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April 19, 2013

Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423

Re: STB Docket No. EP 558 (Sub-No. 16), *Railroad Cost of Capital—2012*

Dear Ms. Brown:

Pursuant to the Decision served by the Board on February 26, 2013, attached please find the Comments of the Association of American Railroads (AAR) in the above captioned proceeding. Also attached are the AAR's underlying workpapers which will be made available upon request to other participants in the proceeding.

A copy of the same on a compact disc, in MS Word and PDF format, will be hand-delivered for the Board's convenience. The disc will also include workpapers and spreadsheets.

Respectfully submitted,

Timothy J. Strafford
Counsel for the Association of
American Railroads

BEFORE THE
SURFACE TRANSPORTATION BOARD

RAILROAD COST OF CAPITAL — 2012	)	EX PARTE NO. 558 (Sub- No. 16)

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS AND ITS MEMBER RAILROADS

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April 19, 2013

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Verified Statements

Tab	Witness*	Subject
1	John T. Gray	The railroads' market value capital structure, overall cost of capital, cost of common and preferred equity, and cost of all types of debt.

*Verified statements are referenced in these comments by witness name – viz., V.S. Gray at _____

BEFORE THE
SURFACE TRANSPORTATION BOARD

RAILROAD COST OF CAPITAL — 2012	)	STB Docket No. EP 558 (Sub-No. 16)

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS AND ITS MEMBER RAILROADS

By order served February 26, 2013, the Board instituted this proceeding to determine the railroad industry's cost of capital for the year 2012. That determination, as the Board noted, will enable it to make the statutorily required annual individual railroad revenue adequacy determination for 2012. 49 U.S.C. § 10701(d)(2), § 10704(a)(2). The Board noted further that the cost of capital determination may also be used in various other STB railroad proceedings. *See Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16) (STB served February 26, 2013).

The railroads, through the Association of American Railroads (AAR), are submitting their calculation of: (1) the railroads' 2012 cost of common equity capital; (2) the railroads' 2012 current cost of preferred equity capital; (3) the railroads' current 2012 cost of debt capital; and (4) the 2012 capital structure mix of the railroad industry on a market value basis.

The AAR's calculations are discussed in the attached verified statement of John T. Gray, Senior Vice President, Policy and Economics of the AAR. Mr. Gray's statement establishes the following:

1. The 2012 cost of debt capital is 3.29 percent.

2. There is no preferred equity capital for 2012.

3. The 2011 cost of common equity capital is 13.33 percent.

4. The capital structure of the railroad industry is 22.62 percent debt, 0.00 percent preferred equity, and 77.38 percent common equity.

From these data Mr. Gray concludes that the overall railroad industry cost of capital for 2012 is 11.06 percent.[1]

I. Introduction

The sole purpose of this proceeding is to determine the railroad industry's cost of capital for 2012. The cost of capital will be computed using the current cost of debt and equity and market value weights. *See 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 (3rd Cir. 1988).

II. The Cost of Common Equity Capital

In its February 26, 2013 order instituting this proceeding, the Board directed that the cost of capital components be calculated "using the methodology followed in Railroad Cost of Capital –2011." *See Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 15), slip op. at 2 (STB served February 26, 2013). In *Railroad Cost of Capital –2011*, the Board calculated the cost of equity component in its annual cost of capital proceeding using a simple average of the estimates produced by the Capital Asset Pricing Model (CAPM) adopted in *Methodology to be Employed in Determining the Railroad Industry's Cost of Capital*, EP 664 (STB served January 17, 2008) and the Morningstar/Ibbotson Multi-Stage Discounted Cash Flow Model (MSDCF) adopted in *Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital*, EP 664 (Sub-No. 1) (STB served January 28, 2009).[2] *See Railroad Cost of Capital –*

[1] Gray V.S. at 2, 45.

[2] The Morningstar/Ibbotson MSDCF model adopted by the Board is a modified version that includes only the railroads that pass the screening criteria set forth in *Railroad Cost of Capital—1984*, 1 I.C.C. 2d

2011, EP 558 (Sub-No. 15), slip op. at 6-11 (STB served September 13, 2012).[3] Mr. Gray used a simple average of the CAPM and Morningstar/Ibbotson MSDCF models adopted by the Board in his calculation of the cost of common equity in this proceeding.

A. The CAPM Methodology

Under the CAPM methodology as applicable to the annual cost of capital proceeding, the cost of common equity is calculated by determining the return an investor would receive on a risk-free investment and by adding to the risk-free return a premium associated with the risk of railroad stocks. The premium is calculated by multiplying the market risk premium of the stock market as a whole by a factor, known as Beta, that represents the non-diversifiable risk of holding railroad stocks. In formulaic terms, the CAPM can be expressed as:

K = RF + (MRP x Beta)

Where K = the firm's cost of equity,
RF = the risk-free rate,
MRP = the market's risk premium, and
Beta = coefficient of systematic, non-diversifiable risk of the stock.

Mr. Gray's attached Verified Statement explains how the AAR calculated the cost of equity using the CAPM methodology. The risk-free rate and the market risk premium were retrieved directly from the Federal Reserve Board and Ibbotson Equity Risk Premium sources

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989 (1985), for inclusion in the sample of railroads used for the annual cost of capital determination. *See Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital*, EP 664 (Sub-No. 1), slip op. at 4 (STB served January 28, 2009).

[3] The Board determined that using a simple average of CAPM and the commercially accepted Morningstar/Ibbotson multi-stage DCF model to calculate the cost of equity yields a more precise determination than relying on CAPM alone. As noted by the Board, "By using an average of the results produced by both models, we harness the strengths of both models while minimizing their respective weaknesses. The result should be a stable yet precise estimate of the cost of equity that we can use in future regulatory proceedings and to gauge the financial health of the railroad industry." *Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital*, EP 664 (Sub-No. 1), slip op. at 15 (STB served January 28, 2009).

approved by the Board in the 2011 cost of capital proceeding. *Railroad Cost of Capital – 2011*, EP 558 (Sub-No. 15), slip op. at 7. The calculation for Beta was made using the S&P 500 Price Return Index and the same methodology approved by the Board in the 2011 cost of capital proceeding. *See id.*; Gray V.S. at 29-31.

The values determined by Mr. Gray for the elements of the CAPM methodology were 2.54 percent for the risk-free rate, 6.70 percent for the market risk premium, and 1.1543 for Beta.

Based on a three-railroad composite (determined using the Board's procedures established in *Railroad Cost of Capital – 1984*, 1 I.C.C.2d 989 (1985)) and the procedures used by the STB in the last cost of capital proceeding, Mr. Gray estimates that under the CAPM methodology the cost of common equity capital for 2011 is 10.27 percent. Gray V.S. at 35.

B. The Morningstar/Ibbotson MSDCF Methodology

The Morningstar/ Ibbotson MSDCF methodology, as adopted by the Board, calculates the cost of common equity capital as follows:

> The cost of equity in a DCF model is the discount rate that equates a firm's market value to the present value of the stream of cash flows that could affect investors. These cash flows are not presumed to be paid out to investors; instead, it is assumed investors will ultimately benefit from these cash flows through higher regular dividends, special dividends, stock buybacks, or stock price appreciation. The incorporation of these cash flows and the expected growth of earnings are the essential aspects of the multi-stage DCF we are adopting here.
>
> The Morningstar/Ibbotson model defines cash flows (CF), for the first two stages, as income before extraordinary items (IBEI) minus capital expenditures (CAPEX) plus depreciation (DEP) and deferred taxes (DT), or
>
> $$CF = IBEI – CAPEX + DEP + DT.$$
>
> An average cash flow figure is used as the starting point of the analysis under the Morningstar/Ibbotson model. To find the average cash flow, the model uses the 5-year period leading up to the year being analyzed, and the total cash flows for that time period are divided by total sales, which determine the 5-year cash-flow-to-sales ratio. The ratio is then multiplied by the total sales for the year being

> analyzed to obtain the average cash flow estimate for that year. For the third (and final) stage of the Morningstar/Ibbotson multistage DCF model stage, Morningstar/Ibbotson uses two additional assumptions: that there is no depreciation or deferred taxes. Therefore, in the third stage, cash flows are based solely on income before extraordinary items.
>
> Growth of earnings is also calculated in three stages. In the first stage (years 1-5), the firm's annual earnings growth rate is assumed to be the median value of the qualifying railroad's 3- to 5-year growth estimates as determined by railroad industry analysts and published by Institutional Brokers Estimate System (IBES). In the second stage (years 6-10), the growth rate is the simple average of all growth rates in stage 1. In stage three (years 11 and onwards), the growth rate is the average long-run nominal growth rate of the U.S. economy. This long-run nominal growth rate is estimated by using the historical growth in real GDP and the long-run expected inflation rate.

Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital, EP 664 (Sub-No. 1), slip. op. at 5-6 (STB served January 28, 2009).

The cost of common equity capital using the Morningstar/Ibbotson MSDCF model adopted by the Board is also calculated and explained in the attached Verified Statement of Mr. Gray. Consistent with the methodology approved by the Board in *Railroad Cost of Capital – 2008*, EP 558 (Sub-No. 12), slip op. at 9-10 (served September 25, 2009), Mr. Gray's calculations used only IBES growth estimates available as of December 31, 2012, and stock market values were based on shares outstanding and stock prices as of December 31, 2012. Gray V.S. at 41-43.[4]

Mr. Gray calculates the cost of common equity capital for 2012 using the Morningstar/Ibbotson MSDCF model as 16.39 percent. Gray V.S. at 43.

[4] Consistent with the methodology approved by the Board in *Railroad Cost of Capital – 2011*, EP 558 (Sub-No. 15), slip op. at 8-9, Mr. Gray's calculations used data inputs in the cash flow formula as retrieved from the railroads' 2008 - 2012 10-K filings with the SEC (and used restated data where set forth in any subsequently filed 10-K filings with the SEC). *See* Gray V.S. at 38.

C. Conclusion as to the Cost of Common Equity Capital

Under the Board's methodology, the cost of common equity capital is the simple average of the results using the CAPM and Morningstar/Ibbotson MSDCF models. The simple average produces a cost of common equity capital of 13.33 percent. Gray V.S. at 44.

III. The Cost of Preferred Equity Capital

Preferred stock is a hybrid security which has some characteristics of debt and some characteristics of equity. Its cost depends on its specific features. The methodology used by the Board in the last sixteen proceedings applies 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 equity 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.

(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 common equity.

Because the three-railroad composite had no preferred stock outstanding at the end of 2012, there is no 2012 cost of preferred equity capital. Gray V.S. at 44.

IV. The Cost of Debt

The cost of debt can include costs for three categories (bonds, equipment trust certificates, conditional sales agreements) of debt instruments, plus flotation costs.[5] To determine the cost of debt for bonds, Mr. Gray has computed the average current bond yield for 69 instruments of the sample railroads for which data were available during 2012. This methodology is identical to that used in the last 22 cost of capital proceedings. *Railroad Cost of Capital – 2011,* EP 558 (Sub-No. 15), slip op. at 3. Under this approach, the bond yield is based on a sample representing 97 percent of the book of the bonds issued by the railroads in the sample.[6] 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 Treasury securities that are actively traded.[7] This is the same methodology used by the Board in the last 25 proceedings. The composite current cost of debt is the market-weighted average cost of bonds, ETCs, and CSAs (if there were any modeled), plus a small floatation cost.[8] Using the Board's established methodology, the railroads' 2012 cost of new debt is 3.29 percent. Gray V.S. at 24.

[5] The term "Bonds" is used to describe bonds, notes, debentures, and other similar types of debt.

[6] Bond data were retrieved from a Bloomberg database. Gray V.S. at 8.

[7] Gray V.S. at 11, 16. No CSAs were modeled because only one is not current, and it cannot be modeled because it uses a floating interest rate. Like previous years, that CSA is included in "Other Debt", and impacts only capital structure.

[8] In this proceeding, the AAR calculated bond flotation costs by using data reported by the sample railroads to the Securities and Exchange Commission (SEC) regarding six new debt offerings in 2012. This is the same methodology approved by the Board in *Railroad Cost of Capital –2011,* EP 558 (Sub-No. 15), slip op. at 5. Gray V.S. at 19-24.

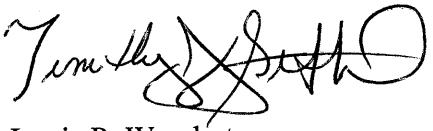
V. The 2012 Capital Structure of the Railroad Industry and the Overall Cost of Capital

Pursuant to the Board's February 25, 2013 decision, the market values of debt, preferred equity, and common equity were compiled to compute the 2012 capital structure of the railroad industry. The railroads' market value capital structure on a market value basis is 22.62 percent debt, 77.38 percent common equity capital, and 0.00 percent preferred equity capital. Gray V.S. at 45. Based upon this capital structure, the overall 2012 cost of capital is 11.06 percent. Gray V.S. at 45.

Conclusion

The Board should determine that the railroads' cost of capital for 2012 is 11.06 percent.

Respectfully submitted,



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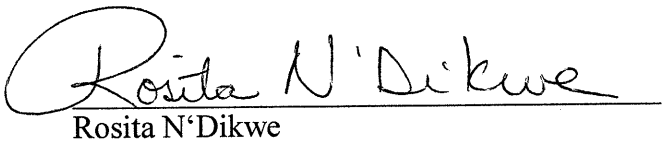
Counsel for the Association of American Railroads
and Member Railroads

April 19, 2013

CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of April, 2013, I served by first class mail, postage prepaid, a copy of the forgoing on the following:

Robert D. Rosenberg
Slover & Loftus
1224 Seventeenth St, NW
Washington, DC 20036-3003



Rosita N'Dikwe

BEFORE THE

SURFACE TRANSPORTATION BOARD

EX PARTE NO. 558 (Sub-No. 16)

RAILROAD COST OF CAPITAL — 2012

VERIFIED STATEMENT

OF

JOHN T. GRAY

SENIOR VICE PRESIDENT — POLICY AND ECONOMICS

ASSOCIATION OF AMERICAN RAILROADS

April 19, 2013

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Verified Statement
of
John T. Gray

I. Introduction

My name is John T. Gray. I am Senior Vice President – Policy and Economics of the Association of American Railroads (AAR), with offices at 425 Third Street, SW, Suite 1000, Washington, DC 20024. The AAR is the trade association of the Nation's major 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 almost 97 percent of our Nation's total railroad freight operating revenue.

When appropriate, the AAR represents the railroad industry before government bodies, including economic 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 and projects addressing regulatory, legislative and internal issues relevant to railroads. Furthermore, I have testified before federal regulatory agencies, and have been an expert witness for a railroad. 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 February 25, 2013 (served February 26), instituting a proceeding to determine the railroad industry's 2012 cost of capital — Ex Parte No. 558 (Sub-No. 16), *Railroad Cost of Capital — 2012* ("Ex Parte 558 Decision"). In my statement, I calculate the cost of debt for the railroad industry using

the procedures accepted in previous STB proceedings. I also calculate the cost of common equity using a simple average of the estimates produced using the following methods: (1) the Capital Asset Pricing Model used by the Board in Ex Parte No. 558 (Sub-No. 15); and (2) the STB's version of the Morningstar/Ibbotson Multi-Stage Discounted Cash Flow Model as used by the Board in Ex Parte No. 558 (Sub-No. 15). Finally, I calculate the market value capital structure and the overall cost of capital using the procedures accepted in previous Cost of Capital proceedings. This statement presents the details for calculating the necessary components for the overall cost of capital calculation: the market value capital structure, the cost of debt, the cost of common equity capital using the Capital Asset Pricing Model and the Multi-Stage Discounted Cash Flow Model, and the cost of preferred equity capital.

I conclude that the 2012 cost of capital for the railroad industry is 11.06 percent. This estimate is based on a current cost of debt of 3.29 percent, a cost of common equity capital of 13.33 percent; and market value weights for debt and common equity of 22.62 percent and 77.38 percent, respectively. Because there were no preferred stock issues outstanding in 2012, the cost of preferred equity capital has not been calculated, and the market value weight for preferred equity capital is zero.

II. Determining the Cost of Capital

A. Defining the Cost of Capital

The cost of capital for a firm is the minimum rate of return on investment that the providers of capital require as a condition for making an investment in the firm. In essence, it is the threshold rate of return on investment that makes investment in the firm attractive.

The cost of capital necessarily incorporates long-term investor expectations for a company's performance. Investment funds flow to companies where the expected returns, over the investors' investment horizons, are thought to at least equal the expected returns available from other investment opportunities, giving consideration to the relative (or commensurate) risk of investment. Similarly within a company, limited capital resources flow to projects where the expected returns are expected to be highest, giving consideration to the relative (or commensurate) risk of investment. Methods used to estimate the cost of capital therefore attempt to measure investor expectations. For some types of capital, such as traded bonds, investor expectations can be readily observed. For other types of capital, such as common equity, modeling is necessary.

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).

C. Selection of Railroads for Analysis

Under the criteria established by the Board for individual firm inclusion in the composite railroad sample, a company must meet certain criteria. (Ex Parte 558 Sub-No. 15 Decision) Those criteria are:

- The company is a Class I line-haul railroad.
- If the Class I railroad is controlled by another company, the controlling company is primarily a railroad company (at least 50 percent of its total assets are devoted to railroad operations), and it is not already included in the study frame.
- The company's bonds are rated at least BBB by Standard & Poor's and Baa by Moody's.

- The company's stock is listed on either the New York or the American Stock Exchange.
- The company has paid dividends throughout the year (2012).

Table 1 (below) lists the AAR's evaluation of railroad companies that may meet the STB's criteria.

Table No. 1
Evaluation of Class I Railroads
Under Surface Transportation Board Selection Criteria
2012

Class I Railroad	Parent	Stock Symbol	Listed NYSE/ASE	Dividends Throughout 2012	Rail Assets Account For At Least 50% of Parent	Adequate Debt Rating
BNSF	Berkshire Hathaway	BRK.A	Yes	No	No	Yes
CSX	CSX Corporation	CSX	Yes	Yes	Yes	Yes
CNGT*	Canadian National Railway Co.	CNI	Yes	---	Non-U.S. company	---
KCS	Kansas City Southern	KSU	Yes	Yes	Yes	No
NS	Norfolk Southern Corporation	NSC	Yes	Yes	Yes	Yes
SOO*	Canadian Pacific Railway Ltd.	CP	Yes	---	Non-U.S. company	---
UP	Union Pacific Corporation	UNP	Yes	Yes	Yes	Yes

* CNGT is Grand Trunk Corporation, and consists of almost all of the U.S. railroad operations of Canadian National Railway (a.k.a. CN). SOO is Soo Line Corporation, and consists of the U.S. operations of Canadian Pacific (CP). Following STB precedent, CN and Canadian Pacific were not included in the sample because both CN and Canadian Pacific are Canadian corporations – and the cost of capital proceeding is concerned with determining costs for U.S. railroads under STB jurisdiction.

This year there are three railroad corporations or holding companies in the sample meeting the Board's criteria: CSX Corporation, Norfolk Southern Corporation, and Union Pacific Corporation. These railroad companies are the same three companies included in the 2011 sample. Consistent with past proceedings, the two Canadian-owned railroads have been excluded from the sample.[1] Berkshire Hathaway, owner of BNSF Railway Company,

[1] See STB Ex Parte No. 558, decided July 2, 1997, page 2, and verified statement of Craig F. Rockey on behalf of the Association of American Railroads in Ex Parte No. 558, submitted March 19, 1997, Table 1 on page 6.

did not pay dividends throughout 2012, and the railroad is less than 50% of the company's assets. Kansas City Southern did not meet the Board's criteria because of its debt rating. However, KCS has moved closer to meeting all criteria. It began paying dividends on its common stock, and its debt ratings have improved to the point where portions of KCS debt are rated as investment grade.[2]

Table 2 contains operating revenue and asset figures from the 2012 Annual Report Form R-1 submitted by each Class I railroad to the STB at the end of March 2013. This table shows that, based on data for 2012, the three-firm composite accounts for 61.9 percent of the operating revenues and 55.8 percent of the assets of all Class I railroads. These percentages are similar to the percentages for the previous year, 2011.

Table No. 2
Relative Size of the Railroad Composite Sample
Year 2012

	Revenue	Assets	Pct of Total Class I RR	
Railroad	($000)	($000)	Revenue	Assets
CSX	$11,471,018	$28,499,743	16.4 %	13.9 %
NS	11,040,097	40,978,862	15.7	20.0
UP	20,898,214	44,996,278	29.8	22.0
Total	$43,409,329	$114,474,883	61.9	55.8
Total Class I	$70,135,049	$204,970,729	100.0 %	100.0 %

Accounting methods, differences in the treatment of taxes, and currency conversion could also be issues if foreign companies were added to the composite railroad. The railroad parents (CN and Canadian Pacific) are still more Canadian than USA. Comparing operating revenues for 2011 as reported in the AAR's *Railroad Facts* book, 2012 edition: CNGT was 31 percent of CN, and SOO was 27 percent of CP.

[2] From page 92 of the 2012 KSU 10-K: "Standard & Poor's Rating Services ("S&P") rates the unsecured KCSR Credit Agreement and secured KCSM Agreement as investment grade but the remaining debt, preferred stock and corporate credit of KCS, KCSR and KCSM as non-investment grade. In the fourth quarter of 2012, Moody's Investor Service ("Moody's") upgraded KCSR's senior unsecured debt to investment grade, assigned an investment grade rating to the unsecured KCSR Credit Agreement, and upgraded the rating on the secured KCSM Agreement to investment grade. Moody's rates the remaining debt and corporate credit of KCSM as non-investment grade."

D. Types of Railroad Capital

The total capital of a firm may include various forms of debt and two types of equity; common stock and preferred stock. Each of these three sources of capital has different expected rates of return (reflecting different levels of perceived risk), and the overall cost of capital is calculated as the weighted average of the costs of common equity, preferred equity, and debt based on their market values. Different approaches are used to estimate the costs of each of the types of capital. In this statement, 99 percent of the cost of debt is calculated using bonds and similar instruments (including notes and debentures). The remaining 1 percent – in the form of Equipment Trust Certificates – is calculated with a long-used model that utilizes market-determined yields for government debt, and the historical relationship between government debt and the type of railroad debt modeled.[3] The estimate of the cost of common equity is a simple average of the results from two estimation methods. One method is calculated using the Capital Asset Pricing Model (CAPM) following the methodology prescribed by the Board in the 2011 Cost of Capital decision. The other method is calculated using the Multi-Stage Discounted Cash Flow model methodology prescribed by the Board in the 2011 Cost of Capital Decision. The cost of preferred equity capital has not been calculated, since none of the representative companies had preferred stock outstanding at the end of 2012. Calculations for all three types of capital are based on data through 2012. The industry's overall cost of capital is computed as a weighted average of the two costs — debt and common equity — based upon the market value for each type of capital.

[3] No Conditional Sales Agreements were used to calculate the 2012 cost of debt because they were either current or had properties (such as floating interest rates) that made them not suitable for the model.

III. Debt Capital in 2012

The current cost of debt is determined from the current market-determined yields on all debt outstanding. This approach is necessary, and in past Board Cost of Capital decisions has been accepted as appropriate, because of the reasons listed below.[4]

(1) There is a lack of sufficient 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 exact 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.

(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.

(4) The quantity and quality of existing debt has an impact on the yield of new issues.

A. Bonds, Notes and Debentures

As in previous Cost of Capital determinations, calculations relating to the bond market value use market data for the composite railroad whenever possible, and calculations

[4] See Ex Parte Nos. 415, 436, 452, 458, 464, 466, 473, 478, 486, 491, 506, 513, 518, 523, 523 (Sub-No. 1), 588, and 588 (Sub-No. 1) through (Sub-No. 15).

for the cost of bond debt rely entirely on market data.[5] Multiple sources for market data are available, and each source has its own criteria for including a financial instrument in its database. However, no market data will be available in any database for privately *held* bonds and bonds that do not trade.[6] (Bonds can be privately *placed*, but then trade.) For 2012, yields and prices of the sample railroads' bonds, notes and debentures were obtained from Bloomberg.[7] This source is the same source used in the previous filing, and we were able to find data for 69 bonds representing 97 percent of the book value of all railroad bonds belonging to the composite railroad.[8]

1. Market Value of Bonds, Notes, and Debentures

The average market value for traded bonds, notes, and debentures is calculated using the methodology employed in previous Cost of Capital proceedings. For each of 69 traded bonds in 2012, an average price is calculated based on the simple average of monthly prices. The prices represent what the investor is willing to pay for the bond given its coupon rate and maturity date. The market value is the average market price (stated as a price per hundred dollars of principal) times the amount of debt outstanding as of December 31, 2012.[9] Where market prices are not available (i.e., for instruments that did not trade or were not found in the Bloomberg database), the "face value" of the bond is assumed to be the

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[5] The terms "bonds" and "bonds, notes, and debentures" are used interchangeably herein.

[6] In some cases, a comparable bond method could be used, where yields for traded bonds could be used for non-traded bonds with similar qualities (maturity date and type of instrument), enabling the calculation of a probable market price. Another approach would be to construct a yield curve for a railroad. These approaches have not been used because they require some judgments that could be debated, and because the supply of bonds with market data is adequate.

[7] Bloomberg's product is called Bloomberg Professional, and it is available as a subscription service. http://www.bloomberg.com/professional/

[8] The bonds not included are those that are either not in Bloomberg's database, or were in the database but did not trade (such as private placements).

[9] Securities that were newly issued during the year were prorated by the ratio of the number of months outstanding (rounded to the nearest half month) to the twelve-month year, as done in past proceedings.

price investors would pay. This assumption may slightly overstate the market value of some issues and understate the value of others, depending upon the relationship of the instruments' coupon rate and the current market rate. However, this possible variation is not likely to significantly affect the overall estimate of the cost of debt capital, since the differences are likely to be both small and offsetting, and since 97 percent of the book value of bonds is priced at market. Table 3 summarizes the results of the market value calculations for 2012. The market value for bonds, notes, and debentures that traded is $26.9 billion, an increase of 19 percent from 2011. The increase was caused by a mixture of more debt and higher market value, with increased debt accounting for more than half of the increase. The corresponding market value for non-traded debt is down 59 percent, making the total market value for debt up by over 16 percent.[10]

Table No. 3
Bonds, Notes and Debentures
Average Market Value

Railroad Co.	Traded Value ($000)	Non-Traded Value ($000)	Total Value ($000)	Weight Based on Traded
CSX	$9,756,990	$139,496	$9,896,486	36.29 %
NSC	$9,521,962	$84,902	9,606,864	35.42
UNP	$7,605,504	$100,391	7,705,895	28.29
Total	$26,884,456	$324,789	$27,209,245	100.00 %
Prior Year	$22,579,146	$787,339	$23,366,485	
Change	19.1%	-58.7%	16.4%	

Appendix A lists details for each of the 69 bonds, notes, and debentures belonging to the composite railroad for which trading data are available for 2012 in the Bloomberg

[10] Non-Traded debt in this case is debt that did not trade, or debt for which no trading data are available in the Bloomberg database.

database – and those instruments are summarized for each sample railroad in the front of the Appendix. Book values for non-traded debt are also listed.

2. Current Cost of Bonds, Notes, and Debentures

Table 4 summarizes the yield or cost of each railroad's debt (bonds, notes, and debentures), which, when weighted by the market value of the traded debt (as shown in Table 3), determines the sample composite cost of bonds, notes and debentures. The weighted average is 3.239 percent, which is 0.674 percentage points below last year's figure of 3.913 percent.

Table No. 4
Bonds, Notes and Debentures
Weighted Current Cost

Railroad Co.	Weight	Current Cost
CSX	36.29 %	3.396 %
NSC	35.42	3.302
UNP	28.29	2.959
Total	100.00 %	3.239 %

As noted earlier, the current cost for bonds, notes, and debentures is based on traded instruments issued by the sample railroads. Appendix A contains the average yield for each of the 69 traded securities as found in Bloomberg's database. The average yield for each security is a simple average of the twelve month-end yields. The traded portion of Appendix A 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 3.239 percent. The weights used in Table 4, as derived from the calculations in Table 3, are also based on the traded portion of bonds, notes and debentures listed in Appendix A.

B. Equipment Trust Certificates

Equipment Trust Certificates (ETCs) are debt obligations that are secured by the particular equipment which is acquired with the instrument's proceeds. In the event of default, creditors may repossess and resell or lease the equipment to pay off the debt obligations. Because entire 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.

To compare ETCs to other debt instruments, the yields to maturity (as detailed in Appendix B) for government bills, notes, and bonds having the same range of maturities as current ETCs were obtained from Federal Reserve data. The yield curve for these government securities (also in Appendix B) 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, such that the data accurately reflect the 2012 relationships between yields and maturities. After determining the yields to maturity for government bonds of maturities

similar to those of an ETC, those yields are adjusted to reflect the risk associated with the ETCs 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, Salomon Brothers has not compiled yields and yield spreads for ETCs since 1988. 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 of ETCs by the sample railroads as compiled by the AAR.[11] (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 rating where there were no new ETC issues of a particular rating.[12])

In recent years prior to 2007, no new ETCs were issued by the sample railroads. An alternative method of estimating yield spreads between government bonds and ETCs was therefore necessary for Cost of Capital determinations for the years 2001 through 2006. For this period, the AAR relied on historical yield spreads to determine the current cost of ETCs. Consequently, the yield spread between ETCs and government bonds was an average of the spreads (government vs. BBB ETCs) used in the 1998 through 2000 Cost of Capital

[11] The 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 the AAR had 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. In today's economic environment, ETCs for non-railroads could distort the spread.

[12] ETCs 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.

proceedings. That spread was 114 basis points. In 2007, however, a new ETC was issued, and its interest rate spread above government bonds was 125 basis points. There were no new ETCs issued in 2008, so the 2007 premium was used. However, in 2009, a new ETC was issued, and its interest rate spread above government bonds was 80 basis points. Because the 2009 ETC is the most current measure of the relationship between ETCs and government securities, its 80 basis point spread is used herein as the interest rate spread above government bonds. Table 5 lists fourteen years of interest rate spreads. The 2009-12 spread is closest to the spreads from 1998 and 1999.

Table No. 5
History of Premiums for
Equipment Trust Certificates (ETC)

Data Year	Proceeding	Basis Points
1998	Ex Parte No. 558 (Sub-No. 2)	84
1999	Ex Parte No. 558 (Sub-No. 3)	87
2000	Ex Parte No. 558 (Sub-No. 4)	171
2001	Ex Parte No. 558 (Sub-No. 5)	114
2002	Ex Parte No. 558 (Sub-No. 6)	114
2003	Ex Parte No. 558 (Sub-No. 7)	114
2004	Ex Parte No. 558 (Sub-No. 8)	114
2005	Ex Parte No. 558 (Sub-No. 9)	114
2006	Ex Parte No. 558 (Sub-No. 10)	114
2007	Ex Parte No. 558 (Sub-No. 11)	125
2008	Ex Parte No. 558 (Sub-No. 12)	125
2009	Ex Parte No. 558 (Sub-No. 13)	80
2010	Ex Parte No. 558 (Sub-No. 14)	80
2011	Ex Parte No. 558 (Sub-No. 15)	80
2012	Proposed for EP 558 (Sub-No. 16)	80

The methodology used to determine the cost of ETC debt is the same as the method employed and approved in previous proceedings. Risk-adjusted yields provide the basis to value each ETC. Using formulae suggested by *Standard Security Calculation Methods,* the

market value of each maturity comprising an ETC is determined. In effect, these formulae make it possible to determine the price investors would pay in 2012 for the contractual interest payments and price appreciation for holding the instrument. It is the most accurate way to compute 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 establish the current cost for ETCs. The weighted-average cost for all modeled Equipment Trust Certificates is shown in Table 6. [13]

Table No. 6
Summary of Equipment Trust Certificates Modeled for 2012
($000)

	Amount Outstanding				Current Market	Current Interest	No.
Railroad	Beg.	Ending	Average	Yield	Value	Amount	ETC
CSX	$75,300	$53,300	$64,300	1.220%	$72,668	$887	5
NS	37,650	25,100	31,375	1.148%	34,818	400	2
UP	128,313	119,417	123,865	2.729%	153,068	4,177	2
Total	$241,263	$197,817	$219,540	2.097%	$260,554	$5,464	9

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

For bonds with less than six months to maturity:

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

For bonds with six months or longer to maturity:

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

Where: DP = Dollar price of the bond

Weighing each railroad's yield, by its current market value for modeled ETCs, results in a current cost of 2.097 percent. The average rate is lower than the 2.779 percent found for 2011. This is not surprising because the yield curve for government securities is lower in 2012 than 2011 (see Appendix B), all instruments are one year closer to maturity – meaning they have moved "lower" (to the left) on the yield curve, and no new instruments were added. Both years were calculated using the same interest rate spread in the model. A summary of each railroad's modeled ETCs can be found in Appendix C, which includes a market value and a current yield. Upon initial examination of Table 6, the yield for Union Pacific's ETCs appears doubtful because of its difference from the two other railroads. However, Appendix C reveals that UP's ETCs have maturity dates much later than the other two railroads – meaning the UP ETCs are much "higher" on the yield curve, justifying their higher yield. Appendix C also lists ETCs that were not modeled. ETCs can fail to be modeled for two reasons: (1) the ETC instrument does not have all of the characteristics typical of an ETC; or (2) the ETC has a floating rate (instead of fixed) making its rate for a particular future year uncertain. The market value of all modeled ETCs is $260.6 million. There were no non-modeled ETCs this year. When non-modeled ETCs exist, the market value of non-modeled ETCs is assumed to be the same as its book value, and the non-modeled ETC "market value" is listed in the Miscellaneous Debt category to comply with the Board's previous decisions.

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 13
K	=	Compute for K, values 1 to N and sum the results

C. Conditional Sales Agreements

Conditional Sales Agreements (CSAs) are another form of railroad financing that is 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, their current cost can be determined from current yields on government bonds in a similar manner to ETCs, using a 1997 relationship between CSAs and ETCs to determine the yield spread over government bonds.

Table No. 7
Summary of Conditional Sales Agreements Modeled for 2012
($000)

	Amount Outstanding				Current Market	Current Interest	No.
Railroad	Beg.	Ending	Average	Yield	Value	Amount	CSA
CSX	$0	$0	$0	--	0	0	0
NS	0	0	0	--	0	0	0
UP	0	0	0	--	0	0	0
Total	$0	$0	$0		$0	$0	0

No CSAs were modeled this year. A summary of each railroad's (only one railroad still has this type of debt instrument) CSAs can be found in Appendix D. Only one CSA was outstanding in 2012, and it was not modeled. Like an ETC, CSAs can fail to be modeled for two reasons: (1) the CSA instrument does not have all of the characteristics typical of a CSA; or (2) the CSA has a floating rate (instead of fixed), making its rate for a particular future year uncertain. In the case of the CSA listed herein as not modeled, the instrument uses a floating interest rate tied to the London Interbank Offered Rate (a.k.a. LIBOR).

Since no CSA's were modeled, the 2012 market value for modeled CSAs is zero. Based on the assumption that the market value of the non-modeled CSA is the same as its book value, the market value of non-modeled CSA is $12.0 million. The non-modeled CSA market value has been listed with the Miscellaneous Debt category to comply with the Board's earlier decisions.

D. All Other Debt

Capital leases and miscellaneous debt such as commercial paper, demand deposits, and other instruments with relatively small amounts outstanding are listed as All Other Debt. To comply with past decisions of the Board, non-modeled Equipment Trust Certificates and Conditional Sales Agreements have been listed in this category. Capital leases account for most of the All Other Debt category.

Capital leases are contracts between two parties and as such take many forms.[14] Since capital 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. For market value purposes, capital leases are included at book value. Given the large number of these leases and the significant differences among their terms, this is the only practical option available. Because the cost of capital calculation assigns this debt a cost based on traded or modeled securities (bonds, notes, debentures, ETCs and CSAs) that typically have a lower cost, the cost used for capital leases will be somewhat understated.

[14] See generally 49 C.F.R. 1201, 2–20 for definitions.

Miscellaneous debt, such as commercial paper, demand deposits, and various instruments with extremely small amounts outstanding are also excluded from the current cost computations. The book value (assumed market value) of capital leases, miscellaneous debt, non-modeled ETCs, and the non-modeled CSA is $1,791.1 million; as a percent of the total market value of debt of the composite railroad, it is 6.1 percent. (More detail on Miscellaneous Debt can be found in the Debt Reconciliation portion of my work papers.) This treatment of All Other Debt is the same approach used in the previous cost of capital proceeding.

E. Market Value of Debt

Table 8 summarizes the total market value for each debt category. The total market value for traded and non-traded debt is $29,260.9 million. Bonds, Notes, and Debentures (Bonds) account for about 93 percent of the total market value. Almost 99 percent of the Bonds' market value is determined by the results of trading throughout the year, while the remaining portion is based upon the book value of non-traded bonds.

Table No. 8
Market Value of Debt ($000)

Type of Debt	Market Value	Percent of Total	Percent of Subtotal
Bonds, Notes & Debentures	$27,209,246	92.99 %	99.05 %
Equipment Trust Certificates	260,554	0.89	0.95
Conditional Sales Agreements	0	0.00	0.00
Subtotal	27,469,800	93.88	100.00 %
All Other Debt*	1,791,073	6.12	
Total	$29,260,873	100.00 %	

* Non-modeled ETCs and non-modeled CSAs are included in All Other Debt.

Current costs can be determined for three of the four debt categories — Bonds, Equipment Trust Certificates, and Conditional Sales Agreements. Therefore, the weighted

average cost of debt is based upon these three (of the four) debt categories (see subtotal column). The total market value of debt, used to determine the weight for debt in the overall cost of capital calculation, includes all four categories. The market value of debt, including traded and non-traded debt, is described in more detail in Appendix E.

F. Flotation Costs for Debt Capital

The cost of issuing new debt generally has two portions. First, when new debt is issued by a negotiated offering or a competitive bid, the issuing firm pays a fee to the investment banking firm or firms handling the offer. These fees cover the banker's administrative costs in handling the sale and profits. Second, the issuer incurs expenses such as legal, accounting, and printing. Those types of expenses are quantified in the Securities and Exchange Commission's Form 424(b)(5) or 424(b)(2), as are the investment banker's fee and other details of new debt offerings. 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 capital 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. In addition, the railroad will have its own internal costs such as legal and accounting. 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 $4 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.

Any 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.

Using the same methodology used since 2008, I calculated 2012 flotation costs for bonds using publicly available data from electronic filings with the Securities and Exchange Commission (SEC).[15] The filing types are "Prospectus Rule 424(b)(2)" and "Prospectus Rule 424(b)(5)". In addition to standard bond information such as coupon and maturity date, these filings also provide the price to investors, underwriter's fee, and railroad expenses excluding the underwriter's fee. I have calculated a yield based on the price to investors and

[15] The SEC's EDGAR (Electronic Data Gathering, Analysis, and Retrieval) system is available on the internet at the following address: http://www.sec.gov/edgar.shtml .

a yield that also included flotation costs. The difference between the two yields is the flotation cost expressed in percentage points. For 2012, six new issues were reported in five (one filing reported two issues) filings.[16] A simple average of the six flotation costs is 0.062 points, slightly lower than the 0.067 percentage points calculated for 2011. Page 1 of Appendix F contains a table with input data and calculations. Pages 2 and 3 of the same appendix contain, as an example, the pages from the SEC filing that were used as a source for one of the filings. The source filings for all of the new bond issues have been included in my work papers. I believe the six new railroad debt issues provide the best information to determine flotation costs for 2012, and I have therefore used 0.062 percentage points for the flotation costs for bonds.

The Securities and Exchange Commission (SEC) conducted a study of flotation costs using railroad ETC data for the years 1951, 1952 and 1955.[17] In that study, the SEC determined that ETC flotation costs averaged 0.89 percent of gross proceeds.

I have calculated flotation costs for ETCs using the same methodology used in the previous Cost of Capital decision, although (as noted previously) it has some flaws. Table 9 below calculates flotation costs for ETCs using the flotation percent of gross proceeds discussed above. No flotation costs have been calculated for CSAs, as none have been modeled. Current average yields on railroad ETCs are assumed to be equal to the yield resulting from the price to investors for a new issue. Coupons are assumed to be paid twice per year. The duration for new ETCs is assumed to be 15 years. Given the input data, effective yields can be calculated, and the difference between the yields excluding flotation

[16] Debt exchanges were not used.

[17] *Cost of Flotation of Corporate Securities 1951-1955,* Securities and Exchange Commission, June 1957.

costs and the yields including flotation costs are the flotation costs measured in percentage points. The results are flotation costs for ETCs of 0.070 percentage points.

The 0.070 percentage points calculated using last year's methodology understates the flotation costs for ETCs, since the weighted average maturity for the 9 modeled ETCs (listed in Appendix C) is 8.69 years – not 15 years, like the methodology incorrectly assumes. Of the 9 ETCs, all but two fully mature in less than 3 years. The government yield curve in Appendix B clearly illustrates that interest rates for debt instruments maturing in 8.69 years are well below those maturing in 15 years.

Table No. 9
Flotation Costs for
Equipment Trust Certificates

Given	**ETC**	**ETC***
Flotation Costs as Pct of Gross Proceeds	0.890%	0.890%
Avg. Railroad Yields (Table 6 & Table 6 adj.)	2.097%	2.871%
Assumed Duration of New Instrument (Yrs)	15	15
Calculated		
Price After Flotation Costs	$99.11	$99.11
Effective Yield Including Flotation Costs	2.167%	2.945%
Difference Between Yields With and Without Floatation Costs =		
Flotation Cost as Percentage Points	**0.070%**	**0.074%**

After adjusting the average railroad yield to its place along the ETC yield curve for 15 years instead of 8.69 years, the flotation costs for ETCs becomes 0.074 percentage points. More detail on this adjusted market yield is provided in my work papers. Table 9 shows the calculation for ETCs using both versions of current yields. The 0.074 percentage points figure for flotation costs is more accurate than a calculation that assumes a yield for an ETC maturing in 8.69 years would be the same as the yield for an ETC that matures in 15 years.

In order for 0.070 percentage points to be correct, the yield curve in Appendix B (which does not contain the ETC premium) would need to be "flat" for the years between 8 and 15 – and it clearly is moving upward instead.

Arguing over 0.070 or 0.074 percentage points for ETC flotation costs is an inefficient use of resources, since the difference has no impact on overall flotation costs shown below in Table 10. The table shows the understated ETC flotation costs only because that methodology was used previously. However, in this case, a much more accurate estimate makes no difference in the resulting cost of debt.

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. The weights for each type of debt are based on market values for debt (excluding All Other Debt), as found in the Percent of Subtotal column in Table 8. All Other Debt is excluded from the weight calculation, since a current cost of debt for that category has not been determined. As shown in Table 10, flotation costs increase the cost of debt by 0.062 percentage points. This result is lower lower than the Board's 0.067 percent points calculated in its 2011 Cost of Capital decision.

Table No. 10
Flotation Costs For Debt

Type of Debt	Market Weight	Floatation Cost
Bonds, Notes & Debentures	99.05%	0.062%
Equipment Trust Certificates	0.95%	0.070%
Conditional Sales Agreements	0.00%	not calculated
Total	100.00%	0.062%

G. Conclusion as to the Cost of Debt Capital

To determine the overall composite current cost of debt, the current cost of each of three categories of debt (Bonds, ETCs and CSAs) is multiplied by 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. Table 11 shows the results of this calculation.

Table No. 11
Composite Current Cost Of Debt

Type of Debt	Market Weight	Current Cost
Bonds, Notes & Debentures	99.05%	3.239%
Equipment Trust Certificates	0.95%	2.097%
Conditional Sales Agreements	0.00%	0.000%
Subtotal	100.00%	3.228%
Flotation Costs		0.062%
Weighted Cost of Debt		3.290%
Weighted Cost of Debt (Rounded)		**3.29%**

The current weighted cost of debt before flotation costs is 3.228 percent. The addition of flotation costs results in a rounded cost of debt of 3.29 percent. This cost of debt is the lowest cost of debt ever – much lower than last year's record of 3.97 percent.[18] Additional details for the 2012 calculation of the overall cost of debt are provided in Appendix G.

IV. Common Equity Capital In 2012

A. The Market Value of Common Equity Capital

The market value of common equity is based on stock prices and shares outstanding for 2012. Table 12 below summarizes the market value calculation. The Weight column, which is not used directly in our calculation, is provided as additional information.

[18] The AAR's *Railroad Facts* book conveniently lists all cost of debt decided by the Board, and its predecessor, since 1978, on page 19 of the 2012 edition.

Table No. 12
Average Market Value
For Common Equity in 2012

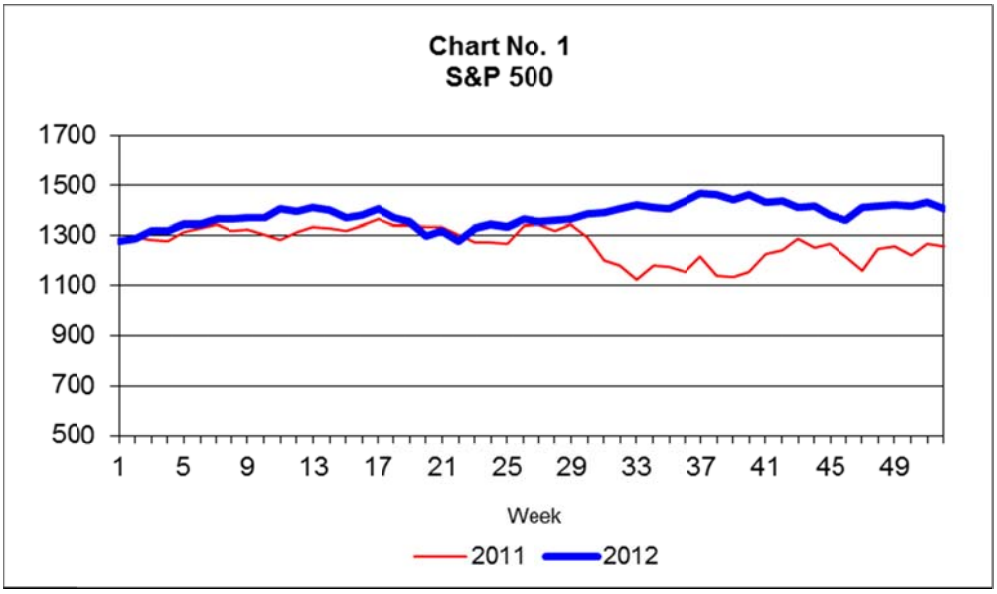
Railroad Co.	Value ($000)	Weight %
CSX	22,471,841.1	22.45
NSC	22,116,997.4	22.09
UNP	55,513,550.0	55.46
Total	$100,102,388.5	100.00 %
Prior Year	$97,034,313.7	
Change	3.2%	

Details of the calculation are presented in Appendix H. Calculations for 2012 included 52 weeks. Week 1 began on Monday January 2 (trading began on January 3), and is the first week after 2011's week 52 used in last year's calculation.[19] Weekly market values were calculated for each railroad using shares outstanding data from railroad 10-Q and 10-K reports multiplied by stock prices at the close of each week in 2012.[20]

The 52-week average market capitalization of the composite railroad (the three railroads that comprise the composite sample), listed on page 4 of Appendix H, is $100.1 billion. This is a 3.2 percent increase from last year's average. Weekly numbers for 29 of the 52 weeks of 2012 were above similar figures (using the same three railroads) for 2011. The stock market in general, as represented by the Standard & Poor's 500, followed a similar pattern for the first half of the year, but fared better in the second half (see Chart 1).

[19] Week 52 for 2011 started Monday December 26, and trading began Tuesday December 27.

[20] The 10-Q and 10-K reports are filed with the U.S. Securities and Exchange Commission (SEC), and are available from railroad web sites or the SEC web site.



B. The Capital Asset Pricing Model (CAPM)

The cost of equity is a measure of investor expectations, including the opportunity cost of investing in a share of a firm's stock; i.e., the expected rate of return that 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. There are several methods available to estimate the cost of equity. Two of these methods, the Capital Asset Pricing Model (CAPM) and a Multi-Stage Discounted Cash Flow Model (MSDCF) are used in this statement to compute an estimate for the cost of equity — in accordance with STB Ex Parte No. 558 (Sub No. 15). The CAPM is discussed herein, and the MSDCF is discussed in the next section.

The theory underlying the CAPM is that an investor seeks a risk-free return plus a premium that is dependent upon risk. In formulaic terms, the cost of equity as estimated by the CAPM may be expressed as:

K = RF + Beta (MRP)

Where K = the firm's cost of equity,
RF = the risk-free rate,
MRP = the market's risk premium, and
Beta = the coefficient of systematic, non-diversifiable risk of the stock.

Therefore, each firm's cost of equity depends on the non-diversifiable risk of its common stock, represented in the model as beta. The risk-free rate (RF) is typically represented by the rate of a U.S. Government (Treasury) instrument. The market risk premium (MRP) is the expected future difference between returns for the overall stock market and risk-free returns. That expected difference is typically estimated using historical differences. Beta is the coefficient of systematic, non-diversifiable risk of the stock, which depends on its volatility and its correlation with the overall stock market. The beta for the overall stock market is 1.0. Firms with higher risk will have a beta above 1.0, while firms with lower risk will have a beta below 1.0. As with the market risk premium, betas are also typically estimated using historical relationships. The methodology used for the CAPM calculation — including details for using certain inputs — follows the methodology prescribed and used by the STB in the 2011 Cost of Capital decision.[21]

[21] Ex Parte No. 558 (Sub-No. 15), Railroad Cost of Capital – 2011, served September 13, 2012.

1. Risk-Free Rate (RF)

In all three decisions regarding the CAPM, the Board has specified a risk-free rate based on an average yield to maturity for a 20-year U.S. Treasury Bond. The average yield-to-maturities for U.S. Treasury Bonds are available from the Federal Reserve web site, and I have again utilized this resource to retrieve data for 2012.[22] A copy of the "download" from the Federal Reserve web site is included in my work papers. Table 13 (below) lists a 15-year history of this bond.

Table No. 13
20-Year U.S. Treasury Bonds 1998 - 2012

Year	Average Annual Rate
1998	5.72 %
1999	6.20
2000	6.23
2001	5.63
2002	5.43
2003	4.96
2004	5.04
2005	4.64
2006	5.00
2007	4.91
2008	4.36
2009	4.11
2010	4.03
2011	3.62
2012	2.54

Source: Federal Reserve

[22] Federal Reserve's web site is http://www.federalreserve.gov/releases/H15/data.htm. Select Treasury Constant Maturities, Nominal, 20-year, Annual.

As can be seen in Table 13, 2012's 2.54 percent average rate for 20-Year U.S. Treasury Bonds is the lowest figure in the fifteen-year period. The rate also had the biggest one-year drop for the fifteen-year period. Furthermore, this rate is the lowest rate in the Federal Reserve Board's two data sets for 20-year bonds, which contain data for 1962 through 1986 and 1993 through 2012.[23]

Using the average yield to maturity in 2012 for a 20-year U.S. Treasury Bond, as directed in STB Ex Parte No. 558 (Sub No. 16), the CAPM's risk-free rate is 2.54 percent.

2. Market Risk Premium (MRP)

In previous decisions, the STB has required that the market risk premium (a.k.a. equity risk premium) calculation begin with year 1926, which is a standard approach. The Standard & Poor's 500 Index is to be used as the representative of the market — also a standard approach. The STB's decision also stated that the "data are also available from a variety of commercial vendors, including Ibbotson."

Since the Ibbotson Equity Risk Premium is well regarded and widely accepted, the 2012 market risk premium from the *Ibbotson SBBI 2013 Valuation Yearbook* published by Morningstar is used.[24] This is the same source used in the 2006 through 2011 decisions. Table 5-1 on page 54 of the 2013 *Ibbotson SBBI* lists the Long-Horizon Equity Risk Premium that is based on the Standard & Poor's 500. The number is 6.70 percent, which is very close to last year's premium of 6.67 percent. Thus, I will use 6.70 percent as the rate for the CAPM's market risk premium.

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[23] Rates from the two datasets, which were downloaded from the Federal Reserve Board during January 2013, are listed in my work papers.

[24] Ibbotson Associates is a wholly-owned subsidiary of Morningstar, Inc. "SBBI" stands for "Stocks, Bonds, Bills, and Inflation.

3. Beta

The STB Ex Parte No. 664 decision requires parties to calculate the CAPM's beta using a portfolio of weekly, merger-adjusted stock returns for the prior five years in the following equation:

$$R - SRRF = Alpha + Beta\ (RM - SRRF) + E$$

Where:

R	=	merger-adjusted stock returns for the portfolio of railroads;[25]
SSRF	=	short-run risk-free rate represented by 3-mo. U.S. Treasury Bills;
Alpha	=	constant term;
Beta	=	coefficient of systematic, non-diversifiable risk;
RM	=	return for the market, represented by the S&P 500; and
E	=	random error term.

In its Railroad Cost of Capital – 2006 decision, the STB clarified its beta calculation methodology. The STB noted that "[t]he proper way to arrive at the weekly portfolio change is to calculate the weekly stock percentage change for each firm, weighted by that firm's share of the industry as a whole." The STB also determined that the Standard & Poor's 500 Price Index, which is publicly available, should be used as a proxy for the Standard & Poor's 500 Total Return Index, unless the Total Return Index is made available to the public.

Using the STB instructions, the value for beta can be solved for using a linear regression. The railroad portfolio return less the short-term risk free rate is the dependent variable, while the market return less the risk free rate is the independent variable. The regression's random error term is unknown, the intercept is the Alpha, and the coefficient for the explanatory variable is the beta.

[25] Railroads must meet the screening criteria set forth in *Railroad Cost of Capital – 1984.*

The raw regression data set used in the AAR calculation is derived from publicly available data from web sites on the internet (for further information, see the work papers). As instructed, I have used weekly stock price data for the prior five years. The raw data consists of weekly observations from the last week of 2007 (Week 0) through the last week of 2012 (Week 261). The data set label variables identify the first day of the week (Monday), but the close prices were for the last day of trading during the week (typically Friday).[26] Week 1 in the regression data set is the week beginning Monday, December 31, 2007.[27] The last week of 2012, Week 261, began on Monday, December 24. Week 0 began in 2007 on Monday December 24, and it is *not* directly used in our regression for beta. The purpose of having a Week 0 is to be able to calculate the return for Week 1 and to have a weight for the beginning of Week 1 (instead of the end). This enables a Week 1 return to be included in the regression data set as clarified by the Board on page 7 of its 2008 cost of capital decision.[28]

Three categories of data are necessary for the raw regression data set. First, weekly stock prices for CSX, NSC, and UNP are downloaded from a web site.[29, 30] The price data were downloaded during the first week of 2013, and are included in my work papers. Stock prices adjusted for dividends and splits are used as the regression's dependent variable, while

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[26] In some cases, stock did not trade on Monday. For example, Week 4 begins Monday, January 21, 2008 – but trading during that week did not begin until Tuesday, January 22, because of the Martin Luther King, Jr. holiday.

[27] Stock was traded on December 31 and January 2 through January 4. Because stock traded for one day in 2007 and three days in 2008, this week counts as the first week in 2008.

[28] Ex Parte No. 558 (Sub-No. 12), served September 25, 2009.

[29] CSX Corporation has a stock symbol of CSX, Norfolk Southern Corporation is NSC, and Union Pacific Corporation is UNP.

[30] The Yahoo! Finance web site was used. Go to http://finance.yahoo.com/q/hp?s=CSX to start with the first railroad (CSX). Select weekly data and a date range.

prices that are only adjusted for splits are used for weighting.[31] (I have adjusted shares outstanding and stock prices for splits for easier comparison to the dividend-adjusted prices. However, original shares outstanding used with original prices will achieve the same results when used for weighting purposes.) The price index values for Standard & Poor's 500 Price Index were also downloaded from the same web site. The second category of data is shares outstanding. Stock shares outstanding, and an effective date, were gathered from each railroad's 10-Q and 10-K reports. The shares outstanding data were adjusted for stock splits, if necessary. For each railroad, a shares outstanding value is assigned to each week based upon the latest available 10-Q or 10-K submissions by that railroad to the Securities and Exchange Commission.[32] The final category of raw data is the rate for 3-Month U.S. Treasury Bills. These securities are also known as 13-Week Treasury Bills or 90-Day Treasury Bills. The Treasury Bill rates are acquired from the Federal Reserve web site, and the "download" is included in my work papers.

SAS statistical software was used to run the regression analysis to calculate beta, and to prepare the regression data set from the raw data.[33] Prior to running the regression, the weekly stock percentage change for each railroad is calculated and weighted by that railroad's share of the industry as a whole to create a composite railroad return.[34] Weekly

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[31] The dividend-adjusted values may differ for a given week if the data are downloaded at different times during the year, especially if dividends have been paid during the interim time. For example using the week beginning December 27, 2011: CSX close price is $21.06 A January 4, 2013 download had an adjusted price of $20.53, while the adjusted price is $20.40 for an April 4 download. The difference affects the fourth digit after the decimal of the beta calculations.

[32] Shares outstanding are updated using the first Friday on, or after, the effective date listed in the 10-Q and 10-K reports – since Friday's stock price is used.

[33] SAS Institute Inc., Cary, NC.

[34] Since the weight needs to be the weight at the beginning of the week instead of the end of the week, data from the end of the previous period are used to represent the beginning of the current period.

returns are also calculated for the Standard & Poor's 500 Price Index (the proxy for the market as a whole). Each week's three-month Treasury Bill rate, which is the measure employed for the short-run risk-free rate, is restated from an annual to a weekly rate to make it comparable to the weekly returns. The method used to convert to a weekly rate accounts for compounding. The weekly Treasury Bill rates are then deducted from the composite railroad portfolio returns and market returns as was done in the previous cost of capital submissions. The resulting regression data set has 261 observations (weeks 1 through 261), since week 0 of the raw data set was used only to calculate a weighted return for week 1.

The SAS General Linear Model procedure was used to calculate the regression, with composite railroad returns less the short-run risk-free rate as the dependent variable and the market returns less the short-run risk-free rate as the independent variable. As a check against our beta calculations, a spreadsheet has also been utilized to calculate the beta, and the results matched the SAS calculation. As specified by the STB decisions, the regression includes an intercept. Appendix I contains a summary of the regression using SAS. The spreadsheet version is included in my work papers. The regression resulted in a beta estimate of 1.1543. The 2012 beta is lower than the 2011 estimate (which was 1.1623) – but still reasonably close.

We have evaluated our beta calculation by (1) comparing it to previous years and expectations, and (2) comparing the results of two independent calculations using data sets created independently. The resulting value of 1.1543 for beta, as calculated in our regression, is used as an input to the Capital Asset Pricing Model.

4. Cost of Equity Using the CAPM

A review of the Capital Asset Pricing Model (CAPM) is as follows:

K = RF + Beta (MRP)

Where K = the cost of equity for the portfolio of railroads,
RF = the risk-free rate,
MRP = the market's risk premium, and
Beta = coefficient of systematic, non-diversifiable risk.

Our CAPM used the methodology used by the STB in Ex Parte No. 558 (Sub-No. 15). Table 14 is a summary of our CAPM cost of common equity calculation, which resulted in an average 2012 cost of equity estimate for the composite railroad of 10.27 percent.

Table No. 14
Cost of of Common Equity
Using STB's Capital Asset Pricing Model

Inputs to Model		
Risk-Free Rate	2.54 %	From Table No. 13
Market Risk Premium	6.70 %	From SBBI, Table 5-1
Beta	1.1543	From Appendix I
Calculation		
Risk-Free Rate	2.54 %	Given
Plus: Beta Adjusted Risk Premium	7.73 %	Beta x Mkt. Risk Prem.
CAPM Cost of Equity	10.27 %	Risk-Free Rate + Prem.

C. The Multi-Stage Discounted Cash Flow Model

As stated earlier, there are several methods available to estimate the cost of equity. The Multi-Stage Discounted Cash Flow Model (MSDCF) is another model available. Using this model, the cost of equity is the discount rate that equates a firm's market value to the present value of the expected stream of free cash flow that is potentially available for distribution to equity investors. The multiple stage portion of the model accounts for the

assumption that the firm will not experience a constant growth rate throughout its life. The STB, in Ex Parte No. 664 (Sub No. 1), adopted the Morningstar/Ibbotson MSDCF model to use for estimating the cost of common equity capital.[35] This model assumes that not all investor cash flows have to be in the form of dividends. Instead, investors benefit from regular dividends, special dividends, stock buybacks, or stock price appreciation. Major inputs to the model include cash flows, expected growth rates, and market values. An equation for this model can be found in Appendix J. A firm's present value as determined by the market is therefore equal to the sum of the present value of three sets of cash flows. This is the same formula that appeared in the Appendix to the Board's decision in Ex Parte No. 664 (Sub-No.1) served August 11, 2008, and it is the same formula found in the AAR's submissions for the 2008 through 2011 cost of capital.

1. Cash Flows

The Morningstar/Ibbotson MSDCF model uses an initial cash flow and a terminal cash flow as inputs. The initial cash flow is defined as income before extraordinary items minus capital expenditures plus depreciation plus deferred taxes. Income before extraordinary items (IBEI) is derived by deducting extraordinary items from net income. Thus, the model's formula for cash flows is as follows:

$$CF = (NI - EI) - CAPEX + DEP + DT$$

Where CF = cash flow,
NI = net income,
EI = extraordinary items,

[35] The Morningstar/Ibbotson MSDCF model adopted by the Board in Ex Parte No. 664 (Sub-No.1) is a modified version that includes only the railroads that pass the screening criteria set forth in Railroad Cost of Capital – 1984, 1 I.C.C. 2d 989 (1985), for inclusion in the sample of railroads used for the annual cost of capital determination. See Ex Parte No. 664 (Sub-No.1), *Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital,* served January 28, 2009.

CAPEX = capital expenditures,
DEP = depreciation, and
DT = deferred taxes.

The Morningstar/Ibbotson MSDCF model utilizes five-year moving averages for each railroad. The years used in this case are 2008 through 2012. Data are copied from the Consolidated Cash Flow and Income Statement of each railroad's annual 10-K report, and any changes to prior years have been incorporated. The 10-K reports, which are filed with the Securities and Exchange Commission, are usually available each year around February. In addition to the data points listed above, sales (a.k.a. revenue) is used as part of a smoothing (or averaging) process. Table 15 illustrates the Morningstar/Ibbotson process to calculate an average cash flow. Revenue, Net Income, and Extraordinary Items are sourced from the Income Statement. Depreciation, Deferred Taxes, and Capital Expenditures are sourced from the Statement of Cash Flows.

Table No. 15
Example Cash Flow Calculations for CSX in 2012
($ in millions)

	2008	2009	2010	2011	2012	Total
Net Income	$1,355	$1,143	$1,563	$1,822	$1,859	$7,742
Less Extraord. Items	-130	15	0	0	0	-115
Inc. Bef. Extraord. Items (+)	$1,485	$1,128	$1,563	$1,822	$1,859	$7,857
Capital Expenditures (-)	$1,719	$1,426	$1,840	$2,297	$2,341	$9,623
Depreciation (+)	914	903	947	976	1,059	4,799
Deferred Taxes (+)	428	430	474	609	592	2,533
Cash Flow	$1,108	$1,035	$1,144	$1,110	$1,169	$5,566
Revenue (a.k.a. "Sales")	$11,255	$9,041	$10,636	$11,743	$11,756	$54,431

Ratio of Cash Flow to Sales (Smoothed Ibbotson-style) = ($5,566 / $54,431) =	0.10226
Initial Cash Flow in 2012 (Smoothed Ibbotson-style) = (0.10226 x $11,756) =	**$1,202.14**
Ratio of IBEI to Sales (Smoothed Ibbotson-style) = ($7,857 / $54,431) =	0.14435
Terminal Cash Flow input (Smoothed Ibbotson-style) = (0.14435 x $11,756) =	**$1,696.95**

After the financial data are collected, they are combined (Total column in the example) into a five-year cash flow for the purpose of averaging or smoothing. The average cash flow for 2012, which is the initial cash flow in the model, is calculated by multiplying revenue for 2012 times the five-year average ratio of cash flow to revenue. In our example here, the model's input for the initial cash flow is $1,202.14 million. The ratio of cash flow to sales is calculated by dividing the five year total cash flow by the five year total revenue.

The model's terminal cash flow value is based on the assumptions that in the third stage of the model, depreciation equals capital expenditures, and deferred taxes are zero. Therefore, the depreciation and capital expenditures from the initial cash flow formula cancel each other, and deferred taxes are eliminated because they are zero. The remaining part of the equation for the model's terminal cash flow is income before extraordinary items (IBEI), which we calculate by subtracting extraordinary items from new income. In our Table 15 example, the model's input for the terminal cash flow is $1,696.95 million. The model's terminal cash flow input is calculated by multiplying revenue for 2012 times the five-year average ratio of income before extraordinary items to revenue. The ratio of income before extraordinary items to sales is calculated by dividing the five year income before extraordinary items by the five year total revenue.

All cash flow calculations herein have been calculated using the same procedure used by the AAR for the previous cost of capital determination. Appendix K contains the three railroad cash flow calculations for 2012. The pages from the 2012 10-K reports that were used as data sources for cash flows are included in my work papers. Data for prior years (2008-2011) used in this year's calculation are unchanged from last year's submission – unless revised data were found in the 2012 10-K statements.

2. Growth Rates

The first stage of the Morningstar/Ibbotson MSDCF model applies to a period that is one to five years in the future. The current year (2012) is considered to be year 0. In each year of the first stage, a firm's annual earnings growth rate is assumed to be the median value of the firm's three- to five-year growth estimates that are made by railroad industry analysts after the release of the year-end financial statements. However, in Ex Parte No. 558 (Sub No. 12), the STB clarified their interpretation of the Morningstar/Ibbotson MSDCF model by specifying use of data in effect on December 31 of the current year as the date for growth rates, stock prices, and stock shares outstanding.[36] (Clearly, the Board's interpretation does not anticipate the use of growth estimates based on the release of year-end financial statements.) Therefore, we have utilized growth rate projections that were in effect at the end of 2012. Each growth rate projection was reviewed by the brokerage firm's analyst during that year.

For many years, analyst growth rate estimates were collected, and distributed, by the Institutional Brokers Estimate System (a.k.a. IBES or I/B/E/S). In recent years, the IBES growth rates have been distributed by Thomson Financial through its Thomson ONE Investment Management service. Although the term "IBES" is rarely used by Thomson, many users of the data still refer to these growth rates as "IBES" growth rates. Thomson Financial also distributes medians of the IBES growth rate estimates on a historical basis through its Thomson ONE Banker service. The median estimates provided through the Thomson ONE Banker service do not always reflect the full set of growth rate estimates. Therefore, I have utilized all estimates available from the Thomson ONE Investment

[36] STB Ex Parte No. 558 (Sub-No. 12), Railroad Cost of Capital – 2008, served September 25, 2009.

Management service, and determined medians based on that data. These growth rates are described in the Thomson Financial Glossary as the expected annual increase in operating earnings over a company's next full business cycle. A worktable and the source data are included in Appendix L. Table 16 below lists the median growth rate estimates.

Table No. 16
2012 Thomson Median Growth Rate Estimates

Company	Stock Symbol	Growth Rate
CSX Corporation	CSX	14.70 %
Norfolk Southern Corporation	NSC	12.10
Union Pacific Corporation	UNP	15.40
Average		14.07

Thus, the median growth rate estimates have been retrieved using the same procedure and source used by the AAR last year. Each individual railroad's median growth rate is used in the first stage of the Morningstar/Ibbotson MSDCF model.

The second stage of the Morningstar/Ibbotson MSDCF model applies to a period six to ten years in the future. In this stage, the cash flows at the end of year five are assumed to grow at the simple (not weighted) average of the individual firm medians used in the first stage. In Table 16, the average of the median growth rates is 14.07 percent, which is lower than the 14.62 percent used for the previous year. This is the growth rate (14.07 percent) used for all railroads in the second stage of the Morningstar/Ibbotson MSDCF model.[37]

The third stage of the MSDCF model begins 11 years in the future and continues in perpetuity. Starting in year 11, the firm's growth rate is assumed to be the long-run nominal growth rate of the aggregate U.S. economy. For 2012, the long-run nominal growth rate

[37] The model used the full float average, 14.06667 percent.

used by Morningstar/Ibbotson is 5.48 percent, which is the sum of the long-run expected growth in real output (3.22 percent) and long-run expected inflation (2.26 percent).[38] The Morningstar/Ibbotson long-run growth rate was used and accepted in last year's filing, and I am using it here. The 2012 figure is between the 2011 and 2010 rates, which were 5.19 and 5.8 percent, respectively.

3. Market Values

The final inputs to the Morningstar/Ibbotson MSDCF model are the stock market values for the equity of each railroad. The market values serve two purposes. First, a firm's market value is a necessary part of the MSDCF model. As stated earlier, each railroad's cost of equity in the MSDCF model is determined by solving for the discount rate that equates a firm's *market value* to the present value of the expected stream of free cash flow that is potentially available for distribution to equity investors. The second need for market values is to determine weights for combining the model's cost of equity for each individual railroad into the composite railroad mandated by the Board. Thus, Table 17 below calculates the market value for each railroad, and it uses the market values to calculate weights.

Table No. 17
Equity Market Value on December 31, 2012

Company	Stock Price	Shares Outstanding	Market Value ($mil)	Weight
CSX	$19.73	1,031,377,919	20,349.1	20.548 %
NSC	$61.84	316,043,185	19,544.1	19.735
UNP	$125.72	470,397,162	59,138.3	59.717
Total		1,817,818,266	$99,031.5	100.000 %

[38] *Ibbotson SBBI, 2013 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012,* Morningstar Inc., on page 52 at the end of chapter 4.

As directed by the Board, I have used stock prices (from Yahoo Finance) for December 31, 2012, and shares outstanding from the 2012 Q3 10-Q reports (the latest information available prior to December 31) filed with the Securities and Exchange Commission.[39] Market value is simply each firm's stock price multiplied by its shares outstanding, and weights are based on the market values. Appendix M contains the stock price pages as retrieved from Yahoo Finance, and it also contains the 10-Q pages used for shares outstanding.

4. Cost of Equity Using the MSDCF Model

The equation found in Appendix J provides the mathematical formula that is used to generate the three-stage DCF cost of equity estimates for each railroad. The left side of this equation is the market value of the firm in year 0. The right side of the equation is the discounted value of the cash flows from the three stages of the firm's expected future growth. Essentially, this equation is solved for each firm by simply testing discount rates (cost of equity) in an effort to find one that causes the sum of the present values of the cash flows for the three stages to be equal to the market value at year 0. An iterative process can be used to narrow down the possible solutions to the ultimate answer, or Microsoft Excel's Solver function can be used to automate the process.[40]

Applying the methods described above, I have calculated a cost of equity for each of the three railroads specified using a spreadsheet like the one utilized in the 2011 filing. Using an initial cash flow, an input for calculating the terminal cash flow, growth rates for

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[39] December 31 is the last trading day for 2012.

[40] A commonly used Excel user's manual describes the Solver function as follows: "Solver is an Excel add-in that goes several steps further than goal seeking. It uses the same basic trial-and-error approach (known to scientific types as an iterative approach), but it's dramatically more intelligent than goal seeking." See Matthew McDonald, Excel: The Missing Manual, O'Reilly Media, 2005, p. 519.

each of the three stages, and a market value effective December 31, I have solved for the discount rate (cost of equity) that causes the sum of the present values of cash flows for each stage to equal the firm's market value. My spreadsheet is displayed in Appendix N. Table 18 below shows the MSDCF estimate for each of the three railroads. In the same table, I have also calculated an MSDCF cost of common equity (using weights from Table 17 and the individual railroad cost of equities) for the composite railroad, which is the current cost of equity for this model. Thus, the MSDCF produces a cost of equity of 16.39 percent for 2012, which is higher than the 15.83 calculated for 2011.

Table No. 18
Cost of Equity Using STB's Ibbotson MSDCF

Company	Weight	Cost of Equity	Weighted Calculation
CSX	20.548%	18.17 %	3.73
NSC	19.735%	17.54	3.46
UNP	59.717%	15.40	9.19
Total	100.000%		
Weighted Current Cost of Equity			**16.39 %**

D. Conclusion as to the Cost of Common Equity Capital

In the STB's Ex Parte No. 558 (Sub-No. 16) decision served February 26, 2013, the Board specified that comments "should focus … using the methodology followed in *Railroad Cost of Capital – 2011",* which means that a simple average of the estimates produced by the CAPM adopted in STB Ex Parte No. 664 and the Morningstar/Ibbotson Multi-Stage DCF Model specified in STB Ex Parte 664 (Sub No. 1) should be used. Table 19 contains the cost of equity estimated by each model, and a simple average of the estimates. The cost of common equity for 2012 is 13.33 percent, which is below the 13.57 percent decided for 2011.

Table No. 19
Cost of of Common Equity Capital

Model		
Capital Asset Pricing Model	10.27 %	From Table No. 14
Multi-Stage Discounted Cash Flow	16.39	From Table No. 18
Cost of Common Equity	13.33 %	Average

V. Preferred Equity Capital in 2012

Like 2003 through 2011, no preferred stock issues were outstanding at the end of 2011 for the railroad companies comprising the railroad composite sample. Therefore, no cost for preferred equity capital has been calculated, and the market value for preferred equity capital is zero.

VI. The Overall Cost of Capital In 2012

A. Determination of Market Value Weights

With more detail shown in Tables 8 and 12, the average market value of debt and common equity are $29.3 billion and $100.1 billion, respectively. More market value detail is provided in Appendix E and Appendix H. As mentioned in Section V, Preferred Equity Capital in 2012, the sample railroad companies had no preferred stock issues outstanding at the end of 2012. Therefore, preferred equity capital is given no weight in the overall cost of capital, and no cost is calculated. 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 2012 market value weights for debt and common equity are 22.62 percent and 77.38 percent, respectively. Table 20 contains the weights computation and a comparison to the previous year.

Table No. 20
Capital Structure and Weights

		2012		2011	
	Source Table	Market Value (mil)	Capital Structure Weight	Market Value (mil)	Capital Structure Weight
Debt	8	$29,260.9	22.62 %	$25,524.3	20.83 %
Common Equity	12	100,102.4	77.38	97,034.3	79.17
Preferred Equity	(Text)	0.0	0.00	0.0	0.00
Total		$129,363.3	100.00 %	$122,558.6	100.00 %

These figures show debt increasing faster than equity, caused in part by more debt outstanding (instead of purely higher market value). The 2012 capital structure has more weight for debt compared to 2011, and is closer to the structure found by the Surface Transportation Board for 2010.

B. The Overall Cost of Capital

Multiplying the cost of debt, the cost of common equity capital, and the cost of preferred equity capital, by their respective market value proportions, results in a 2012 overall cost of capital of 11.06 percent, as shown in Table 21. This is lower than the 11.57 percent cost of capital decided for 2011, as both the cost of debt and cost of equity have decreased – and the weight for debt, with its lower cost, has increased.

Table No. 21
Weighted Current Cost of Capital for 2012

	Source Table	Capital Structure Weight	Current Cost
Debt	11	22.62 %	3.29 %
Common Equity	19	77.38	13.33
Preferred Equity	(Text)	0.00	n/a
Total		100.00 %	
Weighted Current Cost of Capital			**11.06 %**

VII. Qualifications of John T. Gray

My name is John T. Gray. I am Senior Vice President — Policy and Economics for the Association of American Railroads (AAR), with offices located at 425 Third Street SW, Suite 1000, Washington, D.C. 20024. 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.

Prior to joining the AAR, I worked for Union Pacific Railroad where my most recent position was as Executive Director, responsible for the commercial relationship with other transportation carriers and ports, and for strategic policy analysis on issues involving regulatory proposals, legislation and potential litigation. I have also held marketing, planning, and operating positions with other railroads including the Southern Pacific, the Burlington Northern and the Alaska Railroad. I began my railroad career at Atchison, Topeka, and Santa Fe in their cost analysis organization. Additionally, I have also worked for ARCO Alaska.

At Southern Pacific, I was responsible for network planning, analysis, and management, as well as the company's cost analysis organization. I provided testimony on behalf of Southern Pacific regarding the economic impact to the company of the proposed combination of the Chicago and North Western Transportation Company with Union Pacific Railroad. Later, I provided extensive testimony on the economic position of Southern Pacific during the STB's review of the merger application for Union Pacific and Southern Pacific.

I hold both a Bachelors and Masters degree in Civil Engineering from Tulane University and did post-graduate work in mathematical modeling of transportation networks and rail cost systems at Northwestern University. I have also served on the faculty at the University of Alaska, where my work included network modeling and research concerning the interrelationship of transportation and economic development.

VERIFICATION

WASHINGTON, D.C.)
) SS.

I, John T. Gray, being duly sworn, state that I have read the foregoing statement, that I know its contents, and that those contents are true as stated.

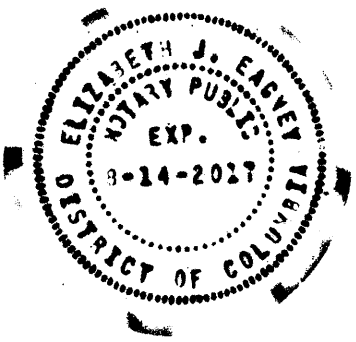
JOHN T. GRAY

Subscribed and sworn to before me this 19th day of April 2013.

Notary Public

My Commission expires:

ELIZABETH J. EAGNEY
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires August 14, 2017



Appendix A
Bonds, Notes and Debentures

CSX Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Traded						
1	Notes	CSX Corp.	1	126408GF4	5.300%	2/15/2014	$200,000	$200,000	106.750	$213,500	1.050%	$2,242
2	Notes	CSX Corp.	2	126408GN7	6.250%	4/1/2015	$600,000	$600,000	113.976	$683,856	0.990%	$6,770
3	Debentures	CSX Corp.	3	126408BL6	7.900%	5/1/2017	$312,596	$312,596	125.588	$392,584	2.210%	$8,676
4	Notes	CSX Corp.	4	126408GJ6	5.600%	5/1/2017	$300,000	$300,000	116.566	$349,699	1.950%	$6,819
5	Notes	CSX Corp.	5	126408GM9	6.250%	3/15/2018	$600,000	$600,000	121.159	$726,957	2.240%	$16,284
6	Notes	CSX Corp.	6	126408GQ0	7.375%	2/1/2019	$500,000	$500,000	127.374	$636,871	2.760%	$17,578
7	Notes	CSX Corp.	7	126408GT4	3.700%	10/30/2020	$500,000	$500,000	106.053	$530,265	2.870%	$15,219
8	Notes	CSX Corp.	8	126408GV9	4.250%	6/1/2021	$350,000	$350,000	110.689	$387,411	2.870%	$11,119
9	Debentures	CSX Corp.	9	126408AQ6	8.100%	9/15/2022	$69,081	$69,081	135.124	$93,345	3.870%	$3,612
10	Debentures	CSX Corp.	10	126408AM5	8.625%	5/15/2022	$81,517	$81,517	144.516	$117,805	3.280%	$3,864
11	Debentures	CSX Corp.	11	126408BP7	7.250%	5/1/2027	$83,312	$83,312	127.013	$105,817	4.710%	$4,984
12	Debentures	CSX Corp.	12	126408BM4	7.950%	5/1/2027	$64,266	$64,266	133.016	$85,484	4.820%	$4,120
13	Notes	CSX Corp.	13	12641LBU6	6.800%	12/1/2028	$200,000	$200,000	124.416	$248,831	4.660%	$11,596
14	Notes	CSX Corp.	14	126408GH0	6.000%	10/1/2036	$400,000	$400,000	121.953	$487,812	4.510%	$22,000
15	Notes	CSX Corp.	15	126408GK3	6.150%	5/1/2037	$700,000	$700,000	124.218	$869,526	4.520%	$39,303
16	Notes	CSX Corp.	16	126408GP2	7.450%	4/1/2038	$79,226	$79,226	142.778	$113,118	4.600%	$5,203
17	Notes	CSX Corp.	17	126408GS6	6.220%	4/30/2040	$660,000	$660,000	127.890	$844,077	4.460%	$37,646
18	Notes	CSX Corp.	18	126408GU1	5.500%	4/15/2041	$550,000	$550,000	116.940	$643,169	4.460%	$28,685
19	Notes	CSX Corp.	19	126408GW7	4.750%	5/30/2042	$600,000	$600,000	106.498	$638,988	4.360%	$27,860
20	Notes	CSX Corp. (new)	20	126408GX5	4.400%	3/1/2043	$300,000	**$250,000**	101.321	$253,301	4.330%	$10,968
21	Notes	CSX Corp. (new)	21	126408GY3	4.100%	3/15/2044	$800,000	**$166,667**	100.024	$166,706	4.100%	$6,835
22	Notes	CSXT - Conrail	22	126410LK3	9.750%	6/15/2020	$227,171	$227,171	141.286	$320,960	3.720%	$11,940
23	Notes	CSXT - Conrail	23	126410LL1	7.875%	5/15/2043	$99,989	$99,989	142.311	$142,295	5.140%	$7,314
24	Sec'd Eq Notes	CSXT	24	126410LN7	8.375%	10/15/2014	$294,269	$294,269	113.948	$335,313	2.030%	$6,807
25	Sec'd Eq Notes	CSXT	25	126410LM9	6.251%	1/15/2023	$304,173	$304,173	121.411	$369,301	3.760%	$13,886
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Total							**$8,875,600**	**$8,192,267**		**$9,756,990**	**3.396%**	**$331,329**

CSX Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
					Trading Data Not Available							
1	Notes	CSX Corp.			9.870%	2/12/2021	10,000	10,000	100.000	$10,000		
2	Notes	CSX Corp.			4.400%	10/25/2035	73,304	73,304	100.000	$73,304		
3	Convertible	CSX Corp.			Changes	10/30/2021	2,303	2,303	100.000	$2,303		
4	Conrail Tax Note	CSXT			4.520%	3/31/2035	23,100	23,100	100.000	$23,100		
5	TORCO	Other			6.450%	12/15/2021	29,700	29,700	100.000	$29,700		
6	NCT Note	Other			0.000%	N/A	1,089	1,089	100.000	$1,089		
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Total							**$139,496**	**$139,496**		**$139,496**		

CSX Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Matures in 2013						
1	Notes	CSX Corp.		126408GD9	5.500%	08/01/13	300,000					
2	Notes	CSX Corp.		126408GL1	5.750%	03/15/13	400,000					
3	Midland Term	Other			Variable	05/26/13	12,000					
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Total							**$712,000**					

	Grand Totals			
Total Traded and Trading Data Not Available	**$9,015,096**	**$8,331,763**		**$9,896,486**
Grand Total (for reconciliation to carrier data only)	**$9,727,096**			

From CSX:

Corporate Notes	$8,733,302
Convertible Debt	2,303
CSXT Notes	350,260
Secured Equipment Notes	598,442
Other Notes	42,789
Total	**$9,727,096**

Norfolk Southern Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Traded						
1	Debenture	Conrail	26	209864AT4	9.750%	6/15/2020	$313,741	$313,741	137.500	$431,394	3.950%	$17,040
2	Debenture	Conrail	27	209864AU1	7.875%	5/15/2043	$138,085	$138,085	152.360	$210,386	4.670%	$9,825
3	Notes	Series A NSC	28	655844AA6	9.000%	3/1/2021	$83,372	$83,372	134.030	$111,743	4.190%	$4,682
4	Notes	Senior	29	655844AQ1	7.250%	2/15/2031	$316,316	$316,316	141.065	$446,212	4.080%	$18,205
5	Notes	Senior	30	655844AZ1	5.750%	4/1/2018	$600,000	$600,000	119.825	$718,949	2.040%	$14,667
6	Notes	Senior	31	655844BB3	5.750%	1/15/2016	$500,000	$500,000	115.135	$575,674	1.290%	$7,426
7	Notes	Senior	32	655844BC1	5.900%	6/15/2019	$500,000	$500,000	122.259	$611,297	2.380%	$14,549
8	Notes	Senior	33	655844BG2	3.250%	12/1/2021	$500,000	$500,000	104.327	$521,634	2.720%	$14,188
9	Notes	Senior (new)	34	655844BJ6	3.000%	4/1/2022	$600,000	**$475,000**	102.748	$488,052	2.670%	$13,031
10	Notes	Senior (new)	35	655844BK3	2.903%	2/15/2023	$600,000	**$225,000**	101.779	$229,002	2.710%	$6,206
11	Notes	Senior	36	655844BD9	6.000%	5/23/2111	$504,492	$504,492	121.991	$615,435	4.920%	$30,279
12	Notes	Senior 2105	37	655844AV0	6.000%	3/15/2105	$550,000	$550,000	120.664	$663,651	4.970%	$32,983
13	Notes	Senior	38	655844AX6	5.640%	5/17/2029	$210,316	$210,316	121.776	$256,115	3.870%	$9,912
14	Notes	Senior	39	655844AW8	5.590%	5/17/2025	$251,172	$251,172	120.082	$301,613	3.620%	$10,918
15	Notes	Senior	40	655844BE7	4.837%	10/1/2041	$595,504	$595,504	112.733	$671,330	4.090%	$27,457
16	Notes	Senior (new)	41	655844BM9	3.950%	10/1/2042	$600,000	**$200,000**	101.420	$202,840	3.870%	$7,850
17	Conrail Notes	CR NSC 2014	42	655844AU2	5.257%	9/17/2014	$431,456	$431,456	109.142	$470,900	0.980%	$4,615
18	Conrail Notes	CR NSC 2017	43	655844AE8	7.700%	5/15/2017	$550,000	$550,000	127.014	$698,575	1.810%	$12,644
19	Conrail Notes	CR NSC 2027	44	655844AJ7	7.800%	5/15/2027	$368,199	$368,199	142.821	$525,867	3.960%	$20,824
20	Conrail Notes	CR NSC 2037	45	655844AF5	7.050%	5/1/2037	$256,690	$256,690	142.078	$364,700	4.280%	$15,609
21	Conrail Notes	CR NSC 2097	46	655844AK4	7.900%	5/15/2097	$273,317	$273,317	148.763	$406,595	5.290%	$21,509
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Total							**$8,742,660**	**$7,842,660**		**$9,521,962**	**3.302%**	**$314,421**

Norfolk Southern Corporation
12/31/2012

	Type	Description	No. CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
					Trading Data Not Available						
1	Other Bond	NSC Poca Dev Timber Bond		8.250%	10/1/2019	75,734	75,734	100.000	$75,734		
2	Other Bond	NSC Poca Dev Timber Zero Coupon		0.000%	10/1/2019	9,169	9,169	100.000	$9,169		
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Total						**$84,903**	**$84,903**		**$84,903**		

Norfolk Southern Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Matures in 2013						
1	Other Bond	Marine Terminal Facility			5.300%	08/15/13	27,200					
2	Other Bond	Pan Am Southern			0.000%	08/15/13	3,359					
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Total							**$30,559**					

	Grand Totals			
Total Traded and Trading Data Not Available	**$8,827,563**	**$7,927,563**		**$9,606,865**
Grand Total (for reconciliation to carrier data only)	**$8,858,122**			

From NSC:

Income Debentures	$451,826
Other Debt Less A/R Securitization	30,559
Medium Term Notes & Conrail Notes	8,290,834
Other Debt (Poca Dev)	84,903
Total	**$8,858,122**

Union Pacific Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Traded						
1	Debentures	UP Corp.	47	907818CS5	5.375%	6/1/2033	$198,553	$198,553	113.024	$224,412	4.420%	$9,919
2	Debentures	UP Corp.	48	907818CX4	6.150%	5/1/2037	$248,990	$248,990	128.445	$319,814	4.280%	$13,688
3	Debentures	UP Corp.	49	907818CU0	6.250%	5/1/2034	$246,605	$246,605	126.803	$312,703	4.340%	$13,571
4	Debentures	UP Corp.	50	907818CF3	6.625%	2/1/2029	$594,936	$594,936	133.168	$792,264	3.890%	$30,819
5	Debentures	UP Corp.	51	907818AZ1	7.000%	2/1/2016	$211,504	$211,504	118.747	$251,155	1.530%	$3,843
6	Debentures	UP Corp.	52	907818BY3	7.125%	2/1/2028	$247,822	$247,822	136.959	$339,414	3.920%	$13,305
7	Notes	UP Corp. (new)	53	907818DM7	2.950%	1/15/2023	$299,837	**$162,412**	103.911	$168,763	2.520%	$4,253
8	Notes	UP Corp.	54	907818DG0	4.000%	2/1/2021	$498,083	$498,083	110.943	$552,587	2.560%	$14,146
9	Notes	UP Corp.	55	907818DK1	4.163%	7/15/2022	$604,664	$604,664	112.302	$679,048	2.740%	$18,606
10	Notes	UP Corp. (new)	56	907818DL9	4.300%	6/15/2042	$299,649	**$162,310**	106.870	$173,461	3.910%	$6,782
11	Notes	UP Corp.	57	907818DJ4	4.750%	9/15/2041	$490,361	$490,361	111.061	$544,601	4.100%	$22,329
12	Notes	UP Corp.	58	907818CV8	4.875%	1/15/2015	$249,877	$249,877	109.178	$272,810	1.100%	$3,001
13	Notes	UP Corp.	59	907818DC9	5.125%	2/15/2014	$305,447	$305,447	106.684	$325,862	0.850%	$2,770
14	Notes	UP Corp.	60	907818CT3	5.375%	5/1/2014	$194,445	$194,445	107.603	$209,229	1.090%	$2,281
15	Notes	UP Corp.	61	907818CW6	5.650%	5/1/2017	$231,674	$231,674	116.888	$270,800	1.930%	$5,226
16	Notes	UP Corp.	62	907818DA3	5.700%	8/15/2018	$471,726	$471,726	120.218	$567,098	2.120%	$12,022
17	Notes	UP Corp.	63	907818CZ9	5.750%	11/15/2017	$321,455	$321,455	119.941	$385,557	1.790%	$6,901
18	Notes	UP Corp.	64	907818DF2	5.780%	7/15/2040	$279,668	$279,668	125.503	$350,991	4.220%	$14,812
19	Notes	UP Corp.	65	907818DD7	6.125%	2/15/2020	$398,864	$398,864	124.168	$495,260	2.590%	$12,827
20	Notes	UP Corp.	66	907818DB1	7.875%	1/15/2019	$178,317	$178,317	130.994	$233,585	2.650%	$6,190
21	Mort. Bond	UPRR-MP	67	606198LF4	4.750%	1/1/2020	$29,905	$29,905	99.638	$29,797	4.810%	$1,433
22	Mort. Bond	UPRR-MP	68	606198LG2	4.750%	1/1/2030	$27,381	$27,381	93.038	$25,475	5.380%	$1,371
23	Debentures	UPRR-MP	69	606198LH0	5.000%	1/1/2045	$96,025	$96,025	84.164	$80,818	6.140%	$4,962
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Total							**$6,725,788**	**$6,451,024**		**$7,605,504**	**2.959%**	**$225,058**

Union Pacific Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
					Trading Data Not Available							
1	Tax Exempt	UP Corp.			Variable	2010 - 2026	40,000	40,000	100.000	$40,000		
2	Med. Term Notes	Series B			9.2-9.3%	2005 - 2020	7,409	7,409	100.000	$7,409		
3	Med. Term Notes	Series C			9.5-10.0%	2005 - 2020	24,124	24,124	100.000	$24,124		
4	RR Tax Exempt	Albany County UPRR			4.400%	12/1/2015	8,000	8,000	100.000	$8,000		
5	Debentures	MP C&EI UPRR		167123AP3	5.000%	1/1/2054	1,641	1,641	100.000	$1,641		
6	Debt Security	Illinois DOT SPCSL			3.000%	12/31/2019	10,679	10,679	100.000	$10,679		
7	Debt Security	Illinois DOT UPRR			3.000%	3/14/2018	908	908	100.000	$908		
8	Debt Security	ITCF 1999 UPRR			5.750%	11/1/2014	7,630	7,630	100.000	$7,630		
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Total							**$100,391**	**$100,391**		**$100,391**		

Union Pacific Corporation
12/31/2012

	Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding ($000) Year-End	Amt. Outstanding ($000) Used	Average Price	Market Value ($ 000)	Average Yield	Interest Cost ($ 000)
						Matures in 2013						
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Total							**$0**					

Grand Totals			
Total Traded and Trading Data Not Available	**$6,826,179**	**$6,551,415**	**$7,705,895**
Grand Total (for reconciliation to carrier data only)	**$6,826,179**		

From UNP:

Debentures, Notes, Tax exempt, Floating, and Commercial Paper	$6,844,010
Removal of Floating Rate Loans and Commercial Paper	-200,000
Misc Debt Securities (KFW, Albany County, MP, IL DOT….)	185,287
Removal of MP Debt Discount, Receivables, and SP Purch. Acct. Debt Premium	-3,118
Total	**$6,826,179**

CSX Corporation

1	**Type:**	Notes
	Description:	CSX Corp.
	CUSIP:	126408GF4
	Coupon Rate:	5.300%
	Maturity Date:	2/15/2014
	Amount Outstanding ($ 000)	$200,000
	Months Outstanding	12.0

End of Month	Price	Yield
January	108.772	0.95 %
February	108.696	0.79
March	107.537	1.24
April	Not Traded	-
May	106.980	1.21
June	106.497	1.24
July	106.646	1.07
August	105.775	1.25
September	106.232	0.72
October	105.495	1.05
November	Not Traded	-
December	104.870	0.97
Average	106.750	1.05 %

Source: Bloomberg

CSX Corporation

2

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GN7
Coupon Rate:	6.250%
Maturity Date:	4/1/2015
Amount Outstanding ($ 000)	$600,000
Months Outstanding	12.0

End of Month	Price	Yield
January	115.557	1.22 %
February	116.049	0.94
March	115.616	0.94
April	114.500	1.17
May	114.233	1.12
June	114.059	1.03
July	113.884	0.95
August	113.558	0.90
September	113.791	0.67
October	113.454	0.64
November	112.273	0.90
December	110.737	1.37
Average	113.976	0.99 %

Source: Bloomberg

CSX Corporation

3

Type:	Debentures
Description:	CSX Corp.
CUSIP:	126408BL6
Coupon Rate:	7.900%
Maturity Date:	5/1/2017
Amount Outstanding ($ 000)	$312,596
Months Outstanding	12.0

End of Month	Price	Yield
January	123.000	3.11 %
February	126.380	2.43
March	123.785	2.83
April	124.642	2.61
May	126.563	2.17
June	125.642	2.27
July	125.910	2.13
August	125.648	2.09
September	126.610	1.82
October	125.901	1.87
November	126.238	1.71
December	126.742	1.52
Average	125.588	2.21 %

Source: Bloomberg

CSX Corporation

4

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GJ6
Coupon Rate:	5.600%
Maturity Date:	5/1/2017
Amount Outstanding ($ 000)	$300,000
Months Outstanding	12.0

End of Month	Price	Yield
January	118.691	1.85 %
February	116.016	2.29
March	114.898	2.46
April	115.250	2.35
May	116.248	2.11
June	115.200	2.26
July	116.538	1.95
August	116.733	1.84
September	117.689	1.60
October	117.678	1.52
November	117.358	1.53
December	116.495	1.65
Average	116.566	1.95 %

Source: Bloomberg

CSX Corporation

5

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GM9
Coupon Rate:	6.250%
Maturity Date:	3/15/2018
Amount Outstanding ($ 000)	$600,000
Months Outstanding	12.0

End of Month	Price	Yield
January	120.261	2.64 %
February	122.045	2.31
March	120.005	2.60
April	120.973	2.40
May	120.257	2.47
June	119.842	2.49
July	120.667	2.31
August	122.008	2.02
September	120.947	2.16
October	122.205	1.88
November	122.429	1.78
December	122.274	1.76
Average	121.159	2.24 %

Source: Bloomberg

CSX Corporation

6

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GQ0
Coupon Rate:	7.375%
Maturity Date:	2/1/2019
Amount Outstanding ($ 000)	$500,000
Months Outstanding	12.0

End of Month	Price	Yield
January	124.872	3.36 %
February	128.187	2.85
March	126.043	3.11
April	127.806	2.82
May	128.934	2.61
June	128.186	2.67
July	128.918	2.52
August	127.696	2.65
September	128.107	2.54
October	125.377	2.90
November	129.971	2.15
December	124.393	2.96
Average	127.374	2.76 %

Source: Bloomberg

CSX Corporation

7	**Type:**	Notes
	Description:	CSX Corp.
	CUSIP:	126408GT4
	Coupon Rate:	3.700%
	Maturity Date:	10/30/2020
	Amount Outstanding ($ 000)	$500,000
	Months Outstanding	12.0

End of Month	Price	Yield
January	105.102	3.03 %
February	102.924	3.31
March	103.458	3.24
April	105.625	2.95
May	105.138	3.00
June	105.782	2.91
July	106.250	2.84
August	107.543	2.66
September	107.921	2.61
October	108.733	2.49
November	107.210	2.68
December	106.950	2.71
Average	106.053	2.87 %

Source: Bloomberg

CSX Corporation

8

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GV9
Coupon Rate:	4.250%
Maturity Date:	6/1/2021
Amount Outstanding ($ 000)	$350,000
Months Outstanding	12.0

End of Month	Price	Yield
January	109.071	3.12 %
February	109.999	3.00
March	106.322	3.44
April	108.506	3.16
May	109.375	3.05
June	109.696	3.00
July	113.212	2.57
August	110.763	2.85
September	112.433	2.64
October	114.001	2.43
November	112.591	2.59
December	112.298	2.61
Average	110.689	2.87 %

Source: Bloomberg

CSX Corporation

9

Type:	Debentures
Description:	CSX Corp.
CUSIP:	126408AQ6
Coupon Rate:	8.100%
Maturity Date:	9/15/2022
Amount Outstanding ($ 000)	$69,081
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	134.735	4.00
April	Not Traded	-
May	132.146	4.22
June	138.401	3.58
July	132.540	4.15
August	135.100	3.86
September	134.041	3.95
October	136.017	3.72
November	138.008	3.48
December	Not Traded	-
Average	135.124	3.87 %

Source: Bloomberg

CSX Corporation

10

Type:	Debentures
Description:	CSX Corp.
CUSIP:	126408AM5
Coupon Rate:	8.625%
Maturity Date:	5/15/2022
Amount Outstanding ($ 000)	$81,517
Months Outstanding	12.0

End of Month	Price	Yield
January	143.278	3.56 %
February	143.625	3.50
March	140.329	3.79
April	143.537	3.45
May	144.986	3.29
June	143.517	3.39
July	147.102	3.03
August	145.072	3.18
September	144.662	3.19
October	145.749	3.05
November	147.060	2.89
December	145.279	3.03
Average	144.516	3.28 %

Source: Bloomberg

CSX Corporation

11

Type:	Debentures
Description:	CSX Corp.
CUSIP:	126408BP7
Coupon Rate:	7.250%
Maturity Date:	5/1/2027
Amount Outstanding ($ 000)	$83,312
Months Outstanding	12.0

End of Month	Price	Yield
January	119.000	5.41 %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	132.000	4.31
July	127.500	4.65
August	129.812	4.46
September	126.755	4.70
October	Not Traded	-
November	Not Traded	-
December	Not Traded	-
Average	127.013	4.71 %

Source: Bloomberg

CSX Corporation

12

Type:	Debentures
Description:	CSX Corp.
CUSIP:	126408BM4
Coupon Rate:	7.950%
Maturity Date:	5/1/2027
Amount Outstanding ($ 000)	$64,266
Months Outstanding	12.0

End of Month	Price	Yield
January	135.970	4.64 %
February	134.732	4.72
March	133.385	4.82
April	134.148	4.75
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	Not Traded	-
September	125.175	5.43
October	127.550	5.22
November	137.923	4.38
December	135.241	4.58
Average	133.016	4.82 %

Source: Bloomberg

CSX Corporation

13

Type:	Notes
Description:	CSX Corp.
CUSIP:	12641LBU6
Coupon Rate:	6.800%
Maturity Date:	12/1/2028
Amount Outstanding ($ 000)	$200,000
Months Outstanding	12.0

End of Month	Price	Yield
January	128.068	4.42 %
February	122.480	4.83
March	119.416	5.06
April	119.550	5.05
May	120.050	5.00
June	Not Traded	-
July	125.170	4.59
August	129.314	4.28
September	124.335	4.65
October	Not Traded	-
November	Not Traded	-
December	131.358	4.10
Average	124.416	4.66 %

Source: Bloomberg

CSX Corporation

14

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GH0
Coupon Rate:	6.000%
Maturity Date:	10/1/2036
Amount Outstanding ($ 000)	$400,000
Months Outstanding	12.0

End of Month	Price	Yield
January	121.353	4.55 %
February	122.251	4.50
March	113.263	5.05
April	117.012	4.81
May	117.481	4.78
June	120.584	4.58
July	122.326	4.48
August	125.631	4.28
September	125.781	4.27
October	126.281	4.24
November	129.521	4.06
December	Not Traded	-
Average	121.953	4.51 %

Source: Bloomberg

CSX Corporation

15

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GK3
Coupon Rate:	6.150%
Maturity Date:	5/1/2037
Amount Outstanding ($ 000)	$700,000
Months Outstanding	12.0

End of Month	Price	Yield
January	123.758	4.56 %
February	123.541	4.57
March	117.060	4.95
April	120.619	4.73
May	117.705	4.91
June	121.876	4.65
July	128.075	4.30
August	128.649	4.26
September	127.701	4.31
October	127.532	4.32
November	128.558	4.26
December	125.542	4.43
Average	124.218	4.52 %

Source: Bloomberg

CSX Corporation

16

Type:	Notes
Description:	CSX Corp.
CUSIP:	126408GP2
Coupon Rate:	7.450%
Maturity Date:	4/1/2038
Amount Outstanding ($ 000)	$79,226
Months Outstanding	12.0

End of Month	Price	Yield
January	141.256	4.69 %
February	140.339	4.74
March	134.609	5.05
April	138.260	4.84
May	140.728	4.71
June	139.903	4.75
July	147.448	4.36
August	147.904	4.33
September	146.408	4.40
October	144.411	4.50
November	147.428	4.34
December	144.646	4.48
Average	142.778	4.60 %

Source: Bloomberg

CSX Corporation

17	**Type:**	Notes
	Description:	CSX Corp.
	CUSIP:	126408GS6
	Coupon Rate:	6.220%
	Maturity Date:	4/30/2040
	Amount Outstanding ($ 000)	$660,000
	Months Outstanding	12.0

End of Month	Price	Yield
January	125.293	4.61 %
February	127.318	4.50
March	120.500	4.87
April	123.331	4.71
May	126.909	4.52
June	124.329	4.65
July	132.905	4.20
August	129.633	4.36
September	130.271	4.33
October	133.069	4.19
November	131.726	4.25
December	129.401	4.37
Average	127.890	4.46 %

Source: Bloomberg

CSX Corporation

18	**Type:**	Notes
	Description:	CSX Corp.
	CUSIP:	126408GU1
	Coupon Rate:	5.500%
	Maturity Date:	4/15/2041
	Amount Outstanding ($ 000)	$550,000
	Months Outstanding	12.0

End of Month	Price	Yield
January	114.886	4.57 %
February	115.624	4.53
March	109.297	4.90
April	112.033	4.73
May	113.276	4.66
June	114.254	4.60
July	122.138	4.17
August	119.726	4.30
September	120.493	4.25
October	123.221	4.11
November	120.203	4.27
December	118.127	4.38
Average	116.940	4.46 %

Source: Bloomberg

CSX Corporation

19	**Type:**	Notes
	Description:	CSX Corp.
	CUSIP:	126408GW7
	Coupon Rate:	4.750%
	Maturity Date:	5/30/2042
	Amount Outstanding ($ 000)	$600,000
	Months Outstanding	12.0

End of Month	Price	Yield
January	104.205	4.49 %
February	104.944	4.45
March	100.384	4.73
April	100.886	4.69
May	104.075	4.50
June	104.819	4.46
July	110.836	4.12
August	109.058	4.21
September	110.613	4.13
October	111.719	4.07
November	108.827	4.22
December	107.609	4.29
Average	106.498	4.36 %

Source: Bloomberg

CSX Corporation

20

Type:	Notes
Description:	CSX Corp. (new)
CUSIP:	126408GX5
Coupon Rate:	4.400%
Maturity Date:	3/1/2043
Amount Outstanding ($ 000)	$300,000
Months Outstanding	10.0

End of Month	Price	Yield
January	Not Traded	- %
February	99.898	4.41
March	94.107	4.77
April	96.972	4.58
May	98.141	4.51
June	99.843	4.41
July	106.923	4.01
August	106.062	4.05
September	103.455	4.20
October	105.933	4.06
November	103.529	4.19
December	99.663	4.42
Average	101.321	4.33 %

Source: Bloomberg

CSX Corporation

21

Type:	Notes
Description:	CSX Corp. (new)
CUSIP:	126408GY3
Coupon Rate:	4.100%
Maturity Date:	3/15/2044
Amount Outstanding ($ 000)	$800,000
Months Outstanding	2.5

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	Not Traded	-
September	Not Traded	-
October	101.457	4.02
November	99.042	4.16
December	99.572	4.12
Average	100.024	4.10 %

Source: Bloomberg

CSX Corporation

22

Type:	Notes
Description:	CSXT - Conrail
CUSIP:	126410LK3
Coupon Rate:	9.750%
Maturity Date:	6/15/2020
Amount Outstanding ($ 000)	$227,171
Months Outstanding	12.0

End of Month	Price	Yield
January	143.748	3.64 %
February	142.759	3.70
March	141.121	3.85
April	145.121	3.36
May	135.750	4.41
June	140.925	3.75
July	143.895	3.36
August	Not Traded	-
September	143.037	3.36
October	143.533	3.25
November	Not Traded	-
December	132.968	4.49
Average	141.286	3.72 %

Source: Bloomberg

CSX Corporation

23

Type:	Notes
Description:	CSXT - Conrail
CUSIP:	126410LL1
Coupon Rate:	7.875%
Maturity Date:	5/15/2043
Amount Outstanding ($ 000)	$99,989
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	138.000	5.36
March	Not Traded	-
April	142.000	5.15
May	Not Traded	-
June	Not Traded	-
July	147.685	4.87
August	144.593	5.01
September	146.585	4.92
October	135.000	5.50
November	Not Traded	-
December	Not Traded	-
Average	142.311	5.14 %

Source: Bloomberg

CSX Corporation

24

Type:	Sec'd Eq Notes
Description:	CSXT
CUSIP:	126410LN7
Coupon Rate:	8.375%
Maturity Date:	10/15/2014
Amount Outstanding ($ 000)	$294,269
Months Outstanding	12.0

End of Month	Price	Yield
January	116.875	2.08 %
February	115.010	2.42
March	116.700	1.67
April	116.750	1.41
May	113.125	2.61
June	114.434	2.03
July	Not Traded	-
August	114.250	1.50
September	112.625	2.02
October	111.000	2.54
November	111.531	2.08
December	111.125	1.98
Average	113.948	2.03 %

Source: Bloomberg

CSX Corporation

25

Type:	Sec'd Eq Notes
Description:	CSXT
CUSIP:	126410LM9
Coupon Rate:	6.251%
Maturity Date:	1/15/2023
Amount Outstanding ($ 000)	$304,173
Months Outstanding	12.0

End of Month	Price	Yield
January	117.000	4.29 %
February	Not Traded	-
March	120.650	3.90
April	119.375	4.01
May	120.000	3.93
June	123.250	3.58
July	123.375	3.55
August	121.250	3.77
September	123.125	3.55
October	122.750	3.57
November	122.625	3.57
December	122.125	3.60
Average	121.411	3.76 %

Source: Bloomberg

Norfolk Southern Corp.

26

Type:	Debenture
Description:	Conrail
CUSIP:	209864AT4
Coupon Rate:	9.750%
Maturity Date:	6/15/2020
Amount Outstanding ($ 000)	$313,741
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	Not Traded	-
September	Not Traded	-
October	Not Traded	-
November	137.500	3.95
December	Not Traded	-
Average	137.500	3.95 %

Source: Bloomberg

Norfolk Southern Corp.

27

Type:	Debenture
Description:	Conrail
CUSIP:	209864AU1
Coupon Rate:	7.875%
Maturity Date:	5/15/2043
Amount Outstanding ($ 000)	$138,085
Months Outstanding	12.0

End of Month	Price	Yield
January	146.997	4.92 %
February	147.978	4.87
March	141.839	5.16
April	147.081	4.91
May	145.726	4.97
June	150.367	4.75
July	157.233	4.44
August	159.285	4.36
September	156.063	4.49
October	160.569	4.30
November	159.267	4.35
December	155.910	4.49
Average	152.360	4.67 %

Source: Bloomberg

Norfolk Southern Corp.

28

Type:	Notes
Description:	Series A NSC
CUSIP:	655844AA6
Coupon Rate:	9.000%
Maturity Date:	3/1/2021
Amount Outstanding ($ 000)	$83,372
Months Outstanding	12.0

End of Month	Price	Yield
January	128.857	5.01 %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	134.030	4.24
August	131.000	4.56
September	137.015	3.83
October	137.420	3.74
November	133.498	4.16
December	136.389	3.78
Average	134.030	4.19 %

Source: Bloomberg

Norfolk Southern Corp.

29

Type:	Notes
Description:	Senior
CUSIP:	655844AQ1
Coupon Rate:	7.250%
Maturity Date:	2/15/2031
Amount Outstanding ($ 000)	$316,316
Months Outstanding	12.0

End of Month	Price	Yield
January	139.475	4.21 %
February	139.980	4.18
March	136.663	4.38
April	138.982	4.22
May	140.900	4.10
June	141.378	4.06
July	144.817	3.85
August	147.000	3.71
September	140.500	4.09
October	145.493	3.78
November	139.136	4.16
December	138.459	4.20
Average	141.065	4.08 %

Source: Bloomberg

Norfolk Southern Corp.

30

Type:	Notes
Description:	Senior
CUSIP:	655844AZ1
Coupon Rate:	5.750%
Maturity Date:	4/1/2018
Amount Outstanding ($ 000)	$600,000
Months Outstanding	12.0

End of Month	Price	Yield
January	119.669	2.31 %
February	122.235	1.87
March	118.858	2.36
April	118.903	2.31
May	118.812	2.28
June	120.386	1.99
July	119.859	2.02
August	118.857	2.15
September	120.600	1.80
October	119.796	1.88
November	120.335	1.74
December	119.587	1.82
Average	119.825	2.04 %

Source: Bloomberg

Norfolk Southern Corp.

31

Type:	Notes
Description:	Senior
CUSIP:	655844BB3
Coupon Rate:	5.750%
Maturity Date:	1/15/2016
Amount Outstanding ($ 000)	$500,000
Months Outstanding	12.0

End of Month	Price	Yield
January	116.638	1.41 %
February	116.527	1.35
March	115.432	1.54
April	115.960	1.32
May	115.294	1.40
June	115.302	1.32
July	115.563	1.14
August	112.918	1.77
September	114.998	1.09
October	114.380	1.15
November	114.681	0.97
December	113.925	1.07
Average	115.135	1.29 %

Source: Bloomberg

Norfolk Southern Corp.

32

Type:	Notes
Description:	Senior
CUSIP:	655844BC1
Coupon Rate:	5.900%
Maturity Date:	6/15/2019
Amount Outstanding ($ 000)	$500,000
Months Outstanding	12.0

End of Month	Price	Yield
January	122.794	2.49 %
February	121.771	2.60
March	121.814	2.56
April	121.051	2.64
May	122.895	2.35
June	122.116	2.42
July	123.304	2.22
August	122.176	2.34
September	121.739	2.38
October	121.357	2.39
November	122.957	2.12
December	123.138	2.05
Average	122.259	2.38 %

Source: Bloomberg

Norfolk Southern Corp.

33

Type:	Notes
Description:	Senior
CUSIP:	655844BG2
Coupon Rate:	3.250%
Maturity Date:	12/1/2021
Amount Outstanding ($ 000)	$500,000
Months Outstanding	12.0

End of Month	Price	Yield
January	104.183	2.76 %
February	103.203	2.87
March	101.297	3.09
April	102.851	2.91
May	102.865	2.90
June	103.859	2.78
July	105.482	2.59
August	105.247	2.61
September	104.962	2.64
October	105.530	2.56
November	105.342	2.58
December	107.100	2.36
Average	104.327	2.72 %

Source: Bloomberg

Norfolk Southern Corp.

34

Type:	Notes
Description:	Senior (new)
CUSIP:	655844BJ6
Coupon Rate:	3.000%
Maturity Date:	4/1/2022
Amount Outstanding ($ 000)	$600,000
Months Outstanding	9.5

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	98.577	3.17
April	100.819	2.90
May	101.541	2.82
June	101.691	2.80
July	104.941	2.42
August	103.988	2.53
September	103.814	2.55
October	104.363	2.48
November	104.245	2.49
December	103.498	2.57
Average	102.748	2.67 %

Source: Bloomberg

Norfolk Southern Corp.

35

Type:	Notes
Description:	Senior (new)
CUSIP:	655844BK3
Coupon Rate:	2.903%
Maturity Date:	2/15/2023
Amount Outstanding ($ 000)	$600,000
Months Outstanding	4.5

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	101.964	2.69
September	101.848	2.70
October	102.030	2.68
November	102.223	2.65
December	100.829	2.81
Average	101.779	2.71 %

Source: Bloomberg

Norfolk Southern Corp.

36

Type:	Notes
Description:	Senior
CUSIP:	655844BD9
Coupon Rate:	6.000%
Maturity Date:	5/23/2111
Amount Outstanding ($ 000)	$504,492
Months Outstanding	12.0

End of Month	Price	Yield
January	118.647	5.05 %
February	121.061	4.95
March	113.232	5.30
April	116.326	5.15
May	122.088	4.91
June	119.701	5.01
July	128.688	4.65
August	126.339	4.74
September	123.871	4.84
October	125.951	4.75
November	123.976	4.83
December	124.012	4.83
Average	121.991	4.92 %

Source: Bloomberg

Norfolk Southern Corp.

37

Type:	Notes
Description:	Senior 2105
CUSIP:	655844AV0
Coupon Rate:	6.000%
Maturity Date:	3/15/2105
Amount Outstanding ($ 000)	$550,000
Months Outstanding	12.0

End of Month	Price	Yield
January	123.332	4.85 %
February	117.869	5.08
March	114.989	5.21
April	117.794	5.09
May	120.402	4.97
June	118.157	5.07
July	127.544	4.69
August	118.717	5.05
September	121.800	4.92
October	125.525	4.77
November	122.550	4.89
December	119.287	5.02
Average	120.664	4.97 %

Source: Bloomberg

Norfolk Southern Corp.

38

Type:	Notes
Description:	Senior
CUSIP:	655844AX6
Coupon Rate:	5.640%
Maturity Date:	5/17/2029
Amount Outstanding ($ 000)	$210,316
Months Outstanding	12.0

End of Month	Price	Yield
January	117.367	4.22 %
February	119.099	4.08
March	116.647	4.26
April	120.714	3.96
May	122.154	3.85
June	120.362	3.98
July	125.502	3.60
August	123.658	3.73
September	125.735	3.57
October	123.115	3.75
November	125.286	3.59
December	121.676	3.84
Average	121.776	3.87 %

Source: Bloomberg

Norfolk Southern Corp.

39

Type:	Notes
Description:	Senior
CUSIP:	655844AW8
Coupon Rate:	5.590%
Maturity Date:	5/17/2025
Amount Outstanding ($ 000)	$251,172
Months Outstanding	12.0

End of Month	Price	Yield
January	114.750	4.14 %
February	120.324	3.64
March	113.865	4.20
April	120.625	3.60
May	123.128	3.37
June	119.955	3.64
July	125.240	3.17
August	119.625	3.65
September	125.490	3.13
October	122.521	3.37
November	118.446	3.73
December	117.019	3.85
Average	120.082	3.62 %

Source: Bloomberg

Norfolk Southern Corp.

40

Type:	Notes
Description:	Senior
CUSIP:	655844BE7
Coupon Rate:	4.837%
Maturity Date:	10/1/2041
Amount Outstanding ($ 000)	$595,504
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	112.733	4.09
June	Not Traded	-
July	Not Traded	-
August	Not Traded	-
September	Not Traded	-
October	Not Traded	-
November	Not Traded	-
December	Not Traded	-
Average	112.733	4.09 %

Source: Bloomberg

Note: Private placement, but trades.

Norfolk Southern Corp.

41

Type:	Notes
Description:	Senior (new)
CUSIP:	655844BM9
Coupon Rate:	3.950%
Maturity Date:	10/1/2042
Amount Outstanding ($ 000)	$600,000
Months Outstanding	4.0

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	Not Traded	-
September	100.779	3.91
October	102.224	3.82
November	102.078	3.83
December	100.599	3.92
Average	101.420	3.87 %

Source: Bloomberg

Norfolk Southern Corp.

42

Type:	Conrail Notes
Description:	CR NSC 2014
CUSIP:	655844AU2
Coupon Rate:	5.257%
Maturity Date:	9/17/2014
Amount Outstanding ($ 000)	$431,456
Months Outstanding	12.0

End of Month	Price	Yield
January	109.700	1.48 %
February	110.275	1.13
March	110.602	0.88
April	110.307	0.86
May	110.246	0.74
June	109.113	1.06
July	109.769	0.62
August	108.847	0.89
September	108.710	0.77
October	108.696	0.60
November	106.375	1.63
December	107.064	1.10
Average	109.142	0.98 %

Source: Bloomberg

Norfolk Southern Corp.

43

Type:	Conrail Notes
Description:	CR NSC 2017
CUSIP:	655844AE8
Coupon Rate:	7.700%
Maturity Date:	5/15/2017
Amount Outstanding ($ 000)	$550,000
Months Outstanding	12.0

End of Month	Price	Yield
January	128.277	2.03 %
February	127.231	2.13
March	126.781	2.15
April	127.379	1.97
May	127.073	1.93
June	126.371	1.98
July	126.883	1.81
August	127.021	1.69
September	126.540	1.71
October	126.615	1.59
November	127.804	1.25
December	126.189	1.48
Average	127.014	1.81 %

Source: Bloomberg

Norfolk Southern Corp.

44

Type:	Conrail Notes
Description:	CR NSC 2027
CUSIP:	655844AJ7
Coupon Rate:	7.800%
Maturity Date:	5/15/2027
Amount Outstanding ($ 000)	$368,199
Months Outstanding	12.0

End of Month	Price	Yield
January	143.054	4.01 %
February	142.920	4.01
March	137.492	4.38
April	142.277	4.02
May	145.133	3.82
June	142.309	4.00
July	146.362	3.70
August	141.500	4.04
September	Not Traded	-
October	143.890	3.84
November	146.895	3.61
December	139.203	4.16
Average	142.821	3.96 %

Source: Bloomberg

Norfolk Southern Corp.

45

Type:	Conrail Notes
Description:	CR NSC 2037
CUSIP:	655844AF5
Coupon Rate:	7.050%
Maturity Date:	5/1/2037
Amount Outstanding ($ 000)	$256,690
Months Outstanding	12.0

End of Month	Price	Yield
January	134.109	4.72 %
February	139.905	4.41
March	Not Traded	-
April	136.342	4.59
May	137.713	4.51
June	138.459	4.47
July	144.962	4.13
August	148.705	3.94
September	148.619	3.94
October	147.278	4.00
November	Not Traded	-
December	144.687	4.12
Average	142.078	4.28 %

Source: Bloomberg

Norfolk Southern Corp.

46

Type:	Conrail Notes
Description:	CR NSC 2097
CUSIP:	655844AK4
Coupon Rate:	7.900%
Maturity Date:	5/15/2097
Amount Outstanding ($ 000)	$273,317
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	141.333	5.57
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	154.918	5.07
August	147.368	5.34
September	152.218	5.17
October	150.256	5.24
November	146.396	5.38
December	148.854	5.29
Average	148.763	5.29 %

Source: Bloomberg

Union Pacific Corp.

47

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818CS5
Coupon Rate:	5.375%
Maturity Date:	6/1/2033
Amount Outstanding ($ 000)	$198,553
Months Outstanding	12.0

End of Month	Price	Yield
January	108.851	4.71 %
February	108.564	4.73
March	104.850	5.00
April	113.408	4.39
May	115.411	4.26
June	115.663	4.24
July	115.593	4.24
August	116.000	4.21
September	114.750	4.29
October	114.602	4.30
November	115.570	4.23
December	Not Traded	-
Average	113.024	4.42 %

Source: Bloomberg

Union Pacific Corp.

48

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818CX4
Coupon Rate:	6.150%
Maturity Date:	5/1/2037
Amount Outstanding ($ 000)	$248,990
Months Outstanding	12.0

End of Month	Price	Yield
January	128.313	4.30 %
February	126.927	4.37
March	121.768	4.67
April	126.449	4.40
May	129.038	4.25
June	128.529	4.27
July	133.383	4.01
August	131.782	4.09
September	129.486	4.21
October	128.573	4.26
November	129.765	4.19
December	127.322	4.32
Average	128.445	4.28 %

Source: Bloomberg

Union Pacific Corp.

49

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818CU0
Coupon Rate:	6.250%
Maturity Date:	5/1/2034
Amount Outstanding ($ 000)	$246,605
Months Outstanding	12.0

End of Month	Price	Yield
January	122.000	4.65 %
February	127.419	4.32
March	126.028	4.40
April	124.227	4.50
May	124.888	4.46
June	124.207	4.50
July	125.000	4.44
August	127.000	4.32
September	131.397	4.05
October	131.568	4.04
November	129.557	4.15
December	128.345	4.22
Average	126.803	4.34 %

Source: Bloomberg

Union Pacific Corp.

50

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818CF3
Coupon Rate:	6.625%
Maturity Date:	2/1/2029
Amount Outstanding ($ 000)	$594,936
Months Outstanding	12.0

End of Month	Price	Yield
January	128.601	4.25 %
February	129.973	4.14
March	126.203	4.40
April	129.029	4.20
May	130.108	4.12
June	134.829	3.78
July	142.028	3.31
August	132.070	3.95
September	134.550	3.77
October	139.125	3.46
November	137.999	3.52
December	133.500	3.82
Average	133.168	3.89 %

Source: Bloomberg

Union Pacific Corp.

51

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818AZ1
Coupon Rate:	7.000%
Maturity Date:	2/1/2016
Amount Outstanding ($ 000)	$211,504
Months Outstanding	12.0

End of Month	Price	Yield
January	120.097	1.77 %
February	117.750	2.23
March	119.500	1.71
April	118.298	1.93
May	120.418	1.29
June	119.000	1.52
July	119.807	1.23
August	119.165	1.23
September	118.731	1.24
October	118.308	1.30
November	116.494	1.62
December	117.400	1.25
Average	118.747	1.53 %

Source: Bloomberg

Union Pacific Corp.

52

Type:	Debentures
Description:	UP Corp.
CUSIP:	907818BY3
Coupon Rate:	7.125%
Maturity Date:	2/1/2028
Amount Outstanding ($ 000)	$247,822
Months Outstanding	12.0

End of Month	Price	Yield
January	Not Traded	- %
February	135.546	4.07
March	133.700	4.19
April	134.325	4.14
May	135.137	4.07
June	136.180	3.99
July	140.501	3.67
August	140.260	3.68
September	136.580	3.93
October	136.032	3.95
November	140.658	3.62
December	137.629	3.82
Average	136.959	3.92 %

Source: Bloomberg

Union Pacific Corp.

53

Type:	Notes
Description:	UP Corp. (new)
CUSIP:	907818DM7
Coupon Rate:	2.950%
Maturity Date:	1/15/2023
Amount Outstanding ($ 000)	$299,837
Months Outstanding	6.5

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	101.044	2.83
July	105.508	2.35
August	103.397	2.57
September	103.528	2.56
October	103.710	2.54
November	104.125	2.49
December	106.062	2.27
Average	103.911	2.52 %

Source: Bloomberg

Union Pacific Corp.

54

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DG0
Coupon Rate:	4.000%
Maturity Date:	2/1/2021
Amount Outstanding ($ 000)	$498,083
Months Outstanding	12.0

End of Month	Price	Yield
January	109.134	2.84 %
February	109.492	2.79
March	106.477	3.15
April	108.572	2.88
May	109.875	2.71
June	110.796	2.59
July	112.900	2.32
August	112.848	2.31
September	112.739	2.31
October	112.583	2.32
November	113.437	2.19
December	112.459	2.30
Average	110.943	2.56 %

Source: Bloomberg

Union Pacific Corp.

55

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DK1
Coupon Rate:	4.163%
Maturity Date:	7/15/2022
Amount Outstanding ($ 000)	$604,664
Months Outstanding	12.0

End of Month	Price	Yield
January	109.358	3.11 %
February	109.932	3.04
March	108.428	3.19
April	110.284	2.99
May	112.851	2.70
June	111.496	2.84
July	114.364	2.52
August	113.506	2.60
September	114.214	2.52
October	114.174	2.51
November	114.577	2.45
December	114.436	2.46
Average	112.302	2.74 %

Source: Bloomberg

Union Pacific Corp.

56

Type:	Notes
Description:	UP Corp. (new)
CUSIP:	907818DL9
Coupon Rate:	4.300%
Maturity Date:	6/15/2042
Amount Outstanding ($ 000)	$299,649
Months Outstanding	6.5

End of Month	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	101.661	4.20
July	108.648	3.81
August	106.289	3.94
September	108.029	3.84
October	109.203	3.78
November	107.971	3.85
December	106.292	3.94
Average	106.870	3.91 %

Source: Bloomberg

Union Pacific Corp.

57

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DJ4
Coupon Rate:	4.750%
Maturity Date:	9/15/2041
Amount Outstanding ($ 000)	$490,361
Months Outstanding	12.0

End of Month	Price	Yield
January	109.131	4.21 %
February	109.871	4.17
March	103.773	4.52
April	106.433	4.36
May	109.094	4.21
June	108.925	4.22
July	115.927	3.84
August	113.301	3.97
September	112.990	3.99
October	115.427	3.86
November	114.740	3.89
December	113.122	3.98
Average	111.061	4.10 %

Source: Bloomberg

Union Pacific Corp.

58

Type:	Notes
Description:	UP Corp.
CUSIP:	907818CV8
Coupon Rate:	4.875%
Maturity Date:	1/15/2015
Amount Outstanding ($ 000)	$249,877
Months Outstanding	12.0

End of Month	Price	Yield
January	108.689	1.84 %
February	110.642	1.10
March	109.935	1.23
April	108.760	1.55
May	109.880	1.03
June	109.659	1.00
July	109.831	0.81
August	109.058	0.98
September	109.009	0.89
October	108.310	1.04
November	108.570	0.77
December	107.788	0.99
Average	109.178	1.10 %

Source: Bloomberg

Union Pacific Corp.

59

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DC9
Coupon Rate:	5.125%
Maturity Date:	2/15/2014
Amount Outstanding ($ 000)	$305,447
Months Outstanding	12.0

End of Month	Price	Yield
January	108.082	1.10 %
February	108.084	0.95
March	108.062	0.79
April	107.210	1.03
May	106.680	1.19
June	107.155	0.67
July	106.407	0.98
August	105.915	0.99
September	106.380	0.51
October	105.936	0.68
November	105.283	0.68
December	105.011	0.60
Average	106.684	0.85 %

Source: Bloomberg

Union Pacific Corp.

60

Type:	Notes
Description:	UP Corp.
CUSIP:	907818CT3
Coupon Rate:	5.375%
Maturity Date:	5/1/2014
Amount Outstanding ($ 000)	$194,445
Months Outstanding	12.0

End of Month	Price	Yield
January	108.750	1.41 %
February	109.275	1.12
March	109.398	0.80
April	109.022	0.81
May	108.026	1.11
June	108.064	0.95
July	107.750	0.90
August	107.300	0.91
September	106.880	1.01
October	106.000	1.29
November	105.660	1.34
December	105.116	1.46
Average	107.603	1.09 %

Source: Bloomberg

Union Pacific Corp.

61

Type:	Notes
Description:	UP Corp.
CUSIP:	907818CW6
Coupon Rate:	5.650%
Maturity Date:	5/1/2017
Amount Outstanding ($ 000)	$231,674
Months Outstanding	12.0

End of Month	Price	Yield
January	117.934	2.03 %
February	116.850	2.18
March	116.657	2.17
April	117.728	1.92
May	115.500	2.30
June	115.550	2.24
July	116.796	1.96
August	115.520	2.15
September	117.589	1.66
October	117.933	1.52
November	117.343	1.56
December	117.260	1.51
Average	116.888	1.93 %

Source: Bloomberg

Union Pacific Corp.

62

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DA3
Coupon Rate:	5.700%
Maturity Date:	8/15/2018
Amount Outstanding ($ 000)	$471,726
Months Outstanding	12.0

End of Month	Price	Yield
January	119.650	2.43 %
February	120.441	2.27
March	119.437	2.39
April	120.548	2.18
May	120.579	2.14
June	119.454	2.27
July	120.974	1.99
August	120.991	1.94
September	116.500	2.64
October	121.731	1.73
November	121.766	1.68
December	120.542	1.83
Average	120.218	2.12 %

Source: Bloomberg

Union Pacific Corp.

63

Type:	Notes
Description:	UP Corp.
CUSIP:	907818CZ9
Coupon Rate:	5.750%
Maturity Date:	11/15/2017
Amount Outstanding ($ 000)	$321,455
Months Outstanding	12.0

End of Month	Price	Yield
January	118.940	2.24 %
February	121.218	1.82
March	118.686	2.20
April	119.241	2.06
May	119.442	1.97
June	119.405	1.93
July	119.640	1.83
August	119.249	1.85
September	120.641	1.54
October	121.119	1.40
November	121.972	1.16
December	119.743	1.53
Average	119.941	1.79 %

Source: Bloomberg

Union Pacific Corp.

64

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DF2
Coupon Rate:	5.780%
Maturity Date:	7/15/2040
Amount Outstanding ($ 000)	$279,668
Months Outstanding	12.0

End of Month	Price	Yield
January	125.774	4.22 %
February	124.329	4.29
March	117.659	4.65
April	123.117	4.35
May	124.006	4.30
June	125.193	4.24
July	128.150	4.08
August	127.035	4.14
September	124.690	4.26
October	128.989	4.03
November	128.369	4.06
December	128.720	4.04
Average	125.503	4.22 %

Source: Bloomberg

Union Pacific Corp.

65

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DD7
Coupon Rate:	6.125%
Maturity Date:	2/15/2020
Amount Outstanding ($ 000)	$398,864
Months Outstanding	12.0

End of Month	Price	Yield
January	122.213	3.00 %
February	123.241	2.84
March	122.219	2.94
April	120.795	3.10
May	124.237	2.63
June	124.188	2.60
July	126.350	2.31
August	124.124	2.55
September	125.777	2.30
October	126.389	2.19
November	125.878	2.22
December	124.600	2.35
Average	124.168	2.59 %

Source: Bloomberg

Union Pacific Corp.

66

Type:	Notes
Description:	UP Corp.
CUSIP:	907818DB1
Coupon Rate:	7.875%
Maturity Date:	1/15/2019
Amount Outstanding ($ 000)	$178,317
Months Outstanding	12.0

End of Month	Price	Yield
January	132.148	2.78 %
February	131.512	2.81
March	128.979	3.12
April	130.165	2.90
May	127.500	3.22
June	130.250	2.79
July	131.113	2.65
August	134.145	2.11
September	132.327	2.32
October	130.942	2.47
November	132.147	2.26
December	130.705	2.39
Average	130.994	2.65 %

Source: Bloomberg

Union Pacific Corp.

67

Type:	Mort. Bond
Description:	UPRR-MP
CUSIP:	606198LF4
Coupon Rate:	4.750%
Maturity Date:	1/1/2020
Amount Outstanding ($ 000)	$29,905
Months Outstanding	12.0

End of Month	Price	Yield
January	98.000	5.06 %
February	102.750	4.33
March	96.000	5.39
April	97.655	5.12
May	101.000	4.59
June	101.500	4.51
July	97.500	5.16
August	98.000	5.08
September	102.750	4.30
October	104.000	4.09
November	100.500	4.66
December	96.000	5.45
Average	99.638	4.81 %

Source: Bloomberg

Union Pacific Corp.

68

Type:	Mort. Bond
Description:	UPRR-MP
CUSIP:	606198LG2
Coupon Rate:	4.750%
Maturity Date:	1/1/2030
Amount Outstanding ($ 000)	$27,381
Months Outstanding	12.0

End of Month	Price	Yield
January	93.000	5.37 %
February	91.133	5.54
March	87.000	5.95
April	Not Traded	-
May	Not Traded	-
June	94.500	5.23
July	88.000	5.87
August	92.550	5.42
September	99.000	4.84
October	94.655	5.23
November	Not Traded	-
December	97.500	4.97
Average	93.038	5.38 %

Source: Bloomberg

Union Pacific Corp.

69

Type:	Debentures
Description:	UPRR-MP
CUSIP:	606198LH0
Coupon Rate:	5.000%
Maturity Date:	1/1/2045
Amount Outstanding ($ 000)	$96,025
Months Outstanding	12.0

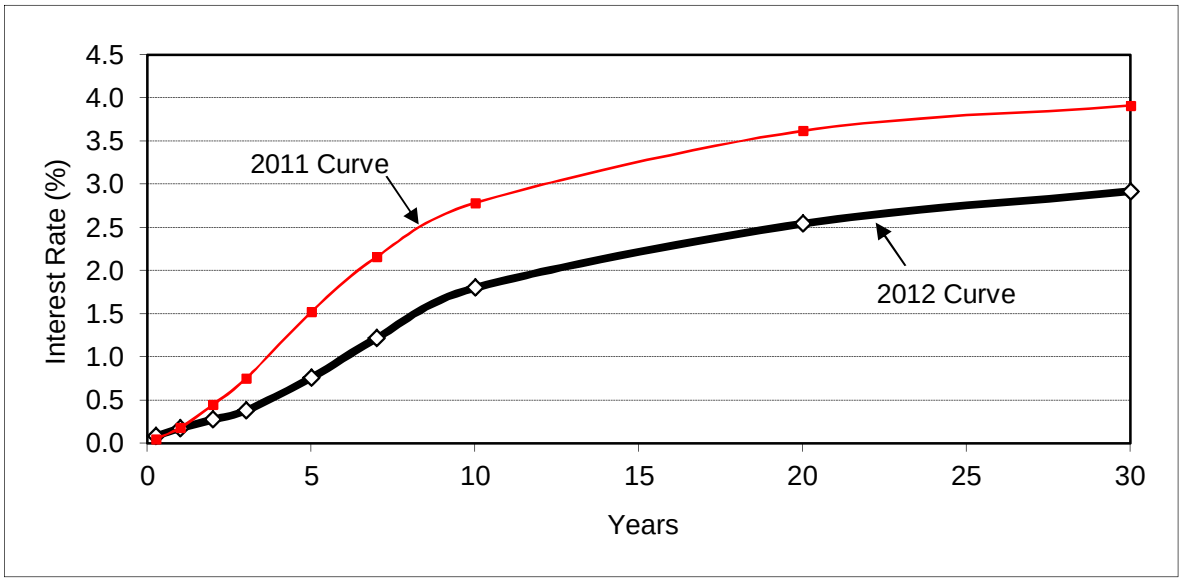
End of Month	Price	Yield
January	76.570	6.80 %
February	85.500	6.02
March	81.000	6.40
April	86.000	5.98
May	81.625	6.34
June	86.000	5.98
July	84.500	6.11
August	82.850	6.24
September	87.750	5.85
October	84.000	6.15
November	86.167	5.98
December	88.000	5.84
Average	84.164	6.14 %

Source: Bloomberg

Interest Rates on Selected Government Instruments

Yield in Percent Per Annum, Constant Maturity Rates for 2012

	3 Mo.	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
January	0.03	0.12	0.24	0.36	0.84	1.38	1.97	2.70	3.03
February	0.09	0.16	0.28	0.38	0.83	1.37	1.97	2.75	3.11
March	0.08	0.19	0.34	0.51	1.02	1.56	2.17	2.94	3.28
April	0.08	0.18	0.29	0.43	0.89	1.43	2.05	2.82	3.18
May	0.09	0.19	0.29	0.39	0.76	1.21	1.80	2.53	2.93
June	0.09	0.19	0.29	0.39	0.71	1.08	1.62	2.31	2.70
July	0.10	0.19	0.25	0.33	0.62	0.98	1.53	2.22	2.59
August	0.10	0.18	0.27	0.37	0.71	1.14	1.68	2.40	2.77
September	0.11	0.18	0.26	0.34	0.67	1.12	1.72	2.49	2.88
October	0.10	0.18	0.28	0.37	0.71	1.15	1.75	2.51	2.90
November	0.09	0.18	0.27	0.36	0.67	1.08	1.65	2.39	2.80
December	0.07	0.16	0.26	0.35	0.70	1.13	1.72	2.47	2.88
Average	**0.09**	**0.18**	**0.28**	**0.38**	**0.76**	**1.22**	**1.80**	**2.54**	**2.92**



Source: Federal Reserve statistical release H.15, Treasury Constant Maturities, Nominal

Equipment Trust Certificates for CSX

Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.	ETC CSX Series B 236	2/15/14	$15,000	$10,000	$12,500	1.149%	1.09285	$13,661	$157
2.	ETC CSX Series B 237	4/15/14	12,000	8,000	10,000	1.148%	1.10505	11,051	127
3.	ETC CSX Series B 238	6/15/14	11,100	7,400	9,250	1.148%	1.11949	10,355	119
4.	ETC CSX Series B 239	4/1/15	20,400	15,300	17,850	1.287%	1.16412	20,780	267
5.	ETC CSX Series B 240	5/15/15	16,800	12,600	14,700	1.287%	1.14436	16,822	217
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
11.					--			--	--
12.					--			--	--
13.					--			--	--
14.					--			--	--
15.					--			--	--
	Total		$75,300	$53,300	$64,300	**1.220%**		**$72,668**	$887

Note:
This list contains ETCs that can be used in the AAR's model to determine market value. Some debt instruments labeled as ETCs do not have all of the characteristics typical of an ETC, and therefore cannot be modeled. For example, ETCs with variable rates cannot be modeled.

Non-Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$0	$0

Equipment Trust Certificates for CSX (continued)

Entire ETC Current – Not Used for Cost or Market Value

	ETC ID	Maturity	Balance 2012 ($000) Beg.	Ending
1.	ETC CSX Series A 235	06/15/13	10,000	5,000
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$10,000	$5,000

Grand Totals (for reconciliation to carrier data)

	Balance For 2012 ($000) Beg.	Ending
Total Modeled	$75,300	$53,300
Total Non-Modeled	0	0
Sub Total	75,300	53,300
Total All Current	10,000	5,000
Grand Total	$85,300	$58,300
From CSX:		
Total ETCs	$85,300	$58,300
Difference		$0

Equipment Trust Certificates for NS

Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.	NSR Series I	4/1/14	18,900	12,600	$15,750	1.149%	1.09813	$17,296	$199
2.	NSR Series J	6/15/14	18,750	12,500	15,625	1.148%	1.12145	17,523	201
3.					--			--	--
4.					--			--	--
5.					--			--	--
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
11.					--			--	--
12.					--			--	--
13.					--			--	--
14.					--			--	--
15.					--			--	--
	Total		$37,650	$25,100	$31,375	**1.148%**		**$34,818**	$400

Note:
This list contains ETCs that can be used in the AAR's model to determine market value. Some debt instruments labeled as ETCs do not have all of the characteristics typical of an ETC, and therefore cannot be modeled. For example, ETCs with variable rates cannot be modeled.

Non-Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$0	$0

Equipment Trust Certificates for NS (continued)

Entire ETC Current – Not Used for Cost or Market Value

	ETC ID	Maturity	Balance 2012 ($000) Beg.	Ending
1.	NSR Series H	7/15/13	$8,400	$4,200
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$8,400	$4,200

Grand Totals (for reconciliation to carrier data)

	Balance For 2012 ($000) Beg.	Ending
Total Modeled	$37,650	$25,100
Total Non-Modeled	0	0
Sub Total	37,650	25,100
Total All Current	8,400	4,200
Grand Total	$46,050	$29,300

From NS:

Total ETCs	$29,300
Difference	$0

Equipment Trust Certificates for UP

Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.	ETC UPC Series I	2/23/19	49,485	44,586	47,036	1.952%	1.20184	56,529	1,104
2.	ETC UPC Series J	1/2/2031	78,828	74,831	76,830	3.184%	1.25654	96,539	3,074
3.					--			--	--
4.					--			--	--
5.					--			--	--
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
11.					--			--	--
12.					--			--	--
13.					--			--	--
14.					--			--	--
15.					--			--	--
	Total		$128,313	$119,417	$123,865	**2.729%**		**$153,068**	$4,177

Note:
This list contains ETCs that can be used in the AAR's model to determine market value. Some debt instruments labeled as ETCs do not have all of the characteristics typical of an ETC, and therefore cannot be modeled. For example, ETCs with variable rates cannot be modeled.

Non-Modeled ETCs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$0	$0

Equipment Trust Certificates for UP (continued)

Entire ETC Current – Not Used for Cost or Market Value

	ETC ID	Maturity	Balance 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
	Total		$0	$0

Grand Totals (for reconciliation to carrier data)

	Balance For 2012 ($000) Beg.	Ending
Total Modeled	$128,313	$119,417
Total Non-Modeled	0	0
Sub Total	128,313	119,417
Total All Current	0	0
Grand Total	$128,313	$119,417
From UP:		
Total ETCs		$119,417
Difference		$0

Conditional Sales Agreements for CSX

Modeled CSAs

	CSA ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.					--			--	--
2.					--			--	--
3.		None.			--			--	--
4.					--			--	--
5.					--			--	--
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
	Total		$0	$0	$0	--		**$0**	$0

Note:
This list contains CSAs that can be used in the AAR's model to determine market value. Some debt instruments labeled as CSAs do not have all of the characteristics typical of a CSA, and therefore cannot be modeled. For example, CSAs with variable rates cannot be modeled.

Non-Modeled CSAs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending	
1.	CSA 424	09/15/14	$17,974	$11,983	(uses a floating interest rate)
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
	Total		$17,974	$11,983	

Current CSAs Not Used	Balance For 2012 ($000) Beg.	Ending
Grand Total All CSAs	$17,974	$11,983

From CSX:

Total CSAs	$11,983
Difference from Grand Total	$0

Conditional Sales Agreements for NS

Modeled CSAs

	CSA ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.					--			--	--
2.					--			--	--
3.		None.			--			--	--
4.					--			--	--
5.					--			--	--
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
	Total		$0	$0	$0	--		**$0**	$0

Note:
This list contains CSAs that can be used in the AAR's model to determine market value. Some debt instruments labeled as CSAs do not have all of the characteristics typical of a CSA, and therefore cannot be modeled. For example, CSAs with variable rates cannot be modeled.

Non-Modeled CSAs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total		$0	$0

	Balance For 2012 ($000) Beg.	Ending
Current CSAs Not Used	0	0
Grand Total All CSAs	$0	$0

Conditional Sales Agreements for UP

Modeled CSAs

	CSA ID	Maturity	Balance For 2012 ($000) Beg.	Ending	Avg O/S	Current Valuation Interest Rate	Valuation Factor	Current Market Value	Interest
1.					--			--	--
2.					--			--	--
3.		None.			--			--	--
4.					--			--	--
5.					--			--	--
6.					--			--	--
7.					--			--	--
8.					--			--	--
9.					--			--	--
10.					--			--	--
	Total		$0	$0	$0	--		**$0**	$0

Note:
This list contains CSAs that can be used in the AAR's model to determine market value. Some debt instruments labeled as CSAs do not have all of the characteristics typical of a CSA, and therefore cannot be modeled. For example, CSAs with variable rates cannot be modeled.

Non-Modeled CSAs

	ETC ID	Maturity	Balance For 2012 ($000) Beg.	Ending
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
	Total		$0	$0

	Balance For 2012 ($000) Beg.	Ending
Current CSAs Not Used	0	0
Grand Total All CSAs	$0	$0

2012 Market Value of Debt ($000)

Type of Debt	Market Value: Traded or Modeled	Market Value: Non-Traded or Non-Modeled	Market Value: Total	Percent of: Subtotal	Percent of: Total
Bonds, Notes & Debentures	$26,884,456	$324,790	$27,209,246	99.05%	92.99%
Equipment Trust Certificates	260,554		260,554	0.95%	0.89%
Conditional Sales Agreements	0		0	0.00%	0.00%
Sub Total	$27,145,010	$324,790	$27,469,800	100.00%	93.88%
All Other — Capital Leases		$1,864,902	$1,864,902	104.12%	6.37%
All Other — Misc. Debt		-85,812	-85,812	-4.79%	-0.29%
All Other — Non-Modeled ETC		0	0	0.00%	0.00%
All Other — Non-Modeled CSA		11,983	11,983	0.67%	0.04%
Sub Total			$1,791,073	100.00%	6.12%
Total Market Value			**$29,260,873**		100.00%

General Notes:

Bonds, Notes, and Debentures from Appendix A. Securities that did not trade were assigned a market value equal to their book value. The traded portion accounts for 98.81 percent of the total market value for this category.

Equipment Trust Certificates from Appendix C.

Conditional Sales Agreements from Appendix D.

Some ETCs and CSAs could not be modeled because they did not have all of the typical characteristics necessary for the model. Those that could not be modeled were assigned a market value equal to their book value, and moved to the All Other category.

Capital Leases and Miscellaneous Debt listed in work papers.

The capital leases and miscellaneous debt portion of the All Other debt category was assigned a market value equal to its book value, and totals to $1,779,090 thousand. The non-modeled ETCs and CSAs were also assigned a market value equal to their book value, and totaled to $11,983 thousand. The All Other category totals to $1,791,073 thousand, or 6.1 percent of total debt.

Negative numbers in the Miscellaneous Debt generally are related to debt premiums and discounts.

2012 Flotation Costs for Bonds

	CSX Notes	CSX Sr Notes	NSC Sr Notes	NSC Sr Notes	UNP Notes	UNP Notes
From 424(b)	**2/23/2012**	**10/17/2012**	**3/12/2012**	**9/4/2012**	**6/6/2012**	**6/6/2012**
Face Amount	$300,000,000	$800,000,000	$600,000,000	$600,000,000	$300,000,000	$300,000,000
Coupon Rate	4.400%	4.100%	3.000%	3.950%	2.950%	4.300%
Maturity Date	3/1/2043	3/15/2044	4/1/2022	10/1/2042	1/15/2023	6/15/2042
Frequency of Coupon Payment	2	2	2	2	2	2
Interest Accrual Date	2/28/2012	10/22/2012	3/15/2012	9/7/2012	6/11/2012	6/11/2012
Price To Investors	99.413	99.635	98.937	99.997	99.943	99.882
Proceeds from Sale (before expenses)	$298,239,000	$797,080,000	$593,622,000	$599,982,000	$299,829,000	$299,646,000
Underwriter Fee as Pct of Gross Proceeds	0.875%	0.875%	0.650%	0.875%	0.650%	0.875%
Underwriter's Fee	$2,625,000	$7,000,000	$3,900,000	$5,250,000	$1,950,000	$2,625,000
Railroad Expenses Excluding Fee	$275,000	$400,000	$200,000	$200,000	$37,500	$37,500
Page in 424(b)(5) for Expenses	S-20	S-20	S-23	S-17	S-7	S-7
Calculated						
Yield Based on Price to Investors	4.435%	4.121%	3.124%	3.950%	2.956%	4.307%
Issue Price Per $100 Less Flotation	$98.45	$98.71	$98.25	$99.09	$99.28	$98.99
Yield on New Issue Including Flotation	4.493%	4.174%	3.205%	4.002%	3.030%	4.360%
Flotation Costs (Difference in Pct Pts)	**0.058%**	**0.053%**	**0.081%**	**0.052%**	**0.074%**	**0.053%**
Average Flotation Cost (Pct. Points)	**0.062%**					

Source: SEC 424(b)(5) or 424(b)(2) filings.

Example of Source for Bond Flotation Costs

424B5 1 d337408d424b5.htm FINAL PROSPECTUS SUPPLEMENT

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Filed Pursuant to Rule 424(b)(5)
Registration No. 333-164842

CALCULATION OF REGISTRATION FEE

Title Of Each Class Of Securities To Be Registered	Proposed Maximum Aggregate Offering Price	Amount Of Registration Fee(1)
2.950% Notes due 2023	$300,000,000	$34,380.00
4.300% Notes due 2042	$300,000,000	$34,380.00
Total:		$68,760.00

(1) Calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended.

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Prospectus Supplement
(To Prospectus Dated February 10, 2010)

$600,000,000

Union Pacific Corporation

$300,000,000 2.950% Notes due 2023

$300,000,000 4.300% Notes due 2042

We will pay interest on the 2.950% notes due 2023 (the "2023 notes") each January 15 and July 15, commencing on January 15, 2013, and we will pay interest on the 4.300% notes due 2042 (the "2042 notes") each December 15 and June 15, commencing on December 15, 2012. The 2023 notes will mature on January 15, 2023, and the 2042 notes will mature on June 15, 2042. We use the term "notes" to refer to the 2023 notes and 2042 notes, collectively.

We may redeem some or all of each series of notes at any time and from time to time at the applicable redemption prices described in this prospectus supplement. There is no sinking fund for the notes. See "Description of the Notes" for a description of the terms of the notes.

	Price to Public (1)	Underwriting Discount	Proceeds to the Company
Per 2023 Note	99.943%	0.650%	99.293%
Total	$299,829,000	$1,950,000	$297,879,000
Per 2042 Note	99.882%	0.875%	99.007%
Total	$299,646,000	$2,625,000	$297,021,000

(1) Plus accrued interest, if any, from June 11, 2012.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying

Example of Source for Bond Flotation Costs

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UNDERWRITING

Under the terms and subject to the conditions contained in an underwriting agreement dated June 6, 2012, we have agreed to sell to the underwriters named below, for whom Barclays Capital Inc., Credit Suisse Securities (USA) LLC and Morgan Stanley & Co. LLC are acting as representatives, the following respective principal amounts of the notes:

Underwriter	Principal Amount of the 2023 Notes	Principal Amount of the 2042 Notes
Barclays Capital Inc.	$ 72,000,000	$ 72,000,000
Credit Suisse Securities (USA) LLC	72,000,000	72,000,000
Morgan Stanley & Co. LLC	72,000,000	72,000,000
Citigroup Global Markets Inc.	16,000,000	16,000,000
J.P. Morgan Securities LLC	16,000,000	16,000,000
Merrill Lynch, Pierce, Fenner & Smith Incorporated	16,000,000	16,000,000
Mitsubishi UFJ Securities (USA), Inc.	6,000,000	6,000,000
SunTrust Robinson Humphrey, Inc.	6,000,000	6,000,000
Wells Fargo Securities, LLC	6,000,000	6,000,000
BNP Paribas Securities Corp	3,000,000	3,000,000
BNY Mellon Capital Markets, LLC	3,000,000	3,000,000
Loop Capital Markets LLC	3,000,000	3,000,000
PNC Capital Markets LLC	3,000,000	3,000,000
RBS Securities Inc.	3,000,000	3,000,000
U.S. Bancorp Investments, Inc.	3,000,000	3,000,000
Total	$300,000,000	$300,000,000

The underwriting agreement provides that the underwriters are obligated to purchase all of the notes if any are purchased.

The underwriters propose to offer the notes of each series at the applicable public offering prices on the cover page of this prospectus supplement and may offer notes to selling group members at those prices less selling concessions of 0.400% and 0.500% of the principal amount per 2023 note and 2042 note, respectively. The underwriters and selling group members may allow discounts of 0.250% and 0.250% of the principal amount per 2023 note and 2042 note, respectively, on sales to other broker/dealers. After the initial public offering the representatives may change the public offering prices and concessions and discounts to broker/dealers.

The following table shows the underwriting discounts and commissions that we are to pay to the underwriters in connection with this offering (expressed as a percentage of the principal amount of the notes):

	Paid by Union Pacific Corporation
Per 2023 Note	0.650%
Per 2042 Note	0.875%

We estimate that our out of pocket expenses for this offering will be approximately $75,000.

Each of the notes is part of a new issue of securities with no established trading market. We do not intend to apply for the notes to be listed on any securities exchange or to arrange for the notes to be quoted on any quotation system. The underwriters intend to make a secondary market for the notes. However, they are not obligated to do so and may discontinue making a secondary market for the notes at any time without notice. No assurance can be given as to how liquid the trading market for the notes will be.

2012 Current Cost of Debt

Type of Debt	Reference	Appendix E Weight	Current Cost	Weighted Cost
Type of Instrument				
Bonds, Notes & Debentures	App. A & Table 4	99.05%	3.239%	3.208%
Equipment Trust Certificates	App. C & Table 6	0.95%	2.097%	0.020%
Conditional Sales Agreements	App. D & Table 7	0.00%	0.000%	0.000%
Total Without Floatation Costs		100.00%		3.228%
Floatation Costs				
Bonds, Notes & Debentures	App. F & Table 10	99.05%	0.062%	0.061%
Equipment Trust Certificates	Tables 9 and 10	0.95%	0.070%	0.001%
Conditional Sales Agreements	Tables 9 and 10	0.00%	not calculated	0.000%
Total Floatation Costs		100.00%		0.062%
Weighted Cost of Debt				3.290%
Weighted Cost of Debt (rounded)				**3.29%**

Market Value for Common Equity

CSX Stock Data from Yahoo Finance 1-2-2013
http://finance.yahoo.com/q/hp?s=CSX&a=11&b=20&c=2007&d=00&e=2&f=2013&g=w

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization ($000)
1/2/2012	21.61	23.12	21.55	22.69	11091000	1,049,953,020	23,823,434
1/9/2012	22.84	23.71	22.35	22.94	9453300	1,049,953,020	24,085,922
1/16/2012	23.12	23.28	21.83	22.82	10401000	1,049,953,020	23,959,928
1/23/2012	22.96	23.10	21.61	22.76	16124300	1,052,267,692	23,949,613
1/30/2012	22.51	23.31	22.44	23.17	10446900	1,052,267,692	24,381,042
2/6/2012	22.84	22.93	21.83	22.05	12745400	1,052,267,692	23,202,503
2/13/2012	22.35	22.35	21.03	21.59	11355000	1,052,267,692	22,718,459
2/20/2012	21.21	21.95	21.00	21.66	11577900	1,052,267,692	22,792,118
2/27/2012	21.43	22.02	20.75	20.76	11757400	1,052,267,692	21,845,077
3/5/2012	20.76	21.05	19.99	20.90	12514600	1,052,267,692	21,992,395
3/12/2012	20.93	22.54	20.10	22.25	17398400	1,052,267,692	23,412,956
3/19/2012	22.16	22.30	20.82	21.17	9509400	1,052,267,692	22,276,507
3/26/2012	21.42	22.17	21.01	21.52	13213600	1,039,158,062	22,362,681
4/2/2012	21.34	22.60	21.31	22.32	13788700	1,039,158,062	23,194,008
4/9/2012	21.71	22.14	20.97	21.92	9267900	1,039,158,062	22,778,345
4/16/2012	21.94	23.02	21.36	21.61	12910100	1,039,158,062	22,456,206
4/23/2012	21.36	22.60	21.11	22.39	8311100	1,039,158,062	23,266,749
4/30/2012	22.33	23.00	21.90	22.15	7496900	1,039,158,062	23,017,351
5/7/2012	22.04	22.23	21.47	21.66	6651200	1,039,158,062	22,508,164
5/14/2012	21.37	21.86	20.63	20.78	7045500	1,039,158,062	21,593,705
5/21/2012	20.86	21.69	20.80	21.37	6804400	1,039,158,062	22,206,808
5/28/2012	21.48	21.60	20.19	20.32	7545200	1,039,158,062	21,115,692
6/4/2012	20.37	21.55	19.88	21.08	7467300	1,039,158,062	21,905,452
6/11/2012	21.40	22.37	20.96	22.30	8876300	1,039,158,062	23,173,225
6/18/2012	22.15	22.91	21.38	21.63	9293300	1,039,158,062	22,476,989
6/25/2012	21.34	22.39	21.06	22.36	7223900	1,039,988,670	23,254,147
7/2/2012	22.31	22.45	21.95	22.41	5405100	1,039,988,670	23,306,146
7/9/2012	22.38	22.78	21.90	22.66	8875900	1,039,988,670	23,566,143
7/16/2012	22.57	22.97	22.27	22.37	8251000	1,039,988,670	23,264,547
7/23/2012	22.03	22.96	21.49	22.85	7049000	1,039,988,670	23,763,741
7/30/2012	22.81	23.21	22.12	23.11	6699100	1,039,988,670	24,034,138
8/6/2012	23.25	23.25	22.46	22.98	5482800	1,039,988,670	23,898,940
8/13/2012	22.98	23.40	22.79	23.39	5569900	1,039,988,670	24,325,335
8/20/2012	23.41	23.49	22.75	22.99	4502900	1,039,988,670	23,909,340
8/27/2012	23.02	23.09	22.32	22.46	4046000	1,039,988,670	23,358,146
9/3/2012	22.15	22.31	21.32	22.31	8265700	1,039,988,670	23,202,147
9/10/2012	22.25	23.29	22.16	23.16	5871400	1,039,988,670	24,086,138
9/17/2012	23.13	23.29	21.11	21.13	11600900	1,039,988,670	21,974,961
9/24/2012	21.00	21.62	20.65	20.75	8646500	1,031,377,919	21,401,092
10/1/2012	20.80	21.58	20.65	21.42	7466400	1,031,377,919	22,092,115
10/8/2012	21.35	21.72	20.92	21.31	6369500	1,031,377,919	21,978,663
10/15/2012	21.36	21.76	20.59	21.10	12079400	1,031,377,919	21,762,074
10/22/2012	21.08	21.47	20.46	20.55	11060100	1,031,377,919	21,194,816
10/29/2012	20.69	21.08	20.44	20.66	11967400	1,031,377,919	21,308,268
11/5/2012	20.57	20.92	19.84	19.88	11613400	1,031,377,919	20,503,793
11/12/2012	19.94	20.20	18.88	19.01	9246600	1,031,377,919	19,606,494
11/19/2012	19.21	19.71	19.18	19.71	6367200	1,031,377,919	20,328,459
11/26/2012	19.63	20.27	19.57	19.76	9690000	1,031,377,919	20,380,028
12/3/2012	19.86	20.31	19.49	19.91	9799900	1,031,377,919	20,534,734
12/10/2012	19.82	20.07	19.42	19.77	10671700	1,031,377,919	20,390,341
12/17/2012	19.85	20.27	19.72	19.95	9739300	1,031,377,919	20,575,989
12/24/2012	19.91	19.96	19.42	19.43	5397900	1,031,377,919	20,039,673

Note: Capitalization calulated using close of week price multiplied by the number of shares outstanding.

Market Value for Common Equity

NSC Stock Data from Yahoo Finance 1-2-2013
http://finance.yahoo.com/q/hp?a=11&b=20&c=2007&d=00&e=2&f=2013&g=w&s=NSC%2C+&ql=1

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization ($000)
1/2/2012	73.99	76.35	73.35	75.31	2067000	336,106,217	25,312,159
1/9/2012	75.94	78.50	74.99	76.50	2341100	336,106,217	25,712,126
1/16/2012	77.14	78.22	75.00	77.26	3029400	336,106,217	25,967,566
1/23/2012	77.49	77.69	72.40	73.94	3651800	336,106,217	24,851,694
1/30/2012	72.52	74.00	71.90	73.61	4977100	330,141,306	24,301,702
2/6/2012	73.05	73.16	71.03	71.53	2947100	330,141,306	23,615,008
2/13/2012	72.03	72.39	67.56	68.81	4252100	330,141,306	22,717,023
2/20/2012	68.39	70.36	67.90	70.03	3829800	330,141,306	23,119,796
2/27/2012	69.53	71.35	67.80	68.10	3961400	330,141,306	22,482,623
3/5/2012	68.08	68.75	65.25	66.48	4072000	330,141,306	21,947,794
3/12/2012	66.69	69.39	64.10	68.98	4717000	330,141,306	22,773,147
3/19/2012	68.68	69.04	64.35	64.45	3086200	330,141,306	21,277,607
3/26/2012	65.21	66.80	64.85	65.83	3155600	330,141,306	21,733,202
4/2/2012	65.66	68.06	65.42	67.83	3918300	325,763,164	22,096,515
4/9/2012	67.08	68.42	64.91	67.44	2848200	325,763,164	21,969,468
4/16/2012	67.82	69.96	67.60	69.53	2991200	325,763,164	22,650,313
4/23/2012	68.63	73.76	68.20	73.37	3090900	325,763,164	23,901,243
4/30/2012	73.32	74.89	71.45	71.63	2312800	325,763,164	23,334,415
5/7/2012	71.36	72.49	67.84	68.44	3409300	325,763,164	22,295,231
5/14/2012	67.72	68.86	65.13	65.34	2346900	325,763,164	21,285,365
5/21/2012	65.06	68.42	65.06	66.43	2154100	325,763,164	21,640,447
5/28/2012	67.00	67.28	64.21	64.29	3221100	325,763,164	20,943,314
6/4/2012	64.06	67.18	62.82	66.44	2261000	325,763,164	21,643,705
6/11/2012	67.15	69.25	65.73	68.97	2383700	325,763,164	22,467,885
6/18/2012	68.70	72.17	68.47	70.00	2668800	325,763,164	22,803,421
6/25/2012	69.25	71.77	68.17	71.77	1893300	325,763,164	23,380,022
7/2/2012	71.77	72.25	70.98	72.20	1323600	319,516,715	23,069,107
7/9/2012	71.78	73.69	70.77	73.69	2099400	319,516,715	23,545,187
7/16/2012	73.29	74.87	72.79	72.99	2242600	319,516,715	23,321,525
7/23/2012	72.03	75.23	71.07	74.69	1968000	319,516,715	23,864,703
7/30/2012	74.50	75.21	72.38	74.94	1621000	319,516,715	23,944,583
8/6/2012	74.97	75.44	73.21	74.56	1334400	319,516,715	23,823,166
8/13/2012	74.42	75.33	73.79	75.10	1051400	319,516,715	23,995,705
8/20/2012	74.97	75.56	72.94	73.60	1301300	319,516,715	23,516,430
8/27/2012	73.66	73.97	72.22	72.46	1336000	319,516,715	23,152,181
9/3/2012	71.90	72.15	69.70	71.92	1828100	319,516,715	22,979,642
9/10/2012	72.11	75.14	71.86	74.69	1454400	319,516,715	23,864,703
9/17/2012	74.50	74.59	64.95	65.00	4821900	319,516,715	20,768,586
9/24/2012	65.09	66.51	63.25	63.63	3342900	319,516,715	20,330,849
10/1/2012	64.01	67.00	63.78	66.90	3198200	316,043,185	21,143,289
10/8/2012	66.56	67.50	65.92	67.28	1980000	316,043,185	21,263,385
10/15/2012	67.29	68.01	65.54	65.64	2993100	316,043,185	20,745,075
10/22/2012	65.64	67.14	60.96	62.77	4900700	316,043,185	19,838,031
10/29/2012	62.78	62.89	61.13	61.13	4406500	316,043,185	19,319,720
11/5/2012	61.00	62.02	57.89	58.00	4492000	316,043,185	18,330,505
11/12/2012	58.09	59.09	56.05	56.34	3474300	316,043,185	17,805,873
11/19/2012	56.81	58.03	56.49	57.76	2243100	316,043,185	18,254,654
11/26/2012	57.52	60.65	57.43	60.38	3415300	316,043,185	19,082,688
12/3/2012	60.67	62.05	59.26	61.51	2561800	316,043,185	19,439,816
12/10/2012	61.51	62.39	61.09	61.36	2068700	316,043,185	19,392,410
12/17/2012	61.77	62.99	61.28	62.55	4033200	316,043,185	19,768,501
12/24/2012	62.53	62.55	60.59	61.07	1497100	316,043,185	19,300,757

Note: Capitalization calulated using close of week price multiplied by the number of shares outstanding.

Market Value for Common Equity

UNP Stock Data from Yahoo Finance 1-2-2013
http://finance.yahoo.com/q/hp?s=UNP&a=11&b=20&c=2006&d=00&e=4&f=2012&g=w

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization ($000)
1/3/2012	108.08	109.19	107.05	107.53	2362300	483,076,978	51,945,267
1/9/2012	108.17	112.52	107.34	109.73	2551000	483,076,978	53,008,037
1/17/2012	111.18	114.82	108.87	112.84	3744700	483,076,978	54,510,406
1/23/2012	113.33	115.81	108.90	114.90	3179300	480,067,865	55,159,798
1/30/2012	113.65	117.40	113.36	116.11	3132500	480,067,865	55,740,680
2/6/2012	115.91	116.11	110.53	111.63	3121000	480,067,865	53,589,976
2/13/2012	112.62	114.10	108.32	110.99	3613000	480,067,865	53,282,732
2/21/2012	111.15	113.70	110.12	112.62	2531200	480,067,865	54,065,243
2/27/2012	111.51	113.95	109.95	110.89	2480500	480,067,865	53,234,726
3/5/2012	110.60	111.36	104.77	107.64	3188700	480,067,865	51,674,505
3/12/2012	107.89	114.87	107.30	113.15	4317000	480,067,865	54,319,679
3/19/2012	112.48	113.69	108.65	108.89	2031400	480,067,865	52,274,590
3/26/2012	109.48	111.70	104.95	107.48	2708000	480,067,865	51,597,694
4/2/2012	107.33	110.06	105.90	108.65	3390900	480,067,865	52,159,374
4/9/2012	107.34	109.17	104.08	108.04	2893900	476,218,255	51,450,620
4/16/2012	108.34	110.47	104.34	107.26	3868800	476,218,255	51,079,170
4/23/2012	105.84	114.48	105.75	113.89	3286400	476,218,255	54,236,497
4/30/2012	113.73	116.14	112.00	113.60	2490600	476,218,255	54,098,394
5/7/2012	113.03	114.17	111.51	112.18	2504900	476,218,255	53,422,164
5/14/2012	111.11	114.18	106.88	107.17	3278500	476,218,255	51,036,310
5/21/2012	107.60	113.54	107.21	111.88	2223300	476,218,255	53,279,298
5/29/2012	112.42	112.85	108.01	108.11	2376000	476,218,255	51,483,956
6/4/2012	108.17	113.00	105.14	110.64	2392100	476,218,255	52,688,788
6/11/2012	111.28	115.42	109.43	114.87	2257500	476,218,255	54,703,191
6/18/2012	114.52	119.82	113.00	116.48	4303300	476,218,255	55,469,902
6/25/2012	115.19	119.33	112.60	119.31	2037800	476,218,255	56,817,600
7/2/2012	119.89	119.94	116.42	116.75	2403200	476,218,255	55,598,481
7/9/2012	116.42	119.24	115.38	118.15	2196500	473,607,721	55,956,752
7/16/2012	117.67	123.56	117.22	119.60	3214500	473,607,721	56,643,483
7/23/2012	117.78	123.35	115.70	122.48	2595500	473,607,721	58,007,474
7/30/2012	122.36	126.91	120.31	124.54	1950500	473,607,721	58,983,106
8/6/2012	125.11	125.20	120.75	122.01	1580000	473,607,721	57,784,878
8/13/2012	121.55	125.54	121.16	125.01	1637500	473,607,721	59,205,701
8/20/2012	125.00	125.34	122.92	123.99	1273200	473,607,721	58,722,621
8/27/2012	124.25	124.50	121.09	121.44	1336200	473,607,721	57,514,922
9/4/2012	121.57	122.86	118.56	122.25	2016400	473,607,721	57,898,544
9/10/2012	122.28	129.27	121.99	128.43	1698700	473,607,721	60,825,440
9/17/2012	128.29	128.29	119.27	119.37	2770500	473,607,721	56,534,554
9/24/2012	118.76	121.98	116.86	118.70	2287700	473,607,721	56,217,236
10/1/2012	118.98	123.15	118.12	122.16	1754800	473,607,721	57,855,919
10/8/2012	121.94	123.45	120.12	121.05	1355500	470,397,162	56,941,576
10/15/2012	121.18	128.38	119.77	123.77	2337200	470,397,162	58,221,057
10/22/2012	123.79	125.17	120.30	123.61	2080700	470,397,162	58,145,793
10/31/2012	124.59	126.92	122.59	123.98	2171900	470,397,162	58,319,840
11/5/2012	123.20	125.50	120.00	120.25	1612900	470,397,162	56,565,259
11/12/2012	120.54	122.58	116.06	117.56	1980600	470,397,162	55,299,890
11/19/2012	118.61	122.00	118.19	121.98	1411000	470,397,162	57,379,046
11/26/2012	121.49	123.67	119.97	122.78	1640400	470,397,162	57,755,364
12/3/2012	123.68	124.15	121.24	123.95	1499200	470,397,162	58,305,728
12/10/2012	124.03	126.20	123.51	124.28	1750200	470,397,162	58,460,959
12/17/2012	124.90	127.55	124.16	125.68	2136100	470,397,162	59,119,515
12/24/2012	125.40	125.69	123.31	123.54	932700	470,397,162	58,112,865

Note: Capitalization calulated using close of week price multiplied by the number of shares outstanding.

Market Value for Common Equity

Total Market Value for CSX, NSC, and UNP combined

Based on close price on last trading day of week and shares outstanding from 10-K and 10-Q.

	Days For Week		Capitalization
	Beginning	**End**	**($000)**
1.	Monday, January 02, 2012	Friday, January 06, 2012	$101,080,861
2.	Monday, January 09, 2012	Friday, January 13, 2012	$102,806,085
3.	Monday, January 16, 2012	Friday, January 20, 2012	$104,437,900
4.	Monday, January 23, 2012	Friday, January 27, 2012	$103,961,104
5.	Monday, January 30, 2012	Friday, February 03, 2012	$104,423,424
6.	Monday, February 06, 2012	Friday, February 10, 2012	$100,407,486
7.	Monday, February 13, 2012	Friday, February 17, 2012	$98,718,215
8.	Monday, February 20, 2012	Friday, February 24, 2012	$99,977,157
9.	Monday, February 27, 2012	Friday, March 02, 2012	$97,562,426
10.	Monday, March 05, 2012	Friday, March 09, 2012	$95,614,694
11.	Monday, March 12, 2012	Friday, March 16, 2012	$100,505,782
12.	Monday, March 19, 2012	Friday, March 23, 2012	$95,828,704
13.	Monday, March 26, 2012	Friday, March 30, 2012	$95,693,578
14.	Monday, April 02, 2012	Thursday, April 05, 2012	$97,449,897
15.	Monday, April 09, 2012	Friday, April 13, 2012	$96,198,433
16.	Monday, April 16, 2012	Friday, April 20, 2012	$96,185,689
17.	Monday, April 23, 2012	Friday, April 27, 2012	$101,404,489
18.	Monday, April 30, 2012	Friday, May 04, 2012	$100,450,160
19.	Monday, May 07, 2012	Friday, May 11, 2012	$98,225,558
20.	Monday, May 14, 2012	Friday, May 18, 2012	$93,915,380
21.	Monday, May 21, 2012	Friday, May 25, 2012	$97,126,553
22.	Monday, May 28, 2012	Friday, June 01, 2012	$93,542,961
23.	Monday, June 04, 2012	Friday, June 08, 2012	$96,237,944
24.	Monday, June 11, 2012	Friday, June 15, 2012	$100,344,301
25.	Monday, June 18, 2012	Friday, June 22, 2012	$100,750,313
26.	Monday, June 25, 2012	Friday, June 29, 2012	$103,451,769
27.	Monday, July 02, 2012	Friday, July 06, 2012	$101,973,734
28.	Monday, July 09, 2012	Friday, July 13, 2012	$103,068,082
29.	Monday, July 16, 2012	Friday, July 20, 2012	$103,229,555
30.	Monday, July 23, 2012	Friday, July 27, 2012	$105,635,918
31.	Monday, July 30, 2012	Friday, August 03, 2012	$106,961,826
32.	Monday, August 06, 2012	Friday, August 10, 2012	$105,506,984
33.	Monday, August 13, 2012	Friday, August 17, 2012	$107,526,741
34.	Monday, August 20, 2012	Friday, August 24, 2012	$106,148,391
35.	Monday, August 27, 2012	Friday, August 31, 2012	$104,025,248
36.	Monday, September 03, 2012	Friday, September 07, 2012	$104,080,333
37.	Monday, September 10, 2012	Friday, September 14, 2012	$108,776,281
38.	Monday, September 17, 2012	Friday, September 21, 2012	$99,278,101
39.	Monday, September 24, 2012	Friday, September 28, 2012	$97,949,177
40.	Monday, October 01, 2012	Friday, October 05, 2012	$101,091,323
41.	Monday, October 08, 2012	Friday, October 12, 2012	$100,183,625
42.	Monday, October 15, 2012	Friday, October 19, 2012	$100,728,205
43.	Monday, October 22, 2012	Friday, October 26, 2012	$99,178,640
44.	Monday, October 29, 2012	Friday, November 02, 2012	$98,947,828
45.	Monday, November 05, 2012	Friday, November 09, 2012	$95,399,556
46.	Monday, November 12, 2012	Friday, November 16, 2012	$92,712,258
47.	Monday, November 19, 2012	Friday, November 23, 2012	$95,962,159
48.	Monday, November 26, 2012	Friday, November 30, 2012	$97,218,079
49.	Monday, December 03, 2012	Friday, December 07, 2012	$98,280,279
50.	Monday, December 10, 2012	Friday, December 14, 2012	$98,243,711
51.	Monday, December 17, 2012	Friday, December 21, 2012	$99,464,006
52.	Monday, December 24, 2012	Friday, December 28, 2012	$97,453,296
	Average		**$100,102,388**

STB-Style 5-Year Beta using SP 500 Price Index, Weighted RR Returns, 90-Day T-Bill as RF
Compounded T-Bill Rate

The GLM Procedure

Dependent Variable: ZRR

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.36207162	0.36207162	410.56	<.0001
Error	259	0.22841094	0.00088190		
Corrected Total	260	0.59048257			

R-Square	Coeff Var	Root MSE	ZRR Mean
0.613179	915.3720	0.029697	0.003244

Source	DF	Type I SS	Mean Square	F Value	Pr > F
ZSP5	1	0.36207162	0.36207162	410.56	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
ZSP5	1	0.36207162	0.36207162	410.56	<.0001

STB-Style 5-Year Beta using SP 500 Price Index, Weighted RR Returns, 90-Day T-Bill as RF
Compounded T-Bill Rate

The GLM Procedure

Dependent Variable: ZRR

Parameter	Estimate	Standard Error	t Value	Pr > |t|
Intercept	0.002950468	0.00183824	1.61	0.1097
ZSP5	1.154286651	0.05696722	20.26	<.0001

Cost of Common Equity using the Multi-Stage Discounted Cash Flow Model

The cost of equity for each firm (r_i) in the Surface Transportation Board's interpretation of the Morningstar/Ibbotson three-stage DCF model is the solution to the following equation:[1]

$$\mathrm{MV}_{i0} = \sum_{t=1}^{5} \frac{\mathrm{CF}_{i0}(1+g_{i1})^t}{(1+r_i)^t} + \sum_{t=6}^{10} \frac{\mathrm{CF}_{i5}(1+g_{i2})}{(1+r_i)^t} + \frac{\dfrac{\mathrm{IBEI}_{i10}(1+g_{i3})}{r_i - g_{i3}}}{(1+r_i)^{10}} ,$$

where

MV_{i0} = market value of equity for firm *i* in year 0 (i.e., the year for which the cost of equity is being estimated);

CF_{it} = average cash flow for firm *i* at the end of year *t*;

g_{ij} = earnings growth rate for firm *i* in stage *j* (*j* = 1, 2, or 3);

r_i = the cost of equity for firm *i*; and

$\mathrm{IBEI}_{10} = \mathrm{IBEI}_0(1+g_1)^5(1+g_2)^5$.

Note that IBEI_0 is determined by the same process as CF_0 (See Table 15 in text).

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[1] *Cost of Capital Yearbook*, 2008, Morningstar, Inc., p. 24.

Cash Flow Calculation

CSX, Corp.	1	2	3	4	5	Total
	2008	2009	2010	2011	2012	
($ in millions)						
Revenue	11,255	9,041	10,636	11,743	11,756	54,431
Net Income	1,355	1,143	1,563	1,822	1,859	7,742
Extraordinary Items	-130	15	0	0	0	-115
Depreciation	914	903	947	976	1,059	4,799
Deferred Taxes	428	430	474	609	592	2,533
Capital Expenditures	1,719	1,426	1,840	2,297	2,341	9,623
Cash Flow	1,108	1,035	1,144	1,110	1,169	5,566
Cash Flow / Revenue	0.09845	0.11448	0.10756	0.09452	0.09944	0.10226
NIBEI / Revenue	0.13194	0.12476	0.14695	0.15516	0.15813	0.14435

Ibbotson Smoothed Cash Flow = $11,756 x 0.10226 = $1,202.14
Ibbotson Smoothed Net Income BEI = $11,756 x 0.14435 = $1,696.95

Cash Flow Calculation

Norfolk Southern	1	2	3	4	5	Total
	2008	2009	2010	2011	2012	
($ in millions)						
Revenue	10,661	7,969	9,516	11,172	11,040	50,358
Net Income	1,716	1,034	1,496	1,916	1,749	7,911
Extraordinary Items	0	0	0	0	0	0
Depreciation	815	845	826	869	922	4,277
Deferred Taxes	290	338	312	527	366	1,833
Capital Expenditures	1,558	1,299	1,470	2,160	2,241	8,728
Cash Flow	1,263	918	1,164	1,152	796	5,293
Cash Flow / Revenue	0.11847	0.11520	0.12232	0.10311	0.07210	0.10511
NIBEI / Revenue	0.16096	0.12975	0.15721	0.17150	0.15842	0.15710

Ibbotson Smoothed Cash Flow = $11,040 x 0.10511 = $1,160.39
Ibbotson Smoothed Net Income BEI = $11,040 x 0.15710 = $1,734.33

Cash Flow Calculation

Union Pacific Corp.	1	2	3	4	5	Total
	2008	2009	2010	2011	2012	
($ in millions)						
Revenue	17,970	14,143	16,965	19,557	20,926	89,561
Net Income	2,335	1,890	2,780	3,292	3,943	14,240
Extraordinary Items	0	0	0	0	0	0
Depreciation	1,366	1,427	1,487	1,617	1,760	7,657
Deferred Taxes	545	718	672	986	887	3,808
Capital Expenditures	2,754	2,354	2,482	3,176	3,738	14,504
Cash Flow	1,492	1,681	2,457	2,719	2,852	11,201
Cash Flow / Revenue	0.08303	0.11886	0.14483	0.13903	0.13629	0.12507
NIBEI / Revenue	0.12994	0.13364	0.16387	0.16833	0.18843	0.15900

Ibbotson Smoothed Cash Flow = $20,926 x 0.12507 = $2,617.12
Ibbotson Smoothed Net Income BEI = $20,926 x 0.15900 = $3,327.19

2012 Median Growth Rates for MSDCF

	Analyst Growth Rates from IBES December 31								
Company	**Rate 1**	**Rate 2**	**Rate 3**	**Rate 4**	**Rate 5**	**Rate 6**	**Rate 7**	**Rate 8**	**Median**
CSX	9.6	15.0	14.7	4.6	15.0	--	--	--	**14.70**
NSC	6.5	15.0	-7.0	9.2	17.5	15.0	--	--	**12.10**
UNP	16.0	11.0	15.4	22.9	15.0	--	--	--	**15.40**

Simple Average of Medians = 14.07 percent.

2012 Median Growth Rates for MSDCF
CSX

Security: Local Market Ticker | Is Exactly | CSX — Portfolio: * Railroads — Market: All Markets

CSX CORPORATION - CSX (Share Basis: Diluted/Currency: USD) / UNITED STATES OF AMERICA

Detail Estimates - Period Summary

Measure: EPS — Period: Long Term Growth

Create filtered mean from the last 200 days

CSX CORPORATION (Per Share Data in USD)

View Analyst Coverage

EPS

Important Notices

NA

Estimate Summary

	Ests	Mean	Hi	Low
Real Time:	4	13.58	15.00	9.60
Filtered/Preliminary Mean**:	4	13.58	15.00	9.60
30 Day Ago Mean:	4	13.58	15.00	9.60

* Only selected brokers below are included in the filtered mean

Guidance

	Issuance Date	Guidance	Est At Annc
Current	NA	NA	NA
Previous	NA	NA	NA

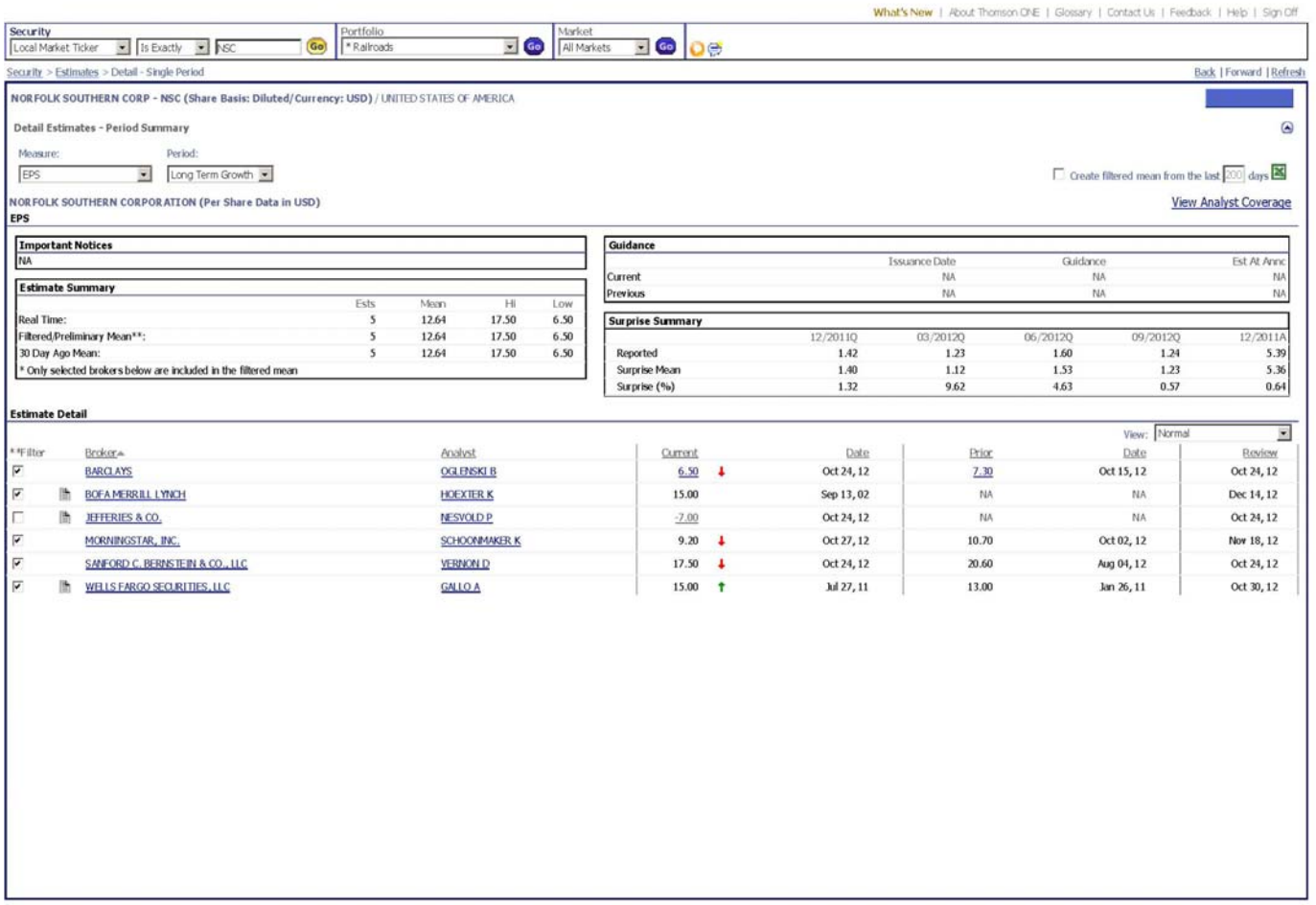
Surprise Summary

	12/2011Q	03/2012Q	06/2012Q	09/2012Q	12/2011A
Reported	0.43	0.43	0.49	0.44	1.67
Surprise Mean	0.44	0.38	0.47	0.43	1.68
Surprise (%)	-1.71	13.28	3.83	2.77	-0.57

Estimate Detail

View: Normal

*Filter	Broker	Analyst	Current		Date	Prior	Date	Review
☑	BARCLAYS	OGLENSKI B	9.60	↓	Oct 18, 12	11.20	Oct 17, 12	Oct 18, 12
☑	BOFA MERRILL LYNCH	HOEXTER K	15.00	↑	Jul 16, 08	12.00	Sep 13, 02	Nov 28, 12
☑	MORNINGSTAR, INC.	SCHOONMAKER K	14.70	↓	Oct 27, 12	15.70	Oct 02, 12	Dec 21, 12
☐	SANFORD C. BERNSTEIN & CO., LLC	VERNON D	4.60	↓	Oct 18, 12	7.00	Oct 03, 12	Oct 18, 12
☑	WELLS FARGO SECURITIES, LLC	GALLO A	15.00	↑	Jul 21, 11	13.00	Dec 17, 09	Oct 17, 12



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Security: Local Market Ticker | Is Exactly | NSC (Go) | Portfolio: * Railroads (Go) | Market: All Markets (Go)

Security > Estimates > Detail - Single Period — Back | Forward | Refresh

NORFOLK SOUTHERN CORP - NSC (Share Basis: Diluted/Currency: USD) / UNITED STATES OF AMERICA

Detail Estimates - Period Summary

Measure: EPS | Period: Long Term Growth

Create filtered mean from the last 200 days

NORFOLK SOUTHERN CORPORATION (Per Share Data in USD) — View Analyst Coverage

EPS

Important Notices

NA

Estimate Summary

	Ests	Mean	HI	Low
Real Time:	5	12.64	17.50	6.50
Filtered/Preliminary Mean**:	5	12.64	17.50	6.50
30 Day Ago Mean:	5	12.64	17.50	6.50

* Only selected brokers below are included in the filtered mean

Guidance

	Issuance Date	Guidance	Est At Annc
Current	NA	NA	NA
Previous	NA	NA	NA

Surprise Summary

	12/2011Q	03/2012Q	06/2012Q	09/2012Q	12/2011A
Reported	1.42	1.23	1.60	1.24	5.39
Surprise Mean	1.40	1.12	1.53	1.23	5.36
Surprise (%)	1.32	9.62	4.63	0.57	0.64

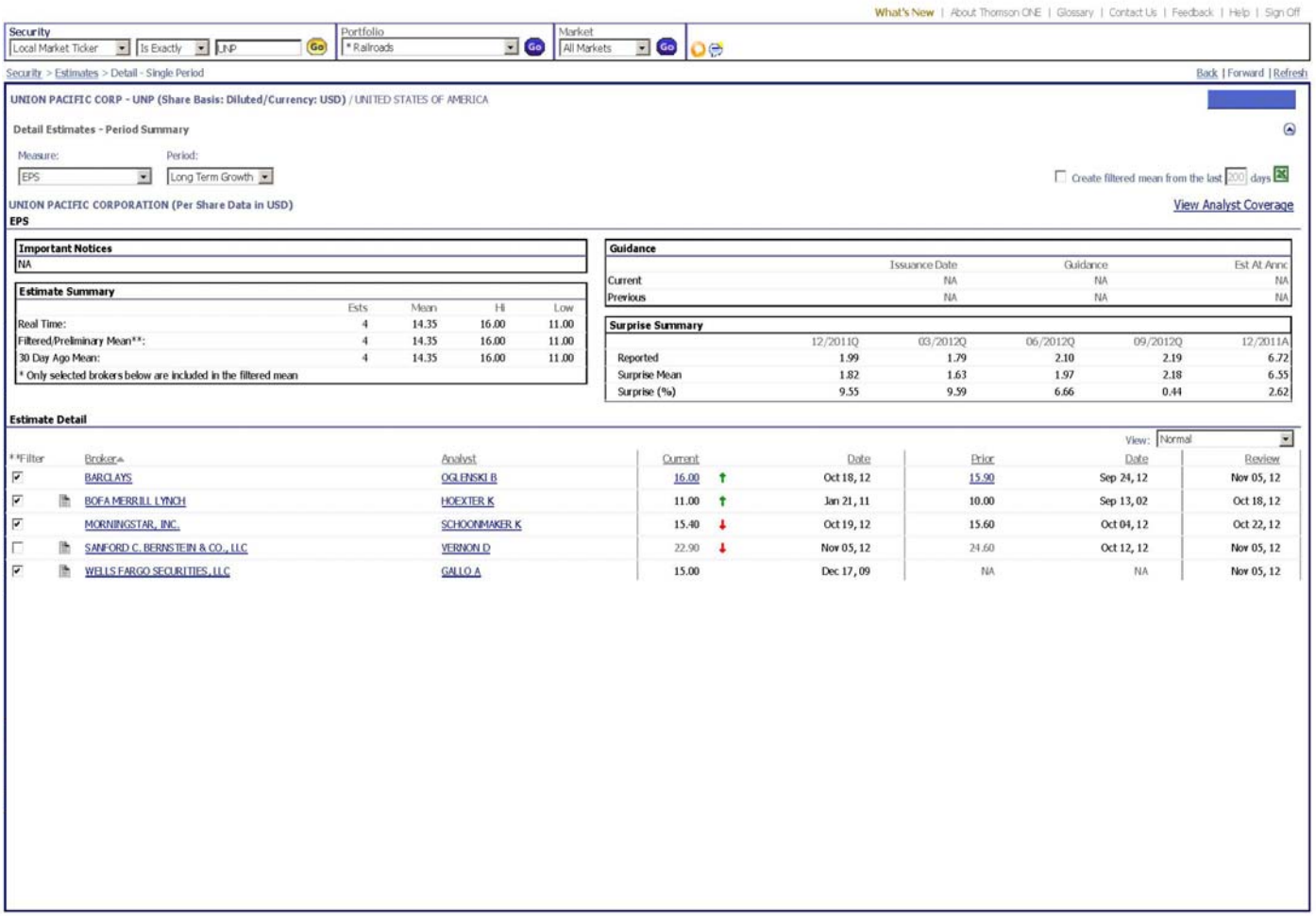
Estimate Detail

View: Normal

*Filter	Broker	Analyst	Current		Date	Prior	Date	Review
☑	BARCLAYS	OGLENSKI B	6.50	↓	Oct 24, 12	7.30	Oct 15, 12	Oct 24, 12
☑	BOFA MERRILL LYNCH	HOEXTER K	15.00		Sep 13, 02	NA	NA	Dec 14, 12
☐	JEFFERIES & CO.	NESVOLD P	-7.00		Oct 24, 12	NA	NA	Oct 24, 12
☑	MORNINGSTAR, INC.	SCHOONMAKER K	9.20	↓	Oct 27, 12	10.70	Oct 02, 12	Nov 18, 12
☑	SANFORD C. BERNSTEIN & CO., LLC	VERNON D	17.50	↓	Oct 24, 12	20.60	Aug 04, 12	Oct 24, 12
☑	WELLS FARGO SECURITIES, LLC	GALLO A	15.00	↑	Jul 27, 11	13.00	Jan 26, 11	Oct 30, 12

2012 Median Growth Rates for MSDCF

NSC



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Security: Local Market Ticker | Is Exactly | UNP — Portfolio: * Railroads — Market: All Markets

Security > Estimates > Detail - Single Period — Back | Forward | Refresh

UNION PACIFIC CORP - UNP (Share Basis: Diluted/Currency: USD) / UNITED STATES OF AMERICA

Detail Estimates - Period Summary

Measure: EPS — Period: Long Term Growth — Create filtered mean from the last 200 days

UNION PACIFIC CORPORATION (Per Share Data in USD) — View Analyst Coverage

EPS

Important Notices

NA

Estimate Summary

	Ests	Mean	Hi	Low
Real Time:	4	14.35	16.00	11.00
Filtered/Preliminary Mean**:	4	14.35	16.00	11.00
30 Day Ago Mean:	4	14.35	16.00	11.00

* Only selected brokers below are included in the filtered mean

Guidance

	Issuance Date	Guidance	Est At Annc
Current	NA	NA	NA
Previous	NA	NA	NA

Surprise Summary

	12/2011Q	03/2012Q	06/2012Q	09/2012Q	12/2011A
Reported	1.99	1.79	2.10	2.19	6.72
Surprise Mean	1.82	1.63	1.97	2.18	6.55
Surprise (%)	9.55	9.59	6.66	0.44	2.62

Estimate Detail

View: Normal

*Filter	Broker	Analyst	Current		Date	Prior	Date	Review
☑	BARCLAYS	OGLENSKI B	16.00	↑	Oct 18, 12	15.90	Sep 24, 12	Nov 05, 12
☑	BOFA MERRILL LYNCH	HOEXTER K	11.00	↑	Jan 21, 11	10.00	Sep 13, 02	Oct 18, 12
☑	MORNINGSTAR, INC.	SCHOONMAKER K	15.40	↓	Oct 19, 12	15.60	Oct 04, 12	Oct 22, 12
☐	SANFORD C. BERNSTEIN & CO., LLC	VERNON D	22.90	↓	Nov 05, 12	24.60	Oct 12, 12	Nov 05, 12
☑	WELLS FARGO SECURITIES, LLC	GALLO A	15.00		Dec 17, 09	NA	NA	Nov 05, 12

2012 Median Growth Rates for MSDCF
UNP

Market Value Data for MSDCF
Stock Price for CSX - December 31, 2012

CSX Corp. (CSX) - NYSE

Add

20.47 ↑0.30(1.49%) 3:04PM EST - Nasdaq Real Time Price

Historical Prices

Get Historical Prices f

Set Date Range

Start Date: Nov 3 1980 Eg. Jan 1, 2010

End Date: Jan 3 2013

- Daily
- Weekly
- Monthly
- Dividends Only

Get Prices

First | Previous | Next | Last

Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Jan 2, 2013	20.11	20.41	20.05	20.17	12,526,900	20.17
Dec 31, 2012	19.40	19.74	19.36	19.73	6,392,000	19.73
Dec 28, 2012	19.50	19.65	19.42	19.43	4,528,100	19.43
Dec 27, 2012	19.73	19.74	19.44	19.62	8,546,400	19.62
Dec 26, 2012	19.89	19.95	19.64	19.70	5,212,300	19.70
Dec 24, 2012	19.91	19.96	19.78	19.85	3,304,900	19.85
Dec 21, 2012	19.77	20.03	19.76	19.95	12,707,500	19.95
Dec 20, 2012	20.07	20.19	20.00	20.10	10,894,300	20.10
Dec 19, 2012	20.23	20.25	19.95	20.01	10,116,200	20.01
Dec 18, 2012	19.96	20.27	19.88	20.24	8,935,900	20.24
Dec 17, 2012	19.85	20.00	19.72	19.91	6,042,600	19.91
Dec 14, 2012	19.80	20.04	19.70	19.77	8,598,300	19.77
Dec 13, 2012	19.66	19.91	19.60	19.74	8,148,900	19.74
Dec 12, 2012	19.66	19.73	19.42	19.64	16,431,400	19.64
Dec 11, 2012	20.07	20.07	19.58	19.59	10,703,400	19.59
Dec 10, 2012	19.82	20.05	19.78	19.93	9,476,800	19.93
Dec 7, 2012	20.20	20.25	19.81	19.91	13,871,600	19.91
Dec 6, 2012	20.27	20.31	19.97	20.25	9,160,800	20.25

Market Value Data for MSDCF
Stock Price for NSC - December 31, 2012

Norfolk Southern Corp. (NSC) - NYSE

Add

63.62 ↑0.33(0.52%) 3:09PM EST - Nasdaq Real Time Price

Historical Prices

Get Historical Prices f

Set Date Range

Start Date: Jun 2 1982 Eg. Jan 1, 2010

End Date: Jan 3 2013

- Daily
- Weekly
- Monthly
- Dividends Only

Get Prices

First | Previous | Next | Last

Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Jan 2, 2013	63.14	63.79	62.81	63.29	2,395,700	63.29
Dec 31, 2012	60.82	61.88	60.70	61.84	2,009,900	61.84
Dec 28, 2012	60.71	61.69	60.66	61.07	1,625,600	61.07
Dec 27, 2012	61.51	61.66	60.59	61.22	1,935,100	61.22
Dec 26, 2012	62.05	62.42	61.45	61.60	1,412,200	61.60
Dec 24, 2012	62.53	62.55	61.77	61.99	1,015,600	61.99
Dec 21, 2012	61.95	62.73	61.95	62.55	3,707,200	62.55
Dec 20, 2012	62.20	62.99	61.80	62.97	3,173,900	62.97
Dec 19, 2012	62.62	62.75	62.07	62.15	2,435,700	62.15
Dec 18, 2012	61.65	62.67	61.61	62.44	8,857,300	62.44
Dec 17, 2012	61.77	62.20	61.28	61.62	1,991,900	61.62
Dec 14, 2012	61.11	62.08	61.11	61.36	2,226,300	61.36
Dec 13, 2012	61.61	62.23	61.09	61.24	1,791,800	61.24
Dec 12, 2012	61.87	62.29	61.45	61.53	2,241,200	61.53
Dec 11, 2012	62.32	62.39	61.29	61.55	2,248,800	61.55
Dec 10, 2012	61.51	62.09	61.44	62.08	1,835,800	62.08
Dec 7, 2012	61.50	61.88	61.22	61.51	1,585,200	61.51
Dec 6, 2012	61.65	61.82	60.82	61.38	1,989,600	61.38

Market Value Data for MSDCF
Stock Price for UNP - December 31, 2012

Union Pacific Corporation (UNP) - NYSE

Add

128.89 ↑0.43(0.33%) 3:09PM EST - Nasdaq Real Time Price

Historical Prices

Get Historical Prices f

Set Date Range

Start Date: Jan 2 1980 Eg. Jan 1, 2010

End Date: Jan 3 2013

- Daily
- Weekly
- Monthly
- Dividends Only

Get Prices

First | Previous | Next | Last

Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Jan 2, 2013	128.24	129.33	127.32	128.46	2,286,400	128.46
Dec 31, 2012	123.25	125.82	123.01	125.72	1,511,000	125.72
Dec 28, 2012	124.03	125.24	123.48	123.54	962,400	123.54
Dec 27, 2012	124.59	125.01	123.31	124.62	1,287,600	124.62
Dec 26, 2012	125.61	125.69	124.39	124.71	909,700	124.71
Dec 24, 2012	125.40	125.58	124.85	125.50	571,400	125.50
Dec 21, 2012	124.86	126.16	124.29	125.68	2,689,300	125.68
Dec 20, 2012	125.75	126.15	125.07	126.12	1,488,000	126.12
Dec 19, 2012	127.55	127.55	125.75	125.77	1,346,800	125.77
Dec 18, 2012	125.51	127.41	125.07	127.16	2,748,800	127.16
Dec 17, 2012	124.90	125.88	124.16	125.69	2,408,000	125.69
Dec 14, 2012	123.62	125.47	123.62	124.28	1,844,800	124.28
Dec 13, 2012	124.81	125.71	124.16	124.69	1,646,000	124.69
Dec 12, 2012	124.36	126.20	123.77	124.70	1,867,100	124.70
Dec 11, 2012	125.40	125.58	123.51	123.59	1,877,900	123.59
Dec 10, 2012	124.03	125.41	123.84	125.23	1,515,500	125.23
Dec 7, 2012	123.68	124.00	122.84	123.95	1,199,600	123.95

Market Value Data for MSDCF
Shares Outstanding for CSX - December 31, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(X) QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 28, 2012

OR

( ) TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 1-8022

CSX CORPORATION

(Exact name of registrant as specified in its charter)

Virginia		62-1051971
(State or other jurisdiction of incorporation or organization)		*(I.R.S. Employer Identification No.)*
500 Water Street, 15th Floor, Jacksonville, FL	**32202**	**(904) 359-3200**
(Address of principal executive offices)	*(Zip Code)*	*(Telephone number, including area code)*

No Change
(Former name, former address and former fiscal year, if changed since last report.)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes (X) No ( )

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes (X) No ( )

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (check one)

Large Accelerated Filer (X)	Accelerated Filer ( )
Non-accelerated Filer ( )	Smaller Reporting Company ( )

Indicate by a check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes ( ) No (X)

There were 1,031,377,919 shares of common stock outstanding on September 28, 2012 (the latest practicable date that is closest to the filing date).

Market Value Data for MSDCF
Shares Outstanding for NSC - December 31, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 10-Q

(X) QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the quarterly period ended **SEPTEMBER 30, 2012**

( ) TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the transition period from _____ to_____

Commission file number 1-8339

NORFOLK SOUTHERN CORPORATION
(Exact name of registrant as specified in its charter)

Virginia	**52-1188014**
(State or other jurisdiction of incorporation)	(IRS Employer Identification No.)
Three Commercial Place	**23510-2191**
Norfolk, Virginia	(Zip Code)
(Address of principal executive offices)	

(757) 629-2680
(Registrant's telephone number, including area code)
No Change
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes [X] No [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer [X] Accelerated filer [ ] Non-accelerated filer [ ] Smaller reporting company [ ]

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes [ ] No [X]

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	**Outstanding at September 30, 2012**
Common Stock ($1.00 par value per share)	316,043,185 (excluding 20,320,777 shares held by the registrant's consolidated subsidiaries)

Market Value Data for MSDCF
Shares Outstanding for UNP - December 31, 2012

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2012

OR

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 1-6075

UNION PACIFIC CORPORATION

(Exact name of registrant as specified in its charter)

UTAH	**13-2626465**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1400 DOUGLAS STREET, OMAHA, NEBRASKA
(Address of principal executive offices)

68179
(Zip Code)

(402) 544-5000
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

[Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

[Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer [Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes [No

As of October 12, 2012, there were 470,397,162 shares of the Registrant's Common Stock outstanding.

2012 Cost of Equity Using STB's MSDCF

Company	CSX		NSC		UNP	
Year	2012		2012		2012	
Inputs						
Initial Cash Flow	$1,202.14		$1,160.39		$2,617.12	
Input for Terminal C.F.	$1,696.95		$1,734.33		$3,327.19	
Stage One Growth	14.700%		12.100%		15.400%	
Stage Two Growth	14.067%		14.067%		14.067%	
Stage Three Growth	5.480%		5.480%		5.480%	
Year	**Val. 12/31**	**Pres Val.**	**Val. 12/31**	**Pres Val.**	**Val. 12/31**	**Pres Val.**
1	$1,379	$1,167	$1,301	$1,107	$3,020	$2,617
2	1,582	1,133	1,458	1,056	3,485	2,617
3	1,814	1,099	1,635	1,007	4,022	2,617
4	2,081	1,067	1,832	960	4,641	2,618
5	2,387	1,036	2,054	916	5,356	2,618
6	2,722	1,000	2,343	889	6,110	2,587
7	3,105	965	2,673	863	6,969	2,558
8	3,542	932	3,049	837	7,949	2,528
9	4,040	899	3,477	812	9,068	2,499
10	4,609	868	3,967	788	10,343	2,470
Terminal	54,075	10,184	51,873	10,310	139,878	33,408
Sum of Pres. Values		$20,349.09		$19,544.11		$59,138.33
Market Value (input)		$20,349.09		$19,544.11		$59,138.33
Cost of Equity	**18.17%**		**17.54%**		**15.40%**	
Prev. Yr. Cost of Equity	16.71%		16.79%		15.00%	