6,625,942,912	0.1761	0.300	3.86%	0.68%
NSC	16.3100	384,549,683	6,272,005,330	0.1667	0.060	1.47%	0.25%
UPC	54.3200	247,633,896	13,451,473,231	0.3575	0.200	1.47%	0.53%
Total:	N. A.	1,237,390,826	\$37,621,833,725	1.0000			1.95%
JULY							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$29.1300	391,124,474	\$11,393,455,928	0.2770	0.120	1.65%	0.46%
CSX	37.1400	213,072,061	7,913,496,346	0.1924	0.100	1.08%	0.21%
NSC	20.8000	385,240,782	8,013,008,266	0.1948	0.060	1.15%	0.22%
UPC	55.6100	248,304,630	13,808,220,474	0.3357	0.200	1.44%	0.48%
Total:	N. A.	1,237,741,947	\$41,128,181,013	1.0000			1.37%
NOVEMBER							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$28.5000	387,502,954	11,043,834,189	0.2802	0.120	1.68%	0.47%
CSX	36.2500	213,162,313	7,727,133,846	0.1961	0.100	1.10%	0.22%
NSC	18.6600	385,473,232	7,192,930,509	0.1825	0.060	1.29%	0.23%
UPC	54.1500	248,385,281	13,450,062,966	0.3413	0.200	1.48%	0.50%
Total:	N. A.	1,234,523,780	\$39,413,961,511	1.0000			1.43%

Source: Dividend yields and stock prices were obtained from financial databases. Individual railroad weights were based on the month market values of individual railroads divided by the total monthly value of all railroads. Shares of stock outstanding were obtained from SEC 10 Q Report

**CALCULATION OF COMPOSITE CURRENT DIVIDEND YIELD
FOR EACH MONTH OF 2001 AND FOR THE YEAR**

APRIL							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$29.1500	391,811,340	\$11,421,300,561	0.2901	0.120	1.65%	0.48%
CSX	33.8100	213,395,907	7,214,915,616	0.1832	0.300	3.55%	0.65%
NSC	17.2100	384,549,683	6,618,100,044	0.1681	0.060	1.39%	0.23%
UPC	57.0200	<u>247,633,896</u>	<u>14,120,084,750</u>	<u>0.3586</u>	0.200	1.40%	<u>0.50%</u>
Total:	N. A.	1,237,390,826	\$39,374,400,971	1.0000			1.87%

AUGUST							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$26.5300	391,124,474	\$10,376,532,295	0.2647	0.120	1.81%	0.48%
CSX	37.2400	213,072,061	7,934,803,552	0.2024	0.100	1.07%	0.22%
NSC	19.7600	385,240,782	7,612,357,852	0.1942	0.060	1.21%	0.24%
UPC	53.4900	<u>248,304,630</u>	<u>13,281,814,659</u>	<u>0.3388</u>	0.200	1.50%	<u>0.51%</u>
Total:	N. A.	1,237,741,947	\$39,205,508,358	1.0000			1.44%

DECEMBER							
<u>Railroad</u>	<u>Common Stock Prices</u>	<u>No. Shares o/s</u>	<u>Market Value</u>	<u>Weight</u>	<u>Dividend Paid</u>	<u>Dividend Yield</u>	<u>Weighted Yield</u>
BNSF	\$28.5600	385,777,648	11,017,809,627	0.2776	0.120	1.68%	0.47%
CSX	35.2900	213,687,996	7,541,049,379	0.1900	0.100	3.40%	0.65%
NSC	18.6000	385,831,746	7,176,470,476	0.1808	0.060	1.29%	0.23%
UPC	55.7700	<u>250,290,268</u>	<u>13,958,688,246</u>	<u>0.3517</u>	0.200	1.43%	<u>0.50%</u>
Total:	N. A.	1,235,587,658	\$39,694,017,728	1.0000			1.85%

Source: Dividend yields and stock prices were obtained from financial databases. Individual railroad weights were based on the month market values of individual railroads divided by the total monthly value of all railroads. Shares of stock outstanding were obtained from SEC 10 Q Report