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ENTERED  
Office of Proceedings  
April 21, 2014  
Part of April 21, 2014  
Public Record

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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. 17), *Railroad Cost of Capital—2013*

Dear Ms. Brown:

Pursuant to the Decision served by the Board on February 28, 2014, 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**

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RAILROAD COST OF  
CAPITAL — 2013

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) ) ) )  
EX PARTE NO. 558 (Sub- No. 17)

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

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April 21, 2014

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## Verified Statements

<b>Tab</b>	<b>Witness*</b>	<b>Subject</b>
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**

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RAILROAD COST OF  
CAPITAL — 2013

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) STB Docket No. EP 558 (Sub-No. 17)  
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**COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS  
AND ITS MEMBER RAILROADS**

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By order served February 28, 2014, the Surface Transportation Board (Board) instituted this proceeding to determine the railroad industry's cost of capital for the year 2013. 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 – 2013*, EP 558 (Sub-No. 17) (STB served Feb. 28, 2014).

The railroads, through the Association of American Railroads (AAR), are submitting their calculation of: (1) the railroads' 2013 cost of common equity capital; (2) the railroads' 2013 current cost of preferred equity capital; (3) the railroads' current 2013 cost of debt capital; and (4) the 2013 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 2013 cost of common equity capital is 12.96 percent.

3. The 2013 cost of preferred equity capital is 3.87 percent.
3. The 2013 cost of debt capital is 3.68 percent.
4. The capital structure of the railroad industry is 17.69 percent debt, 0.00 percent preferred equity,<sup>1</sup> and 82.31 percent common equity.

From these data Mr. Gray concludes that the overall railroad industry cost of capital for 2013 is 11.32 percent.<sup>2</sup>

## **I. Introduction**

The sole purpose of this proceeding is to determine the railroad industry's cost of capital for 2013. 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 (3<sup>rd</sup> Cir. 1988). The Board 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's predecessor, the Interstate Commerce Commission, in Ex Parte No. 458, *Railroad Cost of Capital — 1984*, 1 I.C.C. 2d 989, 1003–1004 (1985). That criteria is: (1) the company is a Class I line-haul railroad; (2) 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; (3) the company's bonds are rated at least BBB by Standard & Poor's and Baa by Moody's; (4) the company's stock is listed on either the New York or the American Stock Exchange; and (5) the company has paid dividends throughout the year (2013).

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<sup>1</sup> The weight for preferred equity is 0.0039 percent which rounds to 0.00.

<sup>2</sup> Gray V.S. at 2, 52.

This year there are four railroad corporations or holding companies in the sample meeting the Board's criteria: CSX Corporation, Kansas City Southern, Norfolk Southern Corporation, and Union Pacific Corporation. Three of these railroad companies are the same three companies included in the 2012 sample; Kansas City Southern is added.

## II. The Cost of Common Equity Capital

In its February 28, 2014 order instituting this proceeding, the Board directed that the cost of capital components be calculated “using the methodology followed in Railroad Cost of Capital –2012.” See *Railroad Cost of Capital – 2013*, EP 558 (Sub-No. 17), slip op. at 2 (STB served Feb. 28, 2014). In *Railroad Cost of Capital –2012*, 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 Jan. 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 Jan. 28, 2009).<sup>3</sup> See *Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16), slip op. at 6-11 (STB served August 30, 2013).<sup>4</sup> Mr. Gray used a simple

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<sup>3</sup> 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 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 Jan. 28, 2009).

<sup>4</sup> 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

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:

$$K = RF + (MRP \times \text{Beta})$$

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 was retrieved directly from the Federal Reserve Board website as approved by the Board in the 2012 cost of capital proceeding.

*Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16), slip op. at 7. Since the 2006 cost of capital determination, the well-regarded and widely-accepted Ibbotson Equity Risk Premium has been used for the market risk premium, as found in the *Ibbotson SBBi Valuation Yearbook* published by Morningstar.<sup>5</sup> Though that publication is no longer put out by Morningstar, much of the same data can be found in other Ibbotson documents and the AAR continues to use the

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(Sub-No. 1), slip op. at 15 (STB served Jan. 28, 2009).

<sup>5</sup> Ibbotson Associates is a wholly-owned subsidiary of Morningstar, Inc. "SBBi" stands for "Stocks, Bonds, Bills, and Inflation.

Ibbotson Equity Risk Premium as the market risk premium here. Gray V.S. at 31. The calculation for Beta was made using the S&P 500 Price Return Index and the same methodology approved by the Board in the 2012 cost of capital proceeding. *See id.*; Gray V.S. at 28.

The values determined by Mr. Gray for the elements of the CAPM methodology were 3.12 percent for the risk-free rate, 6.96 percent for the market risk premium, and 1.3499 for Beta.

Based on a four-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 2013 is 12.52 percent. Gray V.S. at 37.

#### 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 Jan. 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 Sep. 25, 2009), Mr. Gray's calculations used only IBES growth estimates available as of December 31, 2013, and stock market values were based on shares outstanding and stock prices as of the last trading day of the last full week for 2013 – January 3, 2014. Gray V.S. at 41.<sup>6</sup>

Mr. Gray calculates the cost of common equity capital for 2013 using the Morningstar/Ibbotson MSDCF model as 13.40 percent. Gray V.S. at 46.

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<sup>6</sup> Consistent with the methodology approved by the Board in *Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16), slip op. at 8-9, Mr. Gray's calculations used data inputs in the cash flow formula as retrieved from the railroads' 2009 - 2013 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 44.

### 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 12.96 percent. Gray V.S. at 46.

### **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 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.

For the first time since 2002, one railroad in the four-railroad composite had preferred stock outstanding at the end of 2013. The estimated cost of preferred equity is 3.87 percent. Gray V.S. at 50.

#### **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.<sup>7</sup> To determine the cost of debt for bonds, Mr. Gray has computed the average current bond yield for 76 instruments of the sample railroads for which data were available during 2013. This methodology is identical to that used in the last 23 cost of capital proceedings. *Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16), slip op. at 3. Under this approach, the bond yield is based on a sample representing 94 percent of the book of the bonds issued by the railroads in the sample.<sup>8</sup> 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.<sup>9</sup> 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 flotation cost.<sup>10</sup> Using the Board’s established methodology, the railroads’ 2013 cost of new debt is 3.68 percent. Gray V.S. at 24.

#### **V. The 2013 Capital Structure of the Railroad Industry and the Overall Cost of Capital**

Pursuant to the Board’s February 28, 2014 decision, the market values of debt, preferred equity, and common equity were compiled to compute the 2013 capital structure of the railroad

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<sup>7</sup> The term “Bonds” is used to describe bonds, notes, debentures, and other similar types of debt.

<sup>8</sup> Bond data were retrieved from a Bloomberg database. Gray V.S. at 8.

<sup>9</sup> Gray V.S. at 11, 17-18. No CSAs were modeled because the only one is current.

<sup>10</sup> 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 2013. This is the same methodology approved by the Board in *Railroad Cost of Capital – 2012*, EP 558 (Sub-No. 16), slip op. at 5. Gray V.S. at 20-24.

industry. The railroads' market value capital structure on a market value basis is 17.69 percent debt, 82.31 percent common equity capital, and 0.00 percent preferred equity capital. Gray V.S. at 50. Based upon this capital structure, the overall 2013 cost of capital is 11.32 percent. Gray V.S. at 52.

### Conclusion

The Board should determine that the railroads' cost of capital for 2013 is 11.32 percent.

Respectfully submitted,



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April 21, 2014

**CERTIFICATE OF SERVICE**

I hereby certify that on this 21st day of April, 2014, I served by first class mail, postage prepaid, a copy of the forgoing on the following:

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Alyssa M. Johnson

BEFORE THE  
SURFACE TRANSPORTATION BOARD

EX PARTE NO. 558 (Sub-No. 17)  
RAILROAD COST OF CAPITAL — 2013

VERIFIED STATEMENT  
OF  
JOHN T. GRAY  
SENIOR VICE PRESIDENT — POLICY AND ECONOMICS  
ASSOCIATION OF AMERICAN RAILROADS

April 21, 2014

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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 plus 150 additional Class II and III freight railroads, account for 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 27, 2014 (served February 28), instituting a proceeding to determine the railroad industry’s 2013

cost of capital — Ex Parte No. 558 (Sub-No. 17), *Railroad Cost of Capital — 2013* ("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. 16); 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. 16). For the first time since Ex Parte No. 558 (Sub-No. 6), it has been necessary to estimate a cost of preferred equity. I calculated a cost of preferred equity using the dividend yield method, as used in earlier proceedings. 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 2013 cost of capital for the railroad industry is 11.32 percent. This estimate is based on a current cost of debt of 3.68 percent, a cost of common equity capital of 12.96 percent; a cost of preferred equity of 3.87 percent; and market value weights for debt, common equity, and preferred equity of 17.69 percent, 82.31 percent, and 0.00 percent, respectively.<sup>1</sup>

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<sup>1</sup> The weight for preferred equity of 0.0039 percent rounded to 0.00 percent.

## **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's predecessor, the Interstate Commerce Commission, 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. 17 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 (2013).

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**  
**2013**

<b>Class I Railroad</b>	<b>Parent</b>	<b>Stock Symbol</b>	<b>Listed NYSE/ASE</b>	<b>Dividends Throughout 2013</b>	<b>Rail Assets Account For At Least 50% of Parent</b>	<b>Adequate Debt Rating</b>
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	Yes
NS	Norfolk Southern Corporation	NSC	Yes	Yes	Yes	Yes
CPSL*	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). CPSL 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 four railroad corporations or holding companies in the sample meeting the Board's criteria: CSX Corporation, Kansas City Southern, Norfolk Southern Corporation, and Union Pacific Corporation. Three of these railroad companies are the same three companies included in the 2012 sample. In last year's statement, I mentioned that Kansas City Southern "moved closer to meeting all criteria", with its debt ratings keeping the company from meeting the Board's criteria. All of Kansas City Southern's bonds are now rated investment grade by both Standard & Poor's and Moody's. A section in my work papers contains the debt ratings for the Kansas City Southern debt instruments followed by Bloomberg. The Kansas City Southern 2013Q3 10-Q report notes "In recent years, KCS has improved its financial strength and flexibility by decreasing leverage, extending debt maturities, increasing liquidity and reducing interest expense and preferred stock dividends. As a result, the Company has received investment grade credit ratings from rating agencies...." Consistent with past proceedings, the two Canadian-owned railroads have been excluded from the sample.<sup>2</sup> Berkshire Hathaway, owner of BNSF Railway Company, did not pay dividends throughout 2013, and the railroad is less than 50% of the company's assets.

Table 2 contains operating revenue and asset figures from the 2013 Annual Report Form R-1 submitted by each Class I railroad to the STB at the end of March 2014. This table shows that, based on data for 2013, the four-firm composite accounts for 63 percent of the operating revenues and 64 percent of the assets of all Class I railroads. The addition of KCS added 2 percentage points to each of the composite railroad totals.

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<sup>2</sup> 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. 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 2012 as reported in the AAR's *Railroad Facts* book, 2013 edition: CNGT was 31 percent of CN, and SOO was 28 percent of Canadian Pacific.

**Table No. 2**  
**Relative Size of the Railroad Composite Sample**  
**Year 2013**

<b>Railroad</b>	<b>Revenue (\$000)</b>	<b>Assets (\$000)</b>	<b>Pct of Total Class I RR</b>	
			<b>Revenue</b>	<b>Assets</b>
CSX	\$11,705,640	\$30,169,662	16.1 %	15.7 %
KCS	1,258,067	4,415,054	1.7	2.3
NS	11,244,709	39,206,249	15.4	20.4
UP	21,935,122	48,757,371	30.1	25.4
Total	\$46,143,538	\$122,548,336	63.3	63.8
Total Class I	\$72,873,269	\$192,002,290	100.0 %	100.0 %

#### **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, 99.5 percent of the cost of debt is calculated using bonds and similar instruments (including notes and debentures). The remaining 0.5 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.<sup>3</sup>

The estimate of the cost of common equity is a simple average of the results from two

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<sup>3</sup> No Conditional Sales Agreements were used to calculate the 2013 cost of debt because they were either current or had properties (such as floating interest rates) that made them not suitable for the model.

estimation methods. One method is calculated using the Capital Asset Pricing Model (CAPM) following the methodology prescribed by the Board in the 2012 Cost of Capital decision. The other method is calculated using the Multi-Stage Discounted Cash Flow model methodology prescribed by the Board in the 2012 Cost of Capital Decision. The cost of preferred equity capital has been calculated using a simple dividend yield method, as used in the 2002 Cost of Capital Decision. Calculations for all three types of capital are based on data through 2013. The industry's overall cost of capital is computed as a weighted average of the three costs — debt, common equity, and preferred equity — based upon the market value for each type of capital.

### **III. Debt Capital in 2013**

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.<sup>4</sup>

- (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.

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<sup>4</sup> 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. 16).

- (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 for the cost of bond debt rely entirely on market data.<sup>5</sup> 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.<sup>6</sup> (Bonds can be privately *placed*, but then trade.) For 2013, yields and prices of the sample railroads' bonds, notes and debentures were obtained from Bloomberg.<sup>7</sup> This source is the same source used in the previous filing, and we were able to find data for 76 bonds representing 94 percent of the book value of all railroad bonds belonging to the composite railroad.<sup>8</sup>

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<sup>5</sup> The terms "bonds" and "bonds, notes, and debentures" are used interchangeably herein.

<sup>6</sup> 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 the supply of bonds with market data is adequate.

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

<sup>8</sup> 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).

### **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 76 traded bonds in 2013, 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, 2013.<sup>9</sup> 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 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 94 percent of the book value of bonds is priced at market. Table 3 summarizes the results of the market value calculations for 2013. The market value for bonds, notes, and debentures that traded is \$25.4 billion, a decrease of 6 percent from 2012. (A “same railroad” comparison using the three railroads from the previous Cost of Capital decision results in a decrease of 8 percent from 2012.) The decrease was caused by a combination of debt reduction and the market demanding higher interest rates, which decreases the market value of existing debt. The corresponding market value for non-traded debt is up significantly because of a privately-placed set of senior notes that did not trade in 2013 and the addition of Kansas

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<sup>9</sup> 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.

City Southern.<sup>10</sup> In total, the market value for bonds is down about 2 percent – or 6 percent if compared to the same 3 railroads used for 2012.

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

<b>Railroad Co.</b>	<b>Traded Value (\$000)</b>	<b>Non-Traded Value (\$000)</b>	<b>Total Value (\$000)</b>	<b>Weight Based on Traded</b>
CSX	\$9,542,545	\$139,489	\$9,682,034	37.62 %
KSU	\$613,809	\$490,828	1,104,637	2.42
NSC	\$8,866,417	\$680,407	9,546,824	34.96
UNP	\$6,340,946	\$87,558	6,428,504	25.00
Total	\$25,363,716	\$1,398,282	\$26,761,998	100.00 %
Prior Year	\$26,884,456	\$324,790	\$27,209,246	
Change	-5.7%	330.5%	-1.6%	
Change 3 RR	-7.9%	179.4%	-5.7%	

Appendix A lists details for each of the 76 bonds, notes, and debentures belonging to the composite railroad for which trading data are available for 2013 in the Bloomberg 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 3.620 percent, which is 0.381 percentage points higher than 2012’s figure of 3.239 percent.

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<sup>10</sup> The privately-placed senior notes traded during one month of 2012, but did not trade in any months during 2013.

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

<b>Railroad Co.</b>	<b>Weight</b>	<b>Current Cost</b>
CSX	37.62 %	3.698 %
KSU	2.42	3.875
NSC	34.96	3.722
UNP	25.00	3.336
Total	100.00 %	3.620 %

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 76 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 3.620 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 2013 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.<sup>11</sup> (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.<sup>12</sup>)

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 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

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<sup>11</sup> 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.

<sup>12</sup> 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.

ETCs and government securities, its 80 basis point spread is used herein as the interest rate spread above government bonds. Table 5 lists fifteen years of interest rate spreads plus the proposed spread for 2013. The 2009-13 spread is closest to the spreads from 1998 and 1999.

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

<b>Data Year</b>	<b>Proceeding</b>	<b>Basis Points</b>
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	Ex Parte No. 558 (Sub-No. 16)	80
2013	Proposed for EP 558 (Sub-No. 17)	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 2013 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.<sup>13</sup>

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<sup>13</sup>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:

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

Where: DP = Dollar price of the bond  
 C = Coupon rate as a percent per year  
 D = Number of days from settlement date to coupon date  
 Y = Yield to maturity as a decimal per year  
 EXP = Raise the term on the left to the power indicated by the term on the right  
 N = Whole number of coupons payable plus 13  
 K = Compute for K, values 1 to N and sum the results

**Table No. 6**  
**Summary of Equipment Trust Certificates Modeled for 2013**  
**(\$000)**

Railroad	Amount Outstanding			Yield	Current Market Value	Current Interest Amount	No. ETC
	Beg.	Ending	Average				
CSX	\$27,900	\$18,600	\$23,250	1.266%	\$26,164	\$331	2
KCS	0	0	0	--	0	0	0
NS	0	0	0	--	0	0	0
UP	119,417	109,994	114,706	3.070%	137,359	4,218	2
<b>Total</b>	<b>\$147,317</b>	<b>\$128,594</b>	<b>\$137,956</b>	<b>2.782%</b>	<b>\$163,523</b>	<b>\$4,549</b>	<b>4</b>

Weighing each railroad's yield, by its current market value for modeled ETCs, results in a current cost of 2.782 percent. The average rate is higher than the 2.097 percent found for 2012. This was caused by two factors. First, the yield curve for government securities is higher in 2013 than 2012 (see Appendix B). Second, 5 ETCs in last year's calculation are now current – and they were all “lower” (to the left) on the yield curve. With a higher yield curve, and a group of instruments that averages higher on the yield curve, one would expect the higher average yield. 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 difference between the yields for CSX's ETC and Union Pacific's appears doubtful because of its large difference. However, Appendix C reveals that UP's ETCs have maturity dates much later than CSX – 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 \$163.5 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. 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 2013**  
**(\$000)**

Railroad	Amount Outstanding			Yield	Current Market Value	Current Interest Amount	No. CSA
	Beg.	Ending	Average				
CSX	\$0	\$0	\$0	--	0	0	0
KCS	0	0	0	--	0	0	0
NS	0	0	0	--	0	0	0
UP	0	0	0	--	0	0	0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>	<b>0</b>

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 2013, 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 single CSA, it matures in 2014 and is therefore not used. Even if this particular CSA was not current, it cannot be modeled because it uses a floating interest rate tied to the London Interbank Offered Rate (a.k.a. LIBOR).

Since no CSA's were modeled, the 2013 market value for modeled CSAs is zero. The non-modeled CSA market value has not been listed with the Miscellaneous Debt category, since it matures in 2014.

#### **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 (if there had been some) 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.<sup>14</sup> 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

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<sup>14</sup> See generally 49 C.F.R. 1201, 2–20 for definitions.

securities (bonds, notes, debentures, ETCs and CSAs) that typically have a lower cost, the cost used for capital leases will be somewhat understated.

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, and non-modeled ETCs, is \$1,458.7 million; as a percent of the total market value of debt of the composite railroad, it is 5.1 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 \$28,384.2 million. Bonds, Notes, and Debentures (Bonds) account for about 94 percent of the total market value. About 95 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)**

<b>Type of Debt</b>	<b>Market Value</b>	<b>Percent of Total</b>	<b>Percent of Subtotal</b>
Bonds, Notes & Debentures	\$26,761,998	94.28 %	99.39 %
Equipment Trust Certificates	163,523	0.58	0.61
Conditional Sales Agreements	0	0.00	0.00
Subtotal	26,925,522	94.86	100.00 %
All Other Debt*	1,458,667	5.14	
Total	\$28,384,189	100.00 %	

\* If any ETCs or CSAs are not modeled, they 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 (if there were any). 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 2013 flotation costs for bonds using publicly available data from electronic filings with the Securities and Exchange Commission (SEC).<sup>15</sup> The filing types are “Prospectus Rule 424(b)(2)” and

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<sup>15</sup>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>.

“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 a yield that also included flotation costs. The difference between the two yields is the flotation cost expressed in percentage points. For 2013, six new issues were reported in five (one filing reported two issues) filings.<sup>16</sup> A simple average of the six flotation costs is 0.066 points, very close to the 0.062 percentage points calculated for 2012. 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 2013, and I have therefore used 0.066 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.<sup>17</sup> 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 it has some flaws. See my testimony for the previous year for a discussion of the incorrect assumption used with the current method. Because ETCs are such a small portion of total debt, this flawed method for estimating flotation costs for ETCs does not affect the cost of debt, so I have not expended resources

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<sup>16</sup> Debt exchanges were not used.

<sup>17</sup> *Cost of Flotation of Corporate Securities 1951-1955*, Securities and Exchange Commission, June 1957.

with an alternative method. 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 (a flawed assumption). 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 costs and the yields including flotation costs are the flotation costs measured in percentage points. The results are flotation costs for ETCs of 0.073 percentage points.

**Table No. 9  
Flotation Costs for  
Equipment Trust Certificates**

<b><i>Given</i></b>	<b>ETC</b>
Flotation Costs as Pct of Gross Proceeds	0.890%
Avg. Railroad Yields (Table 6)	2.782%
Assumed Duration of New Instrument (Yrs)	15
<b><i>Calculated</i></b>	
Price After Flotation Costs	\$99.11
Effective Yield Including Flotation Costs	2.855%
Difference Between Yields With and Without Flotation Costs =	
<b>Flotation Cost as Percentage Points</b>	<b>0.073%</b>

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 0.066 percentage points. This result is close to the Board's 0.062 percent points calculated in its 2012 Cost of Capital decision.

**Table No. 10  
Flotation Costs For Debt**

<b>Type of Debt</b>	<b>Market Weight</b>	<b>Flotation Cost</b>
Bonds, Notes & Debentures	99.39%	0.066%
Equipment Trust Certificates	0.61%	0.073%
Conditional Sales Agreements	0.00%	not calculated
Total	100.00%	0.066%

**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**

<b>Type of Debt</b>	<b>Market Weight</b>	<b>Current Cost</b>
Bonds, Notes & Debentures	99.39%	3.620%
Equipment Trust Certificates	0.61%	2.782%
Conditional Sales Agreements	0.00%	--
Subtotal	100.00%	3.615%
Flotation Costs		0.066%
Weighted Cost of Debt		3.681%
Weighted Cost of Debt (Rounded)		<b>3.68%</b>

The current weighted cost of debt before flotation costs is 3.615 percent. The addition of flotation costs results in a rounded cost of debt of 3.68 percent. This cost of debt is the second-lowest calculation ever, higher than last year's record low of 3.29 percent and below the 3.97 percent calculated for 2011.<sup>18</sup> Additional details for the 2013 calculation of the overall cost of debt are provided in Appendix G.

#### IV. Common Equity Capital In 2013

##### A. The Market Value of Common Equity Capital

The market value of common equity is based on stock prices and shares outstanding for 2013. Table 12 below summarizes the market value calculation. The Weight column, which is not used directly in our calculation, is provided as additional information.

**Table No. 12**  
**Average Market Value**  
**For Common Equity in 2013**

<b>Railroad Co.</b>	<b>Value (\$000)</b>	<b>Weight %</b>
CSX	25,364,867.0	19.21
KSU	12,072,798.8	9.14
NSC	24,192,243.6	18.32
UNP	70,431,959.1	53.33
Total	\$132,061,868.5	100.00 %
Prior Year	\$100,102,388.5	
Change	31.9%	
3 RR Change	19.9%	

Details of the calculation are presented in Appendix H. Weekly market values were calculated for each railroad using shares outstanding data from railroad 10-Q and 10-K

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<sup>18</sup>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 2013 edition.

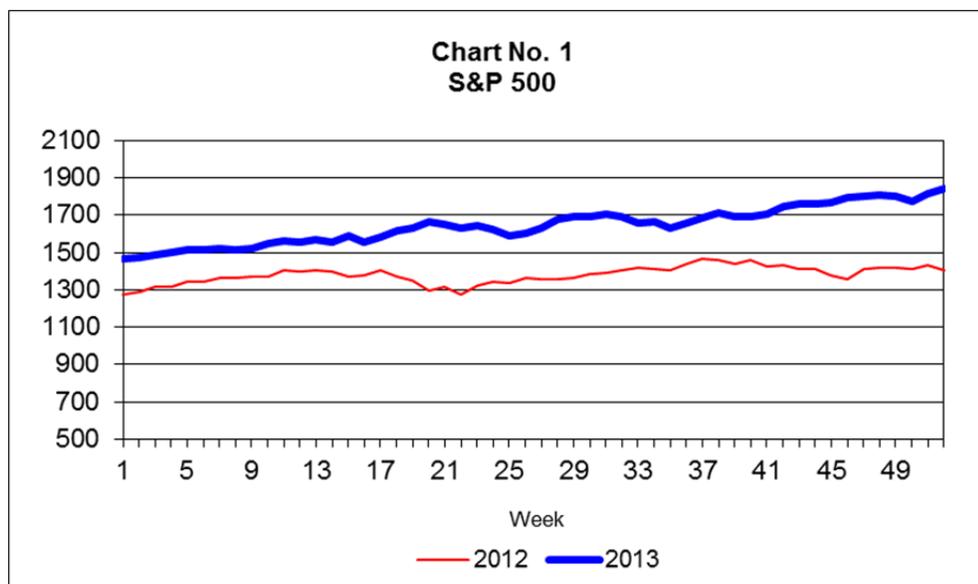
reports multiplied by stock prices at the close of each week in 2013.<sup>19</sup> Calculations for 2013 included 53 weeks. Week 1 began on Monday December 31, 2012 (trading occurred on January 2, 3, and 4 of that week), and is the first week after 2012's week 52 used in last year's calculation.<sup>20</sup> The week beginning Monday December 30, 2013, qualifies as the final week for 2013. To meet the Board's definition for week 1 of 2014, that week would have had to have 3 trading days in 2014 – and trading occurred only on January 2 and 3. Thus, 2013 is a 53-week year for the purpose of calculating the market value of common equity (and for the regression data set used by this year's Capital Asset Pricing Model).

The 53-week average market capitalization of the composite railroad (the four railroads that comprise the composite sample), listed on page 5 of Appendix H, is \$132.1 billion. This is a 31.9 percent increase from last year's average, and a 19.9 percent increase using a same 3 railroad comparison. The biggest year-over-year increases were in the last months of the year. The stock market in general, as represented by the Standard & Poor's 500, followed a similar pattern (see Chart 1).

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<sup>19</sup>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.

<sup>20</sup>Week 52 for 2012 started Monday December 24, and is noted by the Board as the final week for 2012 on page 9 of Ex Parte No. 558 (Sub-No. 16) served August 30, 2013.



**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. 16). 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:

$$K = RF + \text{Beta (MRP)}$$

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 above the risk-free rate depends the market risk premium adjusted for the non-diversifiable risk of its common stock, with the adjustment factor 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 2012 Cost of Capital decision.<sup>21</sup>

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<sup>21</sup> Ex Parte No. 558 (Sub-No. 16), Railroad Cost of Capital – 2012, served August 30, 2013.

### **1. Risk-Free Rate (RF)**

In all 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 2013.<sup>22</sup> A copy of the “download” from the Federal Reserve web site is included in my work papers. Table 13 (next page) lists a 21-year history of this bond.

As can be seen in Table 13, 2013’s 3.12 percent average rate for 20-Year U.S. Treasury Bonds is a small increase from 2012 rate, which was the lowest rate in the Federal Reserve Board’s data set for 1993 through 2013 – and also lower than all years in an older data set with data for 1962 through 1986.<sup>23</sup> In general, interest rates were up in 2013 – see Appendix B. Currently, the Federal Reserve Board has begun reducing its bond-buying program that held down long-term interest rates. Once interest rates become purely market-driven, we may see rates for 20-year bonds similar to rates from pre-2007 and the 1990s.

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

<sup>23</sup> Rates from the two datasets, which were downloaded from the Federal Reserve Board during January 2013 and 2014, are listed in my work papers.

**Table No. 13**  
**20-Year U.S. Treasury Bonds 1993 - 2013**

<b>Year</b>	<b>Average Annual Rate</b>
1993	6.29 %
1994	7.49
1995	6.95
1996	6.83
1997	6.69
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
2013	3.12

Source: Federal Reserve

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Using the average yield to maturity in 2013 for a 20-year U.S. Treasury Bond, as directed in STB Ex Parte No. 558 (Sub No. 17), the CAPM's risk-free rate is 3.12 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.”

In previous 2006 through 2012 Cost of Capital determinations, the well-regarded and widely-accepted Ibbotson Equity Risk Premium has been used as found in the *Ibbotson SBBi Valuation Yearbook* published by Morningstar.<sup>24</sup> During 2013, Morningstar notified customers that the SBBi Valuation Yearbook was being discontinued, but much of the same data could be found in a newly-expanded version of the *Ibbotson SBBi Classic Yearbook* which would be available in April. During March 2014, Morningstar customers were e-mailed a 17-page document titled *2014 Ibbotson SBBi Market Report*. On page 16 of the report, the long-horizon equity risk premium, using the S&P 500 and data from 1926-2013, is listed as 6.96 percent. The same 6.96 percent can also be found on page 152 of the *Ibbotson SBBi 2014 Classic Yearbook*. The number is the 6<sup>th</sup> lowest premium in the last 50 years, but slightly higher than last year’s premium of 6.70 percent. Thus, I used 6.96 percent as the rate for the CAPM’s market risk premium.

### **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:

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

Where:

$$R = \text{merger-adjusted stock returns for the portfolio of railroads;}^{25}$$

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<sup>24</sup> Ibbotson Associates is a wholly-owned subsidiary of Morningstar, Inc. “SBBi” stands for “Stocks, Bonds, Bills, and Inflation.

<sup>25</sup> Railroads must meet the screening criteria set forth in *Railroad Cost of Capital – 1984*.

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.

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 2008 (Week 0) through the last week of 2013 (Week 261). The data set label variables identify the first day of the week typically (Monday), but the close prices were for the last day of trading during the week (typically

Friday).<sup>26</sup> Week 1 in the regression data set is the week beginning Monday, January 5, 2009.<sup>27</sup> The last week of 2013, Week 261, began on Monday, December 30. Although trading in this week only occurred for 2 days during 2013, trading during 2014 only happened for 2 days – meaning that this week did not meet the Board’s “3 or more trading days” criterion to qualify as week 1 for 2014. Week 0 began in 2008 on Monday December 29, 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 (instead of the end) of Week 1. 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.<sup>28</sup>

Three categories of data are necessary for the raw regression data set. First, weekly stock prices for CSX, KSU, NSC, and UNP are downloaded from a web site.<sup>29,30</sup> The price data were downloaded during the second week of 2014, and are included in my work papers. Stock prices adjusted for dividends and splits are used as the regression’s dependent variable, while prices that are only adjusted for splits are used for weighting.<sup>31</sup>

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<sup>26</sup> In some cases, stock did not trade on Monday. For example, Week 4 begins Monday, January 19, 2009 – but trading during that week did not begin until Tuesday, January 20, because of the Martin Luther King, Jr. holiday.

<sup>27</sup> Following the Board’s clarification in Ex Parte No. 558 (Sub-No. 12), the week beginning January 5, 2009, is the first week in the year that contains 3 or more trading days.

<sup>28</sup> Ex Parte No. 558 (Sub-No. 12), served September 25, 2009.

<sup>29</sup> CSX Corporation has a stock symbol of CSX, Kansas City Southern is KSU, Norfolk Southern Corporation is NSC, and Union Pacific Corporation is UNP.

<sup>30</sup> 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.

<sup>31</sup> 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. The difference typically affects the fourth digit after the decimal of the beta calculations.

(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.<sup>32</sup> 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.<sup>33</sup> 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.<sup>34</sup> Weekly 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

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<sup>32</sup>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.

<sup>33</sup> SAS Institute Inc., Cary, NC.

<sup>34</sup> 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.

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 1.349894286, which rounds to 1.3499. As a check for the impact of KSU, a regression (in the spreadsheet) without KSU resulted in a beta of 1.3308 – not much different from the regression with all four railroads.

The 2013 beta is much higher than the 2012 and 2011 estimates, which were 1.1543 and 1.1623, respectively. It continues the trend of higher betas as the data are distanced from the Tech Stock Bubble. We also note that the STB, using a slightly different methodology (that the STB did not adopt and the AAR does not endorse) during its early tests of a CAPM model, calculated individual railroad betas higher than 1.33 in some instances for years in the first half of the 1990s.<sup>35</sup>

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<sup>35</sup> A portion of those STB work papers were included in the AAR work papers for Ex Parte No. 558 (Sub-No. 14). A complete copy has been included in my work papers for this submission.

Additional checks were performed on our beta calculation. A new spreadsheet data set was created using data downloaded in early April. (This can cause different adjusted values, typically affecting the beta calculation at the third or fourth digit after the decimal.) This data set included over 300 weeks. The first week began December 24, 2007 (“Week negative 53”), and the last week began March 24, 2014 (“Week 273”). A regression for the 261 weeks that fall inside of the Board’s 5-year window resulted in a beta of 1.3507 – confirming the original 1.3499 calculation. By adding 2008 (weeks -53 through 0) back into the regression, the beta falls to 1.1721 – confirming the theory that year 2008 pulls the beta downward. A regression using the standard 5 years plus the first 12 weeks of 2014 results in a beta of 1.3403 – close to our 5-year beta of 1.3499.

We have evaluated our beta calculation by (1) comparing it to previous years and expectations, and (2) comparing the results of two data sets created at different times. The resulting value of 1.3499 for beta, as calculated in our initial 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:

$$K = RF + \text{Beta (MRP)}$$

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 the previous cost of capital determination, Ex Parte No. 558 (Sub-No. 16). Table 14 is a summary of our CAPM cost

of common equity calculation, which resulted in an average 2013 cost of equity estimate for the composite railroad of 12.52 percent.

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

<b><i>Inputs to Model</i></b>		
Risk-Free Rate	3.12 %	From Table No. 13
Market Risk Premium	6.96 %	From SBBI, Table 5-1
Beta	1.3499	From Appendix I
<b><i>Calculation</i></b>		
Risk-Free Rate	3.12 %	Given
Plus: Beta Adjusted Risk Premium	9.40 %	Beta x Mkt. Risk Prem.
CAPM Cost of Equity	12.52 %	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.<sup>36</sup> This model assumes that not all investor cash flows have to be in the form of dividends. Instead, investors benefit from

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<sup>36</sup>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.

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 2012 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,

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 2009 through 2013. 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 NSC in 2013**  
**(\$ in millions)**

	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
Net Income	\$1,034	\$1,496	\$1,916	\$1,749	\$1,910	\$8,105
Less Extraord. Items	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Inc. Bef. Extraord. Items (+)	\$1,034	\$1,496	\$1,916	\$1,749	\$1,910	\$8,105
Capital Expenditures (-)	\$1,299	\$1,470	\$2,160	\$2,241	\$1,971	\$9,141
Depreciation (+)	845	826	869	922	922	4,384
Deferred Taxes (+)	<u>338</u>	<u>312</u>	<u>527</u>	<u>366</u>	<u>262</u>	<u>1,805</u>
Cash Flow	\$918	\$1,164	\$1,152	\$796	\$1,123	\$5,153
Revenue (a.k.a. "Sales")	\$7,969	\$9,516	\$11,172	\$11,040	\$11,245	\$50,942
Ratio of Cash Flow to Sales (Smoothed Ibbotson-style) =	(\$5,153 / \$50,942) =					0.10115
Initial Cash Flow in 2013 (Smoothed Ibbotson-style) =	(0.10115 x \$11,245) =					<b>\$1,137.48</b>
Ratio of IBEL to Sales (Smoothed Ibbotson-style) =	(\$8,105 / \$50,942) =					0.15910
Terminal Cash Flow input (Smoothed Ibbotson-style) =	(0.15910 x \$11,245) =					<b>\$1,789.11</b>

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 2013, which is the initial cash flow in the model, is calculated by multiplying revenue for 2013 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 \$1,137.48 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 \$1,789.11 million. The model's terminal cash flow input is calculated by multiplying revenue for 2013 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 four railroad cash flow calculations for 2013. The pages from the 2013 10-K reports, plus earlier years for KSU, that were used as data sources for cash flows are included in my work papers. Data for prior years (2009-2012) used in this year's calculation are unchanged from last year's submission – unless revised data were found in the 2013 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 (2013) 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 at the end of the current year as the date for growth rates, stock prices, and stock shares outstanding.<sup>37</sup> (Clearly, the Board’s interpretation does not anticipate the use of growth estimates based on the release of year-end financial statements.) In Ex Parte No. 558 (Sub No. 16), the STB made another clarification in their interpretation of the Morningstar/Ibbotson MSDCF model by specifying the *last full week of the year* as the point from which stock prices should be used. Therefore, we have utilized growth rate projections that were in effect at the end of 2013, and stock prices as of January 3, 2014 – the prices at the end of the last full week for 2013. Each growth rate projection was reviewed by the brokerage firm’s analyst during 2013, and the stock prices (like the data used in the CAPM) were retrieved from Yahoo! Finance.

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

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<sup>37</sup> 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**  
**2013 Thomson Median Growth Rate Estimates**

<b>Company</b>	<b>Stock Symbol</b>	<b>Growth Rate</b>
CSX Corporation	CSX	8.15 %
Kansas City Southern	KSU	16.70
Norfolk Southern Corporation	NSC	10.75
Union Pacific Corporation	UNP	14.27
Average		12.47

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 12.47 percent, which is lower than the 14.07 percent used for the previous year. This is the growth rate (12.47 percent) used for all railroads in the second stage of the Morningstar/Ibbotson MSDCF model.<sup>38</sup>

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

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<sup>38</sup> The model used an average rounded to 2 digits after the decimal.

nominal growth rate of the aggregate U.S. economy. In all of the Cost of Capital determinations that used the MSDCF, the long-run nominal growth rate used was that used by Morningstar/Ibbotson in its Ibbotson SBBI Valuation Yearbook. For the previous Cost of Capital determination (2012), the long-run nominal growth rate used by Morningstar/Ibbotson was 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).<sup>39</sup> The 2010 and 2011 rates, retrieved from the same source, were 5.80 and 5.19 percent, respectively.

In September 2013, customers subscribing to the Ibbotson SBBI Valuation Yearbook were notified that the publication was being discontinued, but the *Ibbotson® SBBI® Classic Yearbook* (Classic Yearbook) would be expanded to contain many of the statistics found in the Valuation Yearbook. Using data from the Classic Yearbook, the Federal Reserve, and the Bureau of Economic Analysis, I have replicated the Ibbotson calculations for real growth rates and long-term inflation – which are combined to be used as the long term growth rate for Stage 3 of the MSDCF. Calculations for 2009 through 2012 are replicated in Appendix M. Using the same methodology, I have calculated the Stage 3 growth rate for 2013, also found in Appendix M. The rate for 2013 is 5.58 percent, which is close to the 5.48 percent used for 2012.

### **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

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<sup>39</sup> *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.

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 January 3, 2014**

<b>Company</b>	<b>Stock Price</b>	<b>Shares Outstanding</b>	<b>Market Value (\$mil)</b>	<b>Weight</b>
CSX	\$28.43	1,013,674,361	28,818.8	19.593 %
KSU	\$119.77	110,209,276	13,199.8	8.974
NSC	\$91.37	308,910,328	28,225.1	19.189
UNP	\$166.85	460,568,638	76,845.9	52.244
Total		1,893,362,603	\$147,089.5	100.000 %

As directed by the Board in the previous cost of capital submission, I have used stock prices (from Yahoo Finance) for January 3, 2014 (instead of the end of the calendar year) since January 3 is the last trading day of the week that qualifies as the last week of 2013 for cost of capital purposes. I have also used the shares outstanding for that day from the 2013 Q3 10-Q reports (the latest information available prior to January 3, 2014) filed with the Securities and Exchange Commission. Market value is simply each firm's stock price multiplied by its shares outstanding, and weights are based on the market values. Appendix N 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 Common 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.<sup>40</sup>

Applying the methods described above, I have calculated a cost of common equity for each of the four railroads specified using a spreadsheet like the one utilized in the 2012 filing. Using an initial cash flow, an input for calculating the terminal cash flow, growth rates for each of the three stages, and a market value effective January 3, 2014, 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 O. Table 18 below shows the MSDCF estimate for each of the 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 common equity of 13.40 percent for 2013, which is lower than the 16.53 used by the Board for 2012.

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<sup>40</sup> 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.

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

<b>Company</b>	<b>Weight</b>	<b>Cost of Equity</b>	<b>Weighted Calculation</b>
CSX	19.593%	13.25 %	2.60
KSU	8.974%	9.56	0.86
NSC	19.189%	13.97	2.68
UNP	52.244%	13.90	7.26
Total	100.000%		
<b>Weighted Current Cost of Equity</b>			<b>13.40 %</b>

**D. Conclusion as to the Cost of Common Equity Capital**

In the STB’s Ex Parte No. 558 (Sub-No. 17) decision served February 28, 2014, the Board specified that comments “should focus ... using the methodology followed in *Railroad Cost of Capital – 2012*”, 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 common equity estimated by each model, and a simple average of the estimates. The cost of common equity for 2013 is 12.96 percent, which is below the 13.40 percent decided for 2012. (The 2013 MSDCF coincidentally matches the average of both cost of common equity models for 2012.)

**Table No. 19**  
**Cost of of Common Equity Capital**

<b>Model</b>		
Capital Asset Pricing Model	12.52 %	From Table No. 14
Multi-Stage Discounted Cash Flow	13.40	From Table No. 18
<b>Cost of Common Equity</b>	<b>12.96 %</b>	<b>Average</b>

## V. Preferred Equity Capital in 2013

For the first time since 2002, preferred stock issues were outstanding at the end of the year (2013) for one of the railroad companies comprising the railroad composite sample.

### A. Overview of Preferred Stock

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

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

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

1. *Cumulative* - Occasionally, a board will decide not to pay dividends. If the stock is cumulative, unpaid dividends accumulate and the total accumulated

(in arrears) must be paid to the holder of cumulative preferred stock before any dividends can be paid to the common stockholders. Most preferred stocks are cumulative.

2. *Noncumulative* - When business is such that the corporation's board of directors decides not to pay dividends, holders of noncumulative preferred stock lose their dividends. These dividends cannot be claimed in the future.
3. *Participating* - Owners of participating preferred stock receive – in addition to their fixed dividend – a share in the earnings remaining after all senior securities have been paid. If any additional dividend is declared, it is generally declared along with the common stock dividend. Participating preferred stock may also be cumulative, noncumulative or convertible.
4. *Redeemable* - Preferred stock is usually callable immediately. This means that the issuer can retire the stock at any time, if the company has the necessary cash. In some instances, as with so-called sinking fund preferred, the issuer is required to redeem the stock over a specified period of time. Generally, when redemption occurs, the firm must pay a premium price to the holder of the instrument.
5. *Auction Market* - This stock represents a new variety of variable-rate preferred stock. This security is generally appropriate for corporations with "temporary" idle corporate funds. The dividends, payable every seven weeks in the case of most issues, are determined by bids from current holders and potential buyers. The Auction Market Preferred shares are redeemable at the issuer's option, in whole or in part, on or near the interest payment date.
6. *Convertible* - A preferred stock is convertible if the holder has the privilege of converting the preferred stock into common stock at specified prices. This is an advantage to the holder if the market price of common stock increases. Often the convertible preferred will sell at a premium (above conversion parity) because of the conversion feature, especially as the selling price of common issues increase. Dividends of convertible preferred stock can also be cumulative or noncumulative.

## **B. The Market Value of Preferred Equity Capital**

The market value of preferred equity is based on stock prices and shares outstanding for 2013. Kansas City Southern is the only railroad included in the composite railroad sample that has preferred stock. Table 20 below summarizes the market value calculation. The Weight column, which is not used directly in our calculation, is provided as additional information (which would be more useful if more than one railroad had preferred stock). Calculations are shown in Appendix P.

**Table No. 20**  
**Average Market Value**  
**For Preferred Equity in 2013**

<b>Railroad Co.</b>	<b>Value (\$000)</b>	<b>Weight %</b>
CSX	\$0.0	0.00
KSU	6,253.7	100.00
NSC	0.0	0.00
UNP	0.0	0.00
Total	\$6,253.7	100.00 %
Prior Year	\$0.0	

### **C. The Cost of Preferred Equity Capital**

The cost of preferred equity depends, in large part, on its specific features. Three methods for determining the cost of preferred equity capital are listed below.

1. *The Dividend Yield Method* is used when the preferred stock is not convertible and there is no specific requirement to redeem the preferred. It is also used to cost preferred issues retired or redeemed during the year. The current cost in this instance is computed by dividing the stated dividend by the current market price. This method was used for all preferred stock in the 2002 cost of capital proceeding. This was also the method used for Kansas City Southern preferred stock in 1999, which was the last time Kansas City Southern was part of the composite railroad.
2. The *Internal Rate of Return Method* is used for preferred stocks which are not convertible but are subject to a mandatory redemption schedule providing a premium over the stated/par value. The current cost is equal to rate of return which equates the current price with the present value of dividends plus the redemption price.
3. The *Common Equity Method* is used when the preferred stock is convertible at the option of the holder, and the market values of the preferred and common stock indicate that conversion is likely to occur or the conversion right is influencing the price of the preferred stock. In this case, the preferred equity has the same cost as common equity.

I have used the Dividend Yield Method to estimate the cost of preferred equity for the one preferred stock in the composite railroad. The table below summarizes my findings, and additional work is shown in Appendix P.

**Table No. 21**  
**Cost of Preferred Equity Capital**

<b>Company</b>	<b>Weight</b>	<b>Cost of Equity</b>	<b>Weighted Calculation</b>
CSX	0.00%	-- %	0.00
KSU	100.00%	3.87	3.87
NSC	0.00%	--	0.00
UNP	0.00%	--	0.00
Total	100.00%		
<b>Weighted Current Cost of Equity</b>			<b>3.87 %</b>

## **VI. The Overall Cost of Capital In 2013**

### **A. Determination of Market Value Weights**

With more detail shown in Tables 8, 12, and 20, the average market value of debt and common equity are \$28.7 and \$132.1 billion, respectively. The average market value for preferred equity is \$6.3 million. More market value detail are provided in Appendixes E, H, and P. The figure for the market value of debt includes market values of bonds, notes, debentures, equipment trust certificates, and conditional sales agreements (if there had been any that were not current). 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 2013 market value weights for debt, common equity, and preferred equity are 17.69 percent, 82.31 percent, and

0.00 percent, respectively. Table 22 contains the weights computation and a comparison to the previous year. Rounding of the weights to two digits after the decimal has caused Preferred Equity's weight of 0.0039 percent to be 0.

**Table No. 22**  
**Capital Structure and Weights**

	Source Table	2013		2012	
		Market Value (mil)	Capital Structure Weight	Market Value (mil)	Capital Structure Weight
Debt	8	\$28,384.2	17.69 %	\$29,160.9	22.56 %
Common Equity	12	132,061.9	82.31	100,102.4	77.44
Preferred Equity	20	6.3	0.00	0.0	0.00
Total		\$160,452.3	100.00 %	\$129,263.3	100.00 %

The dollar amounts in the table cannot be compared directly, since an additional railroad has been added to the group. However, rising interest rates have contributed to the lower market value of debt. The 2013 capital structure has more weight for common equity compared to 2012, and is closer to the structure found by the Surface Transportation Board for 2011 than 2012.

**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 2013 overall cost of capital of 11.32 percent, as shown in Table 23. This is a small increase over the 11.12 percent cost of capital decided for 2012 (but lower than the cost for 2011), as the cost of debt and the weight for higher-costing common equity have increased.

**Table No. 23**  
**Weighted Current Cost of Capital for 2013**

	<b>Source Table</b>	<b>Capital Structure Weight</b>	<b>Current Cost</b>
Debt	11	17.69 %	3.68 %
Common Equity	19	82.31	12.96
Preferred Equity	21	0.00	3.87
Total		100.00 %	
<b>Weighted Current Cost of Capital</b>			<b>11.32 %</b>

## **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.

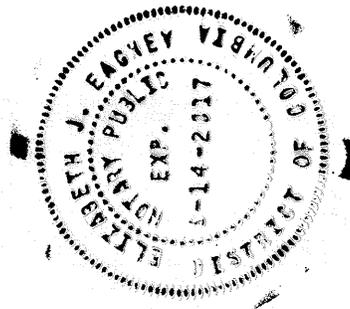
  
JOHN T. GRAY

Subscribed and sworn to before me this 21 day of April 2014.

  
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**

*Summaries*

<b>CSX Corporation</b>	<b>A-1</b>
<b>Kansas City Southern</b>	<b>A-4</b>
<b>Norfolk Southern Corporation</b>	<b>A-7</b>
<b>Union Pacific Corporation</b>	<b>A-10</b>

*Individual Bonds, Notes, and Debentures*

<b>CSX Corporation</b>	<b>A-13</b>
<b>Kansas City Southern</b>	<b>A-37</b>
<b>Norfolk Southern Corporation</b>	<b>A-43</b>
<b>Union Pacific Corporation</b>	<b>A-64</b>

**CSX Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value	Average Yield	Interest Cost		
						Year-End	Used		(\$ 000)		(\$ 000)		
<b>Traded</b>													
1	Notes		CSX Corp.	1	126408GN7	6.250%	4/1/2015	\$600,000	\$600,000	109.060	\$654,360	0.860%	\$5,627
2	Debentures		CSX Corp.	2	126408BL6	7.900%	5/1/2017	\$312,596	\$312,596	121.489	\$379,771	1.990%	\$7,557
3	Notes		CSX Corp.	3	126408GJ6	5.600%	5/1/2017	\$300,000	\$300,000	114.489	\$343,468	1.660%	\$5,702
4	Notes		CSX Corp.	4	126408GM9	6.250%	3/15/2018	\$600,000	\$600,000	118.855	\$713,130	2.000%	\$14,263
5	Notes		CSX Corp.	5	126408GQ0	7.375%	2/1/2019	\$500,000	\$500,000	124.274	\$621,371	2.640%	\$16,404
6	Notes		CSX Corp.	6	126408GT4	3.700%	10/30/2020	\$500,000	\$500,000	105.939	\$529,693	2.810%	\$14,884
7	Notes		CSX Corp.	7	126408GV9	4.250%	6/1/2021	\$350,000	\$350,000	108.128	\$378,448	3.100%	\$11,732
8	Debentures		CSX Corp.	8	126408AQ6	8.100%	9/15/2022	\$69,081	\$69,081	132.227	\$91,344	3.920%	\$3,581
9	Debentures		CSX Corp.	9	126408AM5	8.625%	5/15/2022	\$81,517	\$81,517	130.045	\$106,008	4.470%	\$4,739
10	Notes		CSX Corp. (New)	10	126408GZ0	3.700%	11/1/2023	\$500,000	\$104,167	98.588	\$102,696	3.870%	\$3,974
11	Debentures		CSX Corp.	11	126408BP7	7.250%	5/1/2027	\$83,312	\$83,312	127.898	\$106,555	4.530%	\$4,827
12	Debentures		CSX Corp.	12	126408BM4	7.950%	5/1/2027	\$64,266	\$64,266	135.413	\$87,025	4.490%	\$3,907
13	Notes		CSX Corp.	13	12641LBU6	6.800%	12/1/2028	\$200,000	\$200,000	117.013	\$234,026	5.200%	\$12,169
14	Notes		CSX Corp.	14	126408GH0	6.000%	10/1/2036	\$400,000	\$400,000	115.504	\$462,016	4.890%	\$22,593
15	Notes		CSX Corp.	15	126408GK3	6.150%	5/1/2037	\$700,000	\$700,000	118.216	\$827,511	4.860%	\$40,217
16	Notes		CSX Corp.	16	126408GP2	7.450%	4/1/2038	\$79,226	\$79,226	132.902	\$105,293	5.110%	\$5,380
17	Notes		CSX Corp.	17	126408GS6	6.220%	4/30/2040	\$660,000	\$660,000	120.372	\$794,452	4.860%	\$38,610
18	Notes		CSX Corp.	18	126408GU1	5.500%	4/15/2041	\$550,000	\$550,000	110.204	\$606,120	4.840%	\$29,336
19	Notes		CSX Corp.	19	126408GW7	4.750%	5/30/2042	\$600,000	\$600,000	99.822	\$598,930	4.770%	\$28,569
20	Notes		CSX Corp.	20	126408GX5	4.400%	3/1/2043	\$300,000	\$300,000	94.688	\$284,065	4.750%	\$13,493
21	Notes		CSX Corp.	21	126408GY3	4.100%	3/15/2044	\$800,000	\$800,000	90.275	\$722,197	4.710%	\$34,015
22	Notes		CSXT - Conrail	22	126410LK3	9.750%	6/15/2020	\$227,171	\$227,171	138.965	\$315,688	3.390%	\$10,702
23	Notes		CSXT - Conrail	23	126410LL1	7.875%	5/15/2043	\$99,989	\$99,989	138.603	\$138,587	5.300%	\$7,345
24	Sec'd Eq Notes		CSXT	24	126410LM9	6.251%	1/15/2023	\$286,305	\$286,305	118.682	\$339,792	3.890%	\$13,218
25													
26													
27													
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32													
33													
<b>Total</b>								<b>\$8,863,463</b>	<b>\$8,467,630</b>		<b>\$9,542,545</b>	<b>3.698%</b>	<b>\$352,846</b>

**CSX Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market	Average Yield	Interest
						Year-End	Used		Value (\$ 000)		Cost (\$ 000)
Trading Data Not Available											
1	Notes		12641LB04	9.870%	2/12/2021	10,000	10,000	100.000	\$10,000		
2	Notes			4.400%	10/25/2035	73,304	73,304	100.000	\$73,304		
3	Convertible		126408GA5	Changes	10/30/2021	2,296	2,296	100.000	\$2,296		
4	Conrail Tax Note			4.520%	3/31/2035	23,100	23,100	100.000	\$23,100		
5	TORCO			6.450%	12/15/2021	29,700	29,700	100.000	\$29,700		
6	NCT Note			0.000%	N/A	1,089	1,089	100.000	\$1,089		
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<b>Total</b>						<b>\$139,489</b>	<b>\$139,489</b>		<b>\$139,489</b>		

**CSX Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value (\$ 000)	Average Yield	Interest Cost (\$ 000)
						Year-End	Used				
<b>Matures in 2014</b>											
1	Notes		CSX Corp.	126408GF4	5.300%	02/15/14	200,000				
2	Sec'd Eq Notes		CSXT	126410LN7	8.375%	10/15/14	279,429				
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<b>Total</b>							<b>\$479,429</b>				

**Grand Totals**

<b>Total Traded and Trading Data Not Available</b>	<b>\$9,002,952</b>	<b>\$8,607,119</b>	<b>\$9,682,034</b>
<b>Grand Total (for reconciliation to carrier data only)</b>	<b>\$9,482,381</b>		

**From CSX:**

Corporate Notes	\$8,533,302
Convertible Debt	2,296
CSXT Notes	350,260
Secured Equipment Notes	565,734
Other Notes	30,789
<b>Total</b>	<b>\$9,482,381</b>

**Kansas City Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value	Average Yield	Interest Cost
						Year-End	Used		(\$ 000)		(\$ 000)
<b>Traded</b>											
1	Senior Note	KCSR (New)	25 485188AK2	4.300%	5/15/2043	\$445,913	<b>\$297,275</b>	90.157	<b>\$268,014</b>	4.950%	<b>\$13,267</b>
2	Senior Note	KCSR (New)	26 485188AL0	3.850%	11/15/2023	\$199,737	<b>\$49,934</b>	98.412	<b>\$49,141</b>	4.050%	<b>\$1,990</b>
3	Senior Note	KCSM	27 485161AH6	8.000%	2/1/2018	\$62,256	\$62,256	108.191	<b>\$67,355</b>	1.670%	<b>\$1,125</b>
4	Senior Note	KCSM (New)	28 485161AQ6	2.350%	5/15/2020	\$274,709	<b>\$80,123</b>	95.245	<b>\$76,314</b>	3.170%	<b>\$2,419</b>
5	Senior Note	KCSM (New)	29 485161AS2	3.000%	5/15/2023	\$448,247	<b>\$130,739</b>	93.044	<b>\$121,645</b>	3.880%	<b>\$4,720</b>
6	Senior Note	KCSM (New)	30 485161AU7	VAR	10/28/2016	\$250,000	<b>\$31,250</b>	100.287	<b>\$31,340</b>	0.850%	<b>\$266</b>
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<b>Total</b>						<b>\$1,680,862</b>	<b>\$651,578</b>		<b>\$613,809</b>	<b>3.875%</b>	<b>\$23,787</b>

**Kansas City Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value	Average Yield	Interest Cost
						Year-End	Used		(\$ 000)		(\$ 000)
Trading Data Not Available											
1	Term Loan A-2			1.420%	5/15/2018	245,313	245,313	100.000	\$245,313		
2	RRIF Loan			2.960%	2/24/2037	51,995	51,995	100.000	\$51,995		
3	IDOT-GWE			3.000%	2/19/2018	292	292	100.000	\$292		
4	FRA RRIF			4.290%	7/13/2030	39,423	39,423	100.000	\$39,423		
5	Bank of NY Note	KCS	485170AF1	7.000%	12/15/2025	\$221	221	100.000	\$221		
6	EDC Loan	KCSM		5.737%	2/28/2023	43,771	43,771	100.000	\$43,771		
7	DVB Loan	KCSM		6.195%	9/29/2023	33,930	33,930	100.000	\$33,930		
8	GE Loan	KCSM		9.310%	2/15/2020	74,608	74,608	100.000	\$74,608		
9	Overhaul GE	KCSM		7.500%	1/1/2015	1,275	1,275	100.000	\$1,275		
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<b>Total</b>						<b>\$490,828</b>	<b>\$490,828</b>		<b>\$490,828</b>		

**Kansas City Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value (\$ 000)	Average Yield	Interest Cost (\$ 000)
						Year-End	Used				
Matures in 2014											
1											
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<b>Total</b>											<b>\$0</b>

**Grand Totals**

<b>Total Traded and Trading Data Not Available</b>	<b>\$2,171,690</b>	<b>\$1,142,406</b>	<b>\$1,104,637</b>
<b>Grand Total (for reconciliation to carrier data only)</b>	<b>\$2,171,690</b>		

**From KSU:**

KCSR	\$943,250
TexMex	39,423
KCS	221
KCSM	1,188,796
<b>Total</b>	<b>\$2,171,690</b>

**Norfolk Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value	Average Yield	Interest Cost
						Year-End	Used		(\$ 000)		(\$ 000)
<b>Traded</b>											
1	Debenture	Conrail	31 209864AT4	9.750%	6/15/2020	\$313,741	\$313,741	130.491	\$409,405	4.620%	\$18,914
2	Debenture	Conrail	32 209864AU1	7.875%	5/15/2043	\$138,085	\$138,085	136.589	\$188,608	5.440%	\$10,260
3	Notes	Series A NSC	33 655844AA6	9.000%	3/1/2021	\$83,372	\$83,372	127.318	\$106,147	4.720%	\$5,010
4	Notes	Senior	34 655844AQ1	7.250%	2/15/2031	\$316,316	\$316,316	130.926	\$414,139	4.670%	\$19,340
5	Notes	Senior	35 655844AZ1	5.750%	4/1/2018	\$600,000	\$600,000	115.725	\$694,349	2.230%	\$15,484
6	Notes	Senior	36 655844BB3	5.750%	1/15/2016	\$500,000	\$500,000	111.677	\$558,386	1.000%	\$5,584
7	Notes	Senior	37 655844BC1	5.900%	6/15/2019	\$500,000	\$500,000	119.549	\$597,744	2.350%	\$14,047
8	Notes	Senior	38 655844BG2	3.250%	12/1/2021	\$500,000	\$500,000	101.376	\$506,878	3.080%	\$15,612
9	Notes	Senior	39 655844BJ6	3.000%	4/1/2022	\$600,000	\$600,000	98.683	\$592,095	3.190%	\$18,888
10	Notes	Senior (New)	40 655844BL1	2.903%	2/15/2023	\$600,000	\$425,000	94.782	\$402,824	3.570%	\$14,381
11	Notes	Senior	41 655844BD9	6.000%	5/23/2111	\$504,492	\$504,492	115.388	\$582,122	5.210%	\$30,329
12	Notes	Senior 2105	42 655844AV0	6.000%	3/15/2105	\$550,000	\$550,000	115.277	\$634,021	5.210%	\$33,032
13	Notes	Senior	43 655844AX6	5.640%	5/17/2029	\$210,316	\$210,316	113.862	\$239,471	4.440%	\$10,633
14	Notes	Senior	44 655844AW8	5.590%	5/17/2025	\$251,172	\$251,172	115.849	\$290,980	3.920%	\$11,406
15	Notes	Senior	45 655844BM9	3.950%	10/1/2042	\$600,000	\$600,000	89.878	\$539,266	4.590%	\$24,752
16	Notes	Senior (New)	46 655844BN7	4.800%	8/15/2043	\$500,000	\$187,500	98.360	\$184,425	4.910%	\$9,055
17	Notes	Senior (New)	47 655844BP2	3.850%	1/15/2024	\$400,000	\$50,000	101.240	\$50,620	3.700%	\$1,873
18	Conrail Notes	CR NSC 2017	48 655844AE8	7.700%	5/15/2017	\$550,000	\$550,000	122.413	\$673,274	1.650%	\$11,109
19	Conrail Notes	CR NSC 2027	49 655844AJ7	7.800%	5/15/2027	\$368,199	\$368,199	133.212	\$490,485	4.550%	\$22,317
20	Conrail Notes	CR NSC 2037	50 655844AF5	7.050%	5/1/2037	\$256,690	\$256,690	130.283	\$334,423	4.900%	\$16,387
21	Conrail Notes	CR NSC 2097	51 655844AK4	7.900%	5/15/2097	\$273,317	\$273,317	137.846	\$376,756	5.740%	\$21,626
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<b>Total</b>						<b>\$8,615,700</b>	<b>\$7,778,200</b>		<b>\$8,866,417</b>	<b>3.722%</b>	<b>\$330,040</b>

**Norfolk Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market	Average	Interest
						Year-End	Used		Value (\$ 000)	Yield	Cost (\$ 000)
Trading Data Not Available											
1	Notes		Senior (Private)	655844BE7	4.837%	10/1/2041	595,504	595,504	100.000	\$595,504	
2	Other Bond		NSC Poca Dev Timber Bond		8.250%	10/1/2019	75,734	75,734	100.000	\$75,734	
3	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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<b>Total</b>							<b>\$680,407</b>	<b>\$680,407</b>		<b>\$680,407</b>	

**Norfolk Southern Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value (\$ 000)	Average Yield	Interest Cost (\$ 000)
						Year-End	Used				
<b>Matures in 2014</b>											
1	Conrail Notes	CR NSC 2014	42 655844AU2	5.257%	09/17/14	431,456					
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<b>Total</b>							<b>\$431,456</b>				

**Grand Totals**

<b>Total Traded and Trading Data Not Available</b>	<b>\$9,296,107</b>	<b>\$8,458,607</b>	<b>\$9,546,824</b>
<b>Grand Total (for reconciliation to carrier data only)</b>	<b>\$9,727,563</b>		

**From NSC:**

Income Debentures	\$451,826
Medium Term Notes & Conrail Notes	9,190,834
Other Debt (Poca Dev)	84,903
<b>Total</b>	<b>\$9,727,563</b>

**Union Pacific Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value	Average Yield	Interest Cost		
						Year-End	Used		(\$ 000)		(\$ 000)		
<b>Traded</b>													
1	Debentures		UP Corp.	52	907818CS5	5.375%	6/1/2033	\$198,592	\$198,592	107.961	\$214,401	4.760%	\$10,205
2	Debentures		UP Corp.	53	907818CX4	6.150%	5/1/2037	\$111,968	\$111,968	120.235	\$134,624	4.740%	\$6,381
3	Debentures		UP Corp.	54	907818CU0	6.250%	5/1/2034	\$227,863	\$227,863	121.181	\$276,127	4.660%	\$12,868
4	Debentures		UP Corp.	55	907818CF3	6.625%	2/1/2029	\$419,597	\$419,597	126.838	\$532,207	4.260%	\$22,672
5	Debentures		UP Corp.	56	907818AZ1	7.000%	2/1/2016	\$203,355	\$203,355	114.462	\$232,764	1.210%	\$2,816
6	Debentures		UP Corp.	57	907818BY3	7.125%	2/1/2028	\$175,576	\$175,576	129.048	\$226,577	4.420%	\$10,015
7	Notes		UP Corp. (new)	58	907818DN5	2.750%	4/15/2023	\$323,177	<b>\$255,848</b>	95.641	\$244,696	3.300%	\$8,075
8	Notes		UP Corp.	59	907818DM7	2.950%	1/15/2023	\$299,851	\$299,851	98.681	\$295,895	3.130%	\$9,262
9	Notes		UP Corp.	60	907818DG0	4.000%	2/1/2021	\$498,287	\$498,287	108.277	\$539,532	2.790%	\$15,053
10	Notes		UP Corp.	61	907818DK1	4.163%	7/15/2022	\$615,692	\$615,692	108.174	\$666,020	3.130%	\$20,846
11	Notes		UP Corp. (new)	62	907818DP0	4.250%	4/15/2043	\$320,537	<b>\$253,758</b>	95.401	\$242,089	4.540%	\$10,991
12	Notes		UP Corp.	63	907818DL9	4.300%	6/15/2042	\$299,655	\$299,655	97.452	\$292,021	4.470%	\$13,053
13	Notes		UP Corp.	64	907818DJ4	4.750%	9/15/2041	\$490,517	\$490,517	104.289	\$511,557	4.490%	\$22,969
14	Notes		UP Corp. (new)	65	907818DU9	4.750%	12/15/2043	\$499,791	<b>\$104,123</b>	98.965	\$103,046	4.810%	\$4,957
15	Notes		UP Corp.	66	907818CV8	4.875%	1/15/2015	\$249,934	\$249,934	106.095	\$265,167	0.760%	\$2,015
16	Notes		UP Corp.	67	907818CW6	5.650%	5/1/2017	\$193,634	\$193,634	114.139	\$221,012	1.790%	\$3,956
17	Notes		UP Corp.	68	907818DA3	5.700%	8/15/2018	\$368,628	\$368,628	117.919	\$434,682	1.990%	\$8,650
18	Notes		UP Corp.	69	907818CZ9	5.750%	11/15/2017	\$251,887	\$251,887	117.061	\$294,861	1.660%	\$4,895
19	Notes		UP Corp.	70	907818DF2	5.780%	7/15/2040	\$65,402	\$65,402	119.812	\$78,359	4.520%	\$3,542
20	Notes		UP Corp.	71	907818DD7	6.125%	2/15/2020	\$162,108	\$162,108	121.127	\$196,356	2.630%	\$5,164
21	Notes		UP Corp.	72	907818DB1	7.875%	1/15/2019	\$158,359	\$158,359	126.823	\$200,836	2.610%	\$5,242
22	Mort. Bond		UPRR-MP	73	606198LF4	4.750%	1/1/2020	\$29,905	\$29,905	98.757	\$29,533	4.980%	\$1,471
23	Mort. Bond		UPRR-MP	74	606198LG2	4.750%	1/1/2030	\$27,381	\$27,381	93.043	\$25,476	5.410%	\$1,378
24	Debentures		UPRR-MP	75	606198LH0	5.000%	1/1/2045	\$96,025	\$96,025	85.296	\$81,906	6.070%	\$4,972
25	Debentures		MP C&EI UPRR	76	167123AP3	5.000%	1/1/2054	\$1,641	\$1,641	73.167	\$1,201	7.020%	\$84
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33													
<b>Total</b>								<b>\$6,289,362</b>	<b>\$5,759,587</b>		<b>\$6,340,946</b>	<b>3.336%</b>	<b>\$211,532</b>

**Union Pacific Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market	Average	Interest
						Year-End	Used		Value (\$ 000)	Yield	Cost (\$ 000)
<b>Trading Data Not Available</b>											
1	Notes		UP Corp. (new 12/16)	907818DR6	3.646%	2/15/2024	349,216	14,551	100.000		\$14,551
2	Notes		UP Corp. (new 12/16)	907818DT2	4.821%	2/1/2044	468,269	19,511	100.000		\$19,511
3	Med. Term Notes		Series B		9.2-9.3%	2014 - 2020	7,410	7,410	100.000		\$7,410
4	Med. Term Notes		Series C		9.5-10.0%	2014 - 2020	24,124	24,124	100.000		\$24,124
5	RR Tax Exempt		Albany County UPRR		4.400%	12/1/2015	8,000	8,000	100.000		\$8,000
6	Debt Security		Illinois DOT SPCSL		3.000%	12/31/2019	9,285	9,285	100.000		\$9,285
7	Debt Security		Illinois DOT UPRR		3.000%	3/14/2018	767	767	100.000		\$767
8	Debt Security		ITCF 1999 UPRR		5.750%	11/1/2014	3,910	3,910	100.000		\$3,910
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<b>Total</b>							<b>\$870,981</b>	<b>\$87,558</b>		<b>\$87,558</b>	

**Union Pacific Corporation**  
12/31/2013

Type	Description	No.	CUSIP	Coupon Rate	Maturity Date	Amt. Outstanding (\$000)		Average Price	Market Value (\$ 000)	Average Yield	Interest Cost (\$ 000)
						Year-End	Used				
<b>Matures in 2014</b>											
1	Notes		UP Corp.	59	907818DC9	5.125%	02/15/14	305,463			
2	Notes		UP Corp.	60	907818CT3	5.375%	05/01/14	194,511			
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10											
<b>Total</b>								<b>\$499,974</b>			

**Grand Totals**

<b>Total Traded and Trading Data Not Available</b>	<b>\$7,160,343</b>	<b>\$5,847,145</b>	<b>\$6,428,504</b>
<b>Grand Total (for reconciliation to carrier data only)</b>	<b>\$7,660,317</b>		

**From UNP:**

Corporate Debentures, Notes, and Floating Rate Loans	\$7,683,403
Removal of Floating Rate Loans	-200,000
RR Misc Debt Securities (KFW, Albany County, MP, IL DOT....)	81,098
Removal of MP Debt Discount, and SP Purch. Acct. Debt Premium	95,816
<b>Total</b>	<b>\$7,660,317</b>

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

End of Month in 2013	Price	Yield
January	111.394	0.90 %
February	111.219	0.79
March	110.000	1.17
April	110.368	0.77
May	109.909	0.76
June	109.025	1.02
July	109.090	0.75
August	108.050	1.07
September	107.801	0.98
October	107.568	0.82
November	107.425	0.63
December	106.871	0.66
<b>Average</b>	<b>109.060</b>	<b>0.86 %</b>

Source: Bloomberg

CSX Corporation		
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<b>2</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408BL6
	<b>Coupon Rate:</b>	7.900%
	<b>Maturity Date:</b>	5/1/2017
	<b>Amount Outstanding (\$ 000)</b>	\$312,596
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	124.003	1.98 %
February	124.564	1.76
March	123.798	1.82
April	124.499	1.55
May	122.679	1.85
June	120.520	2.27
July	120.250	2.24
August	119.135	2.45
September	119.296	2.26
October	119.505	2.08
November	120.300	1.74
December	119.324	1.91
<b>Average</b>	<b>121.489</b>	<b>1.99 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	116.056	1.66 %
February	115.768	1.67
March	117.088	1.29
April	116.997	1.23
May	115.767	1.46
June	115.398	1.45
July	112.669	2.07
August	113.555	1.81
September	111.880	2.15
October	112.563	1.86
November	113.450	1.55
December	112.681	1.67
<b>Average</b>	<b>114.489</b>	<b>1.66 %</b>

Source: Bloomberg

CSX Corporation		
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<b>4</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GM9
	<b>Coupon Rate:</b>	6.250%
	<b>Maturity Date:</b>	3/15/2018
	<b>Amount Outstanding (\$ 000)</b>	\$600,000
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	121.149	1.89 %
February	121.677	1.74
March	121.715	1.66
April	121.755	1.59
May	120.358	1.79
June	117.489	2.30
July	117.343	2.27
August	116.750	2.33
September	117.430	2.12
October	117.687	2.00
November	117.209	2.04
December	115.697	2.31
<b>Average</b>	<b>118.855</b>	<b>2.00 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	126.625	2.56 %
February	127.241	2.40
March	127.043	2.39
April	127.936	2.18
May	124.260	2.72
June	122.207	3.02
July	123.492	2.75
August	122.759	2.81
September	123.401	2.64
October	122.870	2.67
November	122.062	2.76
December	121.395	2.82
<b>Average</b>	<b>124.274</b>	<b>2.64 %</b>

Source: Bloomberg

CSX Corporation		
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6	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GT4
	<b>Coupon Rate:</b>	3.700%
	<b>Maturity Date:</b>	10/30/2020
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	107.305	2.65 %
February	108.161	2.52
March	108.110	2.52
April	110.116	2.23
May	108.137	2.49
June	104.625	2.99
July	104.871	2.95
August	103.931	3.08
September	103.780	3.10
October	104.980	2.91
November	103.889	3.07
December	103.359	3.15
Average	105.939	2.81 %

Source: Bloomberg

CSX Corporation		
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<b>7</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GV9
	<b>Coupon Rate:</b>	4.250%
	<b>Maturity Date:</b>	6/1/2021
	<b>Amount Outstanding (\$ 000)</b>	\$350,000
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	110.297	2.85 %
February	110.650	2.80
March	112.648	2.53
April	113.763	2.37
May	110.200	2.82
June	106.802	3.27
July	106.165	3.35
August	105.093	3.49
September	105.339	3.45
October	106.827	3.23
November	105.748	3.38
December	104.004	3.63
Average	108.128	3.10 %

Source: Bloomberg

CSX Corporation		
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<b>8</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408AQ6
	<b>Coupon Rate:</b>	8.100%
	<b>Maturity Date:</b>	9/15/2022
	<b>Amount Outstanding (\$ 000)</b>	\$69,081
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	139.923	3.23 %
February	140.331	3.16
March	140.943	3.07
April	141.441	3.02
May	133.650	3.77
June	129.295	4.22
July	128.119	4.33
August	126.967	4.44
September	126.741	4.45
October	127.970	4.27
November	126.207	4.46
December	125.139	4.56
Average	132.227	3.92 %

Source: Bloomberg

CSX Corporation		
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<b>9</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408AM5
	<b>Coupon Rate:</b>	8.625%
	<b>Maturity Date:</b>	5/15/2022
	<b>Amount Outstanding (\$ 000)</b>	\$81,517
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	135.784	3.93
April	Not Traded	-
May	139.570	3.47
June	Not Traded	-
July	127.000	4.82
August	123.210	5.28
September	Not Traded	-
October	Not Traded	-
November	128.000	4.60
December	126.703	4.72
<b>Average</b>	<b>130.045</b>	<b>4.47 %</b>

Source: Bloomberg

CSX Corporation		
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10	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp. (New)
	<b>CUSIP:</b>	126408GZ0
	<b>Coupon Rate:</b>	3.700%
	<b>Maturity Date:</b>	11/1/2023
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	2.5

End of Month in 2013	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	99.882	3.71
November	98.402	3.90
December	97.481	4.01
<b>Average</b>	<b>98.588</b>	<b>3.87 %</b>

Source: Bloomberg

CSX Corporation		
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<b>11</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408BP7
	<b>Coupon Rate:</b>	7.250%
	<b>Maturity Date:</b>	5/1/2027
	<b>Amount Outstanding (\$ 000)</b>	\$83,312
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	135.495	3.96 %
February	135.736	3.93
March	138.018	3.75
April	134.553	4.00
May	125.703	4.71
June	125.202	4.74
July	124.529	4.79
August	123.181	4.90
September	123.640	4.85
October	124.651	4.75
November	122.628	4.92
December	121.443	5.02
<b>Average</b>	<b>127.898</b>	<b>4.53 %</b>

Source: Bloomberg

CSX Corporation		
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<b>12</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408BM4
	<b>Coupon Rate:</b>	7.950%
	<b>Maturity Date:</b>	5/1/2027
	<b>Amount Outstanding (\$ 000)</b>	\$64,266
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	142.921	3.97 %
February	143.142	3.94
March	145.447	3.76
April	135.362	4.51
May	137.831	4.31
June	134.686	4.54
July	131.213	4.82
August	129.468	4.95
September	130.876	4.82
October	132.232	4.70
November	131.648	4.73
December	130.130	4.85
<b>Average</b>	<b>135.413</b>	<b>4.49 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	126.780	4.43 %
February	Not Traded	-
March	117.150	5.19
April	123.105	4.69
May	118.000	5.11
June	Not Traded	-
July	112.250	5.60
August	112.342	5.59
September	Not Traded	-
October	112.153	5.60
November	114.323	5.40
December	Not Traded	-
<b>Average</b>	<b>117.013</b>	<b>5.20 %</b>

Source: Bloomberg

CSX Corporation		
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<b>14</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GH0
	<b>Coupon Rate:</b>	6.000%
	<b>Maturity Date:</b>	10/1/2036
	<b>Amount Outstanding (\$ 000)</b>	\$400,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	120.544	4.57 %
February	120.970	4.54
March	120.683	4.56
April	122.004	4.47
May	117.977	4.72
June	112.591	5.07
July	113.454	5.01
August	108.067	5.39
September	112.208	5.09
October	113.660	4.99
November	110.453	5.21
December	113.438	5.00
<b>Average</b>	<b>115.504</b>	<b>4.89 %</b>

Source: Bloomberg

CSX Corporation		
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<b>15</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GK3
	<b>Coupon Rate:</b>	6.150%
	<b>Maturity Date:</b>	5/1/2037
	<b>Amount Outstanding (\$ 000)</b>	\$700,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	122.469	4.60 %
February	123.731	4.53
March	123.395	4.54
April	126.654	4.35
May	121.867	4.63
June	114.879	5.07
July	116.333	4.97
August	113.356	5.17
September	113.959	5.12
October	115.500	5.02
November	112.953	5.19
December	113.495	5.15
<b>Average</b>	<b>118.216</b>	<b>4.86 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	140.677	4.68 %
February	141.591	4.63
March	139.929	4.71
April	143.098	4.54
May	134.787	4.99
June	131.093	5.20
July	129.473	5.30
August	128.003	5.38
September	127.964	5.38
October	128.710	5.33
November	125.641	5.52
December	123.854	5.63
<b>Average</b>	<b>132.902</b>	<b>5.11 %</b>

Source: Bloomberg

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

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	125.318	4.58 %
February	125.621	4.56
March	124.806	4.61
April	129.044	4.38
May	124.194	4.64
June	117.063	5.05
July	118.300	4.98
August	114.209	5.23
September	115.552	5.14
October	118.281	4.97
November	115.314	5.15
December	116.756	5.06
<b>Average</b>	<b>120.372</b>	<b>4.86 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	113.460	4.64 %
February	115.243	4.54
March	115.363	4.53
April	118.285	4.36
May	112.210	4.71
June	106.279	5.08
July	108.149	4.96
August	107.078	5.02
September	105.271	5.14
October	107.697	4.98
November	106.250	5.08
December	107.159	5.02
Average	110.204	4.84 %

Source: Bloomberg

Listed on railroad debt list as 2 notes with the same CUSIP for \$300,000 and 250,000.

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

End of Month in 2013	Price	Yield
January	102.876	4.57 %
February	104.765	4.46
March	104.577	4.47
April	109.146	4.20
May	102.151	4.62
June	97.433	4.92
July	97.933	4.88
August	97.370	4.92
September	95.388	5.06
October	97.493	4.91
November	91.850	5.31
December	96.877	4.96
<b>Average</b>	<b>99.822</b>	<b>4.77 %</b>

Source: Bloomberg

CSX Corporation		
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<b>20</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GX5
	<b>Coupon Rate:</b>	4.400%
	<b>Maturity Date:</b>	3/1/2043
	<b>Amount Outstanding (\$ 000)</b>	\$300,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	101.326	4.32 %
February	98.849	4.47
March	98.572	4.49
April	103.025	4.22
May	98.395	4.50
June	90.393	5.03
July	93.048	4.85
August	91.415	4.96
September	90.645	5.01
October	92.010	4.92
November	89.454	5.10
December	89.126	5.12
<b>Average</b>	<b>94.688</b>	<b>4.75 %</b>

Source: Bloomberg

CSX Corporation		
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<b>21</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSX Corp.
	<b>CUSIP:</b>	126408GY3
	<b>Coupon Rate:</b>	4.100%
	<b>Maturity Date:</b>	3/15/2044
	<b>Amount Outstanding (\$ 000)</b>	\$800,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	93.876	4.47 %
February	94.883	4.40
March	95.604	4.36
April	99.839	4.11
May	92.251	4.57
June	87.261	4.91
July	87.322	4.90
August	87.069	4.92
September	85.499	5.04
October	87.252	4.91
November	85.667	5.03
December	86.772	4.95
<b>Average</b>	<b>90.275</b>	<b>4.71 %</b>

Source: Bloomberg

CSX Corporation		
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<b>22</b>	<b>Type:</b>	Notes
	<b>Description:</b>	CSXT - Conrail
	<b>CUSIP:</b>	126410LK3
	<b>Coupon Rate:</b>	9.750%
	<b>Maturity Date:</b>	6/15/2020
	<b>Amount Outstanding (\$ 000)</b>	\$227,171
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	141.174	3.39 %
February	142.597	3.17
March	144.157	2.91
April	143.500	2.93
May	143.819	2.83
June	137.153	3.65
July	137.649	3.52
August	135.229	3.80
September	135.690	3.71
October	136.572	3.51
November	135.505	3.60
December	134.535	3.71
<b>Average</b>	<b>138.965</b>	<b>3.39 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	146.071	4.93 %
February	Not Traded	-
March	141.730	5.14
April	Not Traded	-
May	144.466	5.00
June	138.080	5.32
July	136.460	5.40
August	Not Traded	-
September	Not Traded	-
October	129.612	5.78
November	133.800	5.54
December	Not Traded	-
<b>Average</b>	<b>138.603</b>	<b>5.30 %</b>

Source: Bloomberg

CSX Corporation		
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<b>24</b>	<b>Type:</b>	Sec'd Eq Notes
	<b>Description:</b>	CSXT
	<b>CUSIP:</b>	126410LM9
	<b>Coupon Rate:</b>	6.251%
	<b>Maturity Date:</b>	1/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$286,305
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	121.500	3.65 %
February	121.000	3.69
March	121.425	3.64
April	122.125	3.54
May	121.000	3.65
June	117.500	4.03
July	117.000	4.07
August	116.000	4.17
September	116.830	4.06
October	117.425	3.97
November	116.625	4.05
December	115.750	4.15
<b>Average</b>	<b>118.682</b>	<b>3.89 %</b>

Source: Bloomberg

Kansas City Southern Corp.		
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<b>25</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSR (New)
	<b>CUSIP:</b>	485188AK2
	<b>Coupon Rate:</b>	4.300%
	<b>Maturity Date:</b>	5/15/2043
	<b>Amount Outstanding (\$ 000)</b>	\$445,913
	<b>Months Outstanding</b>	8.0

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	99.663	4.32
June	Not Traded	-
July	Not Traded	-
August	89.250	5.00
September	88.299	5.07
October	89.423	4.99
November	87.933	5.10
December	86.372	5.21
Average	90.157	4.95 %

Source: Bloomberg

Kansas City Southern Corp.		
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<b>26</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSR (New)
	<b>CUSIP:</b>	485188AL0
	<b>Coupon Rate:</b>	3.850%
	<b>Maturity Date:</b>	11/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$199,737
	<b>Months Outstanding</b>	3.0

End of Month in 2013	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	100.087	3.84
November	98.236	4.07
December	96.913	4.24
<b>Average</b>	<b>98.412</b>	<b>4.05 %</b>

Source: Bloomberg

Kansas City Southern Corp.		
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<b>27</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSM
	<b>CUSIP:</b>	485161AH6
	<b>Coupon Rate:</b>	8.000%
	<b>Maturity Date:</b>	2/1/2018
	<b>Amount Outstanding (\$ 000)</b>	\$62,256
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	110.600	1.28 %
February	109.375	1.91
March	109.750	1.00
April	110.120	0.04
May	109.250	0.05
June	108.625	0.07
July	Not Traded	-
August	107.000	0.60
September	Not Traded	-
October	Not Traded	-
November	105.000	2.80
December	104.000	7.31
<b>Average</b>	<b>108.191</b>	<b>1.67 %</b>

Source: Bloomberg

<b>Kansas City Southern Corp.</b>
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<b>28</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSM (New)
	<b>CUSIP:</b>	485161AQ6
	<b>Coupon Rate:</b>	2.350%
	<b>Maturity Date:</b>	5/15/2020
	<b>Amount Outstanding (\$ 000)</b>	\$274,709
	<b>Months Outstanding</b>	3.5

End of Month in 2013	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	95.871	3.05
November	96.007	3.04
December	93.857	3.43
<b>Average</b>	<b>95.245</b>	<b>3.17 %</b>

Source: Bloomberg

Kansas City Southern Corp.		
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<b>29</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSM (New)
	<b>CUSIP:</b>	485161AS2
	<b>Coupon Rate:</b>	3.000%
	<b>Maturity Date:</b>	5/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$448,247
	<b>Months Outstanding</b>	3.5

End of Month in 2013	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	94.531	3.68
November	92.985	3.89
December	91.617	4.08
Average	93.044	3.88 %

Source: Bloomberg

Kansas City Southern Corp.		
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<b>30</b>	<b>Type:</b>	Senior Note
	<b>Description:</b>	KCSM (New)
	<b>CUSIP:</b>	485161AU7
	<b>Coupon Rate:</b>	VAR
	<b>Maturity Date:</b>	10/28/2016
	<b>Amount Outstanding (\$ 000)</b>	\$250,000
	<b>Months Outstanding</b>	1.5

End of Month in 2013	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	Not Traded	-
December	100.287	0.85
<b>Average</b>	<b>100.287</b>	<b>0.85 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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31	<b>Type:</b>	Debenture
	<b>Description:</b>	Conrail
	<b>CUSIP:</b>	209864AT4
	<b>Coupon Rate:</b>	9.750%
	<b>Maturity Date:</b>	6/15/2020
	<b>Amount Outstanding (\$ 000)</b>	\$313,741
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	141.706	3.32 %
February	146.419	2.69
March	139.452	3.50
April	137.836	3.66
May	130.559	4.61
June	125.116	5.37
July	124.914	5.36
August	124.149	5.44
September	124.334	5.37
October	124.884	5.25
November	123.867	5.37
December	122.659	5.52
Average	130.491	4.62 %

Source: Bloomberg

Norfolk Southern Corp.		
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<b>32</b>	<b>Type:</b>	Debenture
	<b>Description:</b>	Conrail
	<b>CUSIP:</b>	209864AU1
	<b>Coupon Rate:</b>	7.875%
	<b>Maturity Date:</b>	5/15/2043
	<b>Amount Outstanding (\$ 000)</b>	\$138,085
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	151.037	4.70 %
February	152.023	4.65
March	151.346	4.68
April	156.284	4.46
May	135.503	5.46
June	128.376	5.85
July	128.283	5.86
August	127.004	5.93
September	126.192	5.98
October	133.066	5.58
November	125.051	6.04
December	124.898	6.05
<b>Average</b>	<b>136.589</b>	<b>5.44 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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<b>33</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Series A NSC
	<b>CUSIP:</b>	655844AA6
	<b>Coupon Rate:</b>	9.000%
	<b>Maturity Date:</b>	3/1/2021
	<b>Amount Outstanding (\$ 000)</b>	\$83,372
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	134.100	4.02 %
February	Not Traded	-
March	132.412	4.17
April	136.704	3.58
May	Not Traded	-
June	125.587	4.95
July	Not Traded	-
August	126.823	4.72
September	126.401	4.74
October	127.349	4.57
November	117.527	5.99
December	118.958	5.75
<b>Average</b>	<b>127.318</b>	<b>4.72 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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<b>34</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844AQ1
	<b>Coupon Rate:</b>	7.250%
	<b>Maturity Date:</b>	2/15/2031
	<b>Amount Outstanding (\$ 000)</b>	\$316,316
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	138.276	4.20 %
February	Not Traded	-
March	138.281	4.19
April	141.923	3.95
May	135.307	4.37
June	127.790	4.88
July	125.192	5.07
August	125.621	5.03
September	127.123	4.91
October	127.757	4.86
November	127.225	4.89
December	125.687	5.00
<b>Average</b>	<b>130.926</b>	<b>4.67 %</b>

Source: Bloomberg

**Norfolk Southern Corp.**

<b>35</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844AZ1
	<b>Coupon Rate:</b>	5.750%
	<b>Maturity Date:</b>	4/1/2018
	<b>Amount Outstanding (\$ 000)</b>	\$600,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	119.588	1.77 %
February	120.409	1.55
March	99.828	5.79
April	120.511	1.41
May	118.372	1.76
June	115.969	2.19
July	116.379	2.05
August	115.243	2.23
September	115.674	2.08
October	116.345	1.88
November	115.948	1.90
December	114.432	2.18
<b>Average</b>	<b>115.725</b>	<b>2.23 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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<b>36</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BB3
	<b>Coupon Rate:</b>	5.750%
	<b>Maturity Date:</b>	1/15/2016
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	113.856	0.99 %
February	113.455	0.97
March	113.021	1.00
April	113.071	0.84
May	111.910	1.11
June	111.647	1.11
July	111.402	1.05
August	110.925	1.05
September	110.746	0.99
October	110.394	0.95
November	110.481	0.74
December	109.218	1.16
<b>Average</b>	<b>111.677</b>	<b>1.00 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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<b>37</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BC1
	<b>Coupon Rate:</b>	5.900%
	<b>Maturity Date:</b>	6/15/2019
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	122.088	2.16 %
February	122.291	2.09
March	122.390	2.04
April	124.218	1.71
May	121.327	2.11
June	117.732	2.66
July	119.143	2.39
August	116.158	2.85
September	117.072	2.65
October	117.880	2.47
November	118.191	2.37
December	116.095	2.71
<b>Average</b>	<b>119.549</b>	<b>2.35 %</b>

Source: Bloomberg

**Norfolk Southern Corp.**

<b>38</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BG2
	<b>Coupon Rate:</b>	3.250%
	<b>Maturity Date:</b>	12/1/2021
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	104.137	2.72 %
February	104.053	2.73
March	105.129	2.59
April	106.324	2.43
May	102.876	2.87
June	100.876	3.13
July	100.178	3.23
August	98.246	3.50
September	99.203	3.36
October	99.956	3.26
November	98.687	3.44
December	96.842	3.71
<b>Average</b>	<b>101.376</b>	<b>3.08 %</b>

Source: Bloomberg

**Norfolk Southern Corp.**

<b>39</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BJ6
	<b>Coupon Rate:</b>	3.000%
	<b>Maturity Date:</b>	4/1/2022
	<b>Amount Outstanding (\$ 000)</b>	\$600,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	102.517	2.69 %
February	102.248	2.72
March	102.592	2.67
April	103.693	2.53
May	99.928	3.01
June	96.889	3.41
July	96.815	3.43
August	94.625	3.74
September	96.090	3.54
October	97.454	3.35
November	96.000	3.56
December	95.339	3.66
<b>Average</b>	<b>98.683</b>	<b>3.19 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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<b>40</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior (New)
	<b>CUSIP:</b>	655844BL1
	<b>Coupon Rate:</b>	2.903%
	<b>Maturity Date:</b>	2/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$600,000
	<b>Months Outstanding</b>	8.5

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	97.865	3.16
June	95.260	3.49
July	94.365	3.61
August	93.256	3.76
September	93.728	3.70
October	94.928	3.55
November	96.024	3.41
December	92.830	3.84
<b>Average</b>	<b>94.782</b>	<b>3.57 %</b>

Source: Bloomberg

**Norfolk Southern Corp.**

<b>41</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BD9
	<b>Coupon Rate:</b>	6.000%
	<b>Maturity Date:</b>	5/23/2111
	<b>Amount Outstanding (\$ 000)</b>	\$504,492
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	119.812	5.00 %
February	123.664	4.84
March	121.514	4.93
April	128.899	4.64
May	118.159	5.07
June	109.394	5.48
July	113.077	5.30
August	108.761	5.51
September	108.723	5.52
October	110.639	5.42
November	113.560	5.28
December	108.452	5.53
<b>Average</b>	<b>115.388</b>	<b>5.21 %</b>

Source: Bloomberg

\$404,492  
100,000  
 \$504,492

<b>Norfolk Southern Corp.</b>		
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<b>42</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior 2105
	<b>CUSIP:</b>	655844AV0
	<b>Coupon Rate:</b>	6.000%
	<b>Maturity Date:</b>	3/15/2105
	<b>Amount Outstanding (\$ 000)</b>	\$550,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	118.813	5.04 %
February	121.843	4.91
March	121.503	4.93
April	128.358	4.66
May	122.291	4.90
June	110.350	5.43
July	112.649	5.32
August	110.135	5.44
September	110.597	5.42
October	110.612	5.42
November	108.566	5.52
December	107.601	5.57
<b>Average</b>	<b>115.277</b>	<b>5.21 %</b>

Source: Bloomberg

\$300,000
<u>250,000</u>
\$550,000

Norfolk Southern Corp.		
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43	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844AX6
	<b>Coupon Rate:</b>	5.640%
	<b>Maturity Date:</b>	5/17/2029
	<b>Amount Outstanding (\$ 000)</b>	\$210,316
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	122.984	3.74 %
February	122.845	3.75
March	119.701	3.97
April	124.709	3.60
May	116.054	4.24
June	111.601	4.60
July	106.500	5.04
August	106.481	5.04
September	109.092	4.81
October	108.677	4.84
November	109.105	4.80
December	108.600	4.84
<b>Average</b>	<b>113.862</b>	<b>4.44 %</b>

Source: Bloomberg

**Norfolk Southern Corp.**

<b>44</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844AW8
	<b>Coupon Rate:</b>	5.590%
	<b>Maturity Date:</b>	5/17/2025
	<b>Amount Outstanding (\$ 000)</b>	\$251,172
	<b>Months Outstanding</b>	12.0

<b>En End of Month in 20'</b>	<b>Price</b>	<b>Yield</b>
January	120.338	3.53 %
February	116.646	3.87
March	118.911	3.65
April	123.250	3.24
May	121.010	3.43
June	113.330	4.16
July	115.732	3.91
August	111.758	4.30
September	113.375	4.13
October	112.768	4.18
November	112.439	4.21
December	110.632	4.39
<b>Average</b>	<b>115.849</b>	<b>3.92 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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45	<b>Type:</b>	Notes
	<b>Description:</b>	Senior
	<b>CUSIP:</b>	655844BM9
	<b>Coupon Rate:</b>	3.950%
	<b>Maturity Date:</b>	10/1/2042
	<b>Amount Outstanding (\$ 000)</b>	\$600,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	94.737	4.26 %
February	95.100	4.24
March	95.047	4.25
April	98.220	4.05
May	92.203	4.43
June	87.177	4.77
July	88.098	4.70
August	85.853	4.86
September	84.637	4.95
October	86.811	4.80
November	84.877	4.94
December	85.772	4.88
<b>Average</b>	<b>89.878</b>	<b>4.59 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>
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<b>46</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior (New)
	<b>CUSIP:</b>	655844BN7
	<b>Coupon Rate:</b>	4.800%
	<b>Maturity Date:</b>	8/15/2043
	<b>Amount Outstanding (\$ 000)</b>	\$500,000
	<b>Months Outstanding</b>	4.5

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	Not Traded	-
May	Not Traded	-
June	Not Traded	-
July	Not Traded	-
August	98.977	4.87
September	97.211	4.98
October	99.209	4.85
November	97.081	4.99
December	99.322	4.84
<b>Average</b>	<b>98.360</b>	<b>4.91 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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<b>47</b>	<b>Type:</b>	Notes
	<b>Description:</b>	Senior (New)
	<b>CUSIP:</b>	655844BP2
	<b>Coupon Rate:</b>	3.850%
	<b>Maturity Date:</b>	1/15/2024
	<b>Amount Outstanding (\$ 000)</b>	\$400,000
	<b>Months Outstanding</b>	1.5

End of Month in 2013	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	101.985	3.61
December	100.495	3.79
<b>Average</b>	<b>101.240</b>	<b>3.70 %</b>

Source: Bloomberg

<b>Norfolk Southern Corp.</b>		
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<b>48</b>	<b>Type:</b>	Conrail Notes
	<b>Description:</b>	CR NSC 2017
	<b>CUSIP:</b>	655844AE8
	<b>Coupon Rate:</b>	7.700%
	<b>Maturity Date:</b>	5/15/2017
	<b>Amount Outstanding (\$ 000)</b>	\$550,000
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	125.290	1.56 %
February	126.001	1.31
March	125.485	1.34
April	124.811	1.37
May	123.585	1.52
June	121.162	1.99
July	121.841	1.72
August	120.059	2.04
September	120.631	1.78
October	120.836	1.62
November	120.239	1.67
December	119.021	1.85
<b>Average</b>	<b>122.413</b>	<b>1.65 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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<b>49</b>	<b>Type:</b>	Conrail Notes
	<b>Description:</b>	CR NSC 2027
	<b>CUSIP:</b>	655844AJ7
	<b>Coupon Rate:</b>	7.800%
	<b>Maturity Date:</b>	5/15/2027
	<b>Amount Outstanding (\$ 000)</b>	\$368,199
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	137.468	4.27 %
February	142.396	3.89
March	135.350	4.41
April	138.143	4.18
May	136.815	4.27
June	128.739	4.92
July	130.579	4.75
August	126.792	5.07
September	130.038	4.78
October	132.201	4.58
November	129.102	4.83
December	130.919	4.67
<b>Average</b>	<b>133.212</b>	<b>4.55 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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50	<b>Type:</b>	Conrail Notes
	<b>Description:</b>	CR NSC 2037
	<b>CUSIP:</b>	655844AF5
	<b>Coupon Rate:</b>	7.050%
	<b>Maturity Date:</b>	5/1/2037
	<b>Amount Outstanding (\$ 000)</b>	\$256,690
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	141.086	4.30
March	Not Traded	-
April	138.651	4.42
May	136.993	4.51
June	131.918	4.79
July	127.948	5.02
August	126.926	5.08
September	124.391	5.24
October	126.370	5.11
November	123.804	5.27
December	124.742	5.21
<b>Average</b>	<b>130.283</b>	<b>4.90 %</b>

Source: Bloomberg

Norfolk Southern Corp.		
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<b>51</b>	<b>Type:</b>	Conrail Notes
	<b>Description:</b>	CR NSC 2097
	<b>CUSIP:</b>	655844AK4
	<b>Coupon Rate:</b>	7.900%
	<b>Maturity Date:</b>	5/15/2097
	<b>Amount Outstanding (\$ 000)</b>	\$273,317
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	146.561	5.37 %
February	Not Traded	-
March	Not Traded	-
April	147.683	5.33
May	154.438	5.09
June	Not Traded	-
July	139.533	5.65
August	129.956	6.07
September	125.392	6.29
October	130.137	6.06
November	134.038	5.88
December	132.875	5.93
<b>Average</b>	<b>137.846</b>	<b>5.74 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>52</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CS5
	<b>Coupon Rate:</b>	5.375%
	<b>Maturity Date:</b>	6/1/2033
	<b>Amount Outstanding (\$ 000)</b>	\$198,592
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	112.017	4.47 %
February	110.523	4.57
March	108.402	4.72
April	113.961	4.33
May	113.919	4.33
June	109.240	4.66
July	104.916	4.98
August	107.750	4.77
September	106.152	4.88
October	102.660	5.16
November	102.837	5.14
December	103.150	5.12
<b>Average</b>	<b>107.961</b>	<b>4.76 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>53</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CX4
	<b>Coupon Rate:</b>	6.150%
	<b>Maturity Date:</b>	5/1/2037
	<b>Amount Outstanding (\$ 000)</b>	\$111,968
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	125.185	4.44
April	131.117	4.10
May	122.613	4.58
June	118.288	4.85
July	122.943	4.56
August	117.059	4.92
September	113.510	5.15
October	116.938	4.93
November	Not Traded	-
December	114.460	5.09
<b>Average</b>	<b>120.235</b>	<b>4.74 %</b>

Source: Bloomberg

Union Pacific Corp.		
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54	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CU0
	<b>Coupon Rate:</b>	6.250%
	<b>Maturity Date:</b>	5/1/2034
	<b>Amount Outstanding (\$ 000)</b>	\$227,863
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	125.981	4.36 %
February	122.534	4.58
March	119.500	4.77
April	131.376	4.02
May	129.541	4.13
June	125.379	4.38
July	Not Traded	-
August	116.833	4.94
September	114.926	5.07
October	117.258	4.91
November	114.875	5.07
December	114.789	5.08
<b>Average</b>	<b>121.181</b>	<b>4.66 %</b>

Source: Bloomberg

Union Pacific Corp.		
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55	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CF3
	<b>Coupon Rate:</b>	6.625%
	<b>Maturity Date:</b>	2/1/2029
	<b>Amount Outstanding (\$ 000)</b>	\$419,597
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	133.331	3.82 %
February	132.142	3.90
March	132.074	3.89
April	133.170	3.81
May	131.839	3.89
June	124.599	4.42
July	125.612	4.34
August	122.182	4.60
September	120.873	4.70
October	123.152	4.51
November	122.543	4.55
December	120.536	4.71
Average	126.838	4.26 %

Source: Bloomberg

Union Pacific Corp.		
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56	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818AZ1
	<b>Coupon Rate:</b>	7.000%
	<b>Maturity Date:</b>	2/1/2016
	<b>Amount Outstanding (\$ 000)</b>	\$203,355
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	117.255	1.17 %
February	115.505	1.56
March	116.548	1.07
April	114.500	1.59
May	115.654	1.01
June	113.787	1.53
July	114.349	1.24
August	112.843	1.57
September	113.580	1.10
October	113.166	1.11
November	113.767	0.58
December	112.589	1.03
Average	114.462	1.21 %

Source: Bloomberg

Union Pacific Corp.		
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57	<b>Type:</b>	Debentures
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818BY3
	<b>Coupon Rate:</b>	7.125%
	<b>Maturity Date:</b>	2/1/2028
	<b>Amount Outstanding (\$ 000)</b>	\$175,576
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	132.000	4.23 %
February	135.000	3.99
March	136.070	3.90
April	139.665	3.63
May	130.870	4.27
June	126.128	4.64
July	126.668	4.59
August	125.050	4.71
September	121.201	5.03
October	122.536	4.91
November	Not Traded	-
December	124.340	4.74
<b>Average</b>	<b>129.048</b>	<b>4.42 %</b>

Source: Bloomberg

<b>Union Pacific Corp.</b>
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<b>58</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp. (new)
	<b>CUSIP:</b>	907818DN5
	<b>Coupon Rate:</b>	2.750%
	<b>Maturity Date:</b>	4/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$323,177
	<b>Months Outstanding</b>	9.5

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	Not Traded	- %
February	Not Traded	-
March	100.804	2.66
April	102.383	2.48
May	98.787	2.89
June	95.040	3.35
July	94.651	3.40
August	92.870	3.64
September	93.499	3.56
October	94.143	3.48
November	92.784	3.67
December	91.447	3.86
<b>Average</b>	<b>95.641</b>	<b>3.30 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>59</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DM7
	<b>Coupon Rate:</b>	2.950%
	<b>Maturity Date:</b>	1/15/2023
	<b>Amount Outstanding (\$ 000)</b>	\$299,851
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	101.823	2.74 %
February	102.908	2.61
March	101.770	2.74
April	104.409	2.44
May	100.310	2.91
June	96.658	3.36
July	95.725	3.49
August	96.966	3.33
September	97.160	3.31
October	96.249	3.43
November	94.485	3.67
December	95.706	3.51
<b>Average</b>	<b>98.681</b>	<b>3.13 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>60</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DG0
	<b>Coupon Rate:</b>	4.000%
	<b>Maturity Date:</b>	2/1/2021
	<b>Amount Outstanding (\$ 000)</b>	\$498,287
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	111.012	2.48 %
February	112.310	2.29
March	111.238	2.42
April	112.992	2.17
May	110.176	2.53
June	106.336	3.06
July	107.213	2.92
August	105.555	3.15
September	105.580	3.14
October	106.192	3.04
November	105.956	3.07
December	104.768	3.24
<b>Average</b>	<b>108.277</b>	<b>2.79 %</b>

Source: Bloomberg

Union Pacific Corp.		
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61	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DK1
	<b>Coupon Rate:</b>	4.163%
	<b>Maturity Date:</b>	7/15/2022
	<b>Amount Outstanding (\$ 000)</b>	\$615,692
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	111.528	2.77 %
February	112.240	2.68
March	112.514	2.64
April	114.045	2.45
May	109.455	2.97
June	106.246	3.36
July	105.811	3.40
August	104.485	3.57
September	106.747	3.27
October	106.367	3.31
November	104.452	3.56
December	104.200	3.59
Average	108.174	3.13 %

Source: Bloomberg

Union Pacific Corp.		
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<b>62</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp. (new)
	<b>CUSIP:</b>	907818DP0
	<b>Coupon Rate:</b>	4.250%
	<b>Maturity Date:</b>	4/15/2043
	<b>Amount Outstanding (\$ 000)</b>	\$320,537
	<b>Months Outstanding</b>	9.5

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	Not Traded	-
March	101.056	4.19
April	105.908	3.91
May	98.475	4.34
June	94.935	4.56
July	93.982	4.62
August	93.133	4.68
September	92.251	4.74
October	92.786	4.71
November	90.551	4.86
December	90.937	4.83
Average	95.401	4.54 %

Source: Bloomberg

<b>Union Pacific Corp.</b>		
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<b>63</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DL9
	<b>Coupon Rate:</b>	4.300%
	<b>Maturity Date:</b>	6/15/2042
	<b>Amount Outstanding (\$ 000)</b>	\$299,655
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	101.760	4.20 %
February	102.671	4.14
March	102.565	4.15
April	106.552	3.92
May	99.372	4.34
June	95.857	4.56
July	94.815	4.63
August	94.230	4.67
September	92.790	4.76
October	93.859	4.69
November	91.707	4.84
December	93.251	4.73
<b>Average</b>	<b>97.452</b>	<b>4.47 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>64</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DJ4
	<b>Coupon Rate:</b>	4.750%
	<b>Maturity Date:</b>	9/15/2041
	<b>Amount Outstanding (\$ 000)</b>	\$490,517
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	107.143	4.31 %
February	109.983	4.15
March	110.450	4.12
April	114.650	3.89
May	106.928	4.32
June	99.716	4.77
July	102.075	4.62
August	100.674	4.71
September	99.324	4.79
October	100.558	4.71
November	99.520	4.78
December	100.450	4.72
<b>Average</b>	<b>104.289</b>	<b>4.49 %</b>

Source: Bloomberg

Union Pacific Corp.		
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65	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp. (new)
	<b>CUSIP:</b>	907818DU9
	<b>Coupon Rate:</b>	4.750%
	<b>Maturity Date:</b>	12/15/2043
	<b>Amount Outstanding (\$ 000)</b>	\$499,791
	<b>Months Outstanding</b>	2.5

End of Month in 2013	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	99.957	4.75
November	97.809	4.89
December	99.130	4.80
<b>Average</b>	<b>98.965</b>	<b>4.81 %</b>

Source: Bloomberg

Union Pacific Corp.		
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66	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CV8
	<b>Coupon Rate:</b>	4.875%
	<b>Maturity Date:</b>	1/15/2015
	<b>Amount Outstanding (\$ 000)</b>	\$249,934
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	107.410	1.02 %
February	107.662	0.72
March	107.460	0.71
April	107.065	0.70
May	106.674	0.70
June	106.030	0.91
July	105.923	0.77
August	105.548	0.77
September	105.480	0.60
October	105.213	0.53
November	104.815	0.54
December	103.860	1.11
Average	106.095	0.76 %

Source: Bloomberg

<b>Union Pacific Corp.</b>
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<b>67</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CW6
	<b>Coupon Rate:</b>	5.650%
	<b>Maturity Date:</b>	5/1/2017
	<b>Amount Outstanding (\$ 000)</b>	\$193,634
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	116.370	1.64 %
February	116.775	1.50
March	116.584	1.45
April	116.344	1.43
May	115.349	1.58
June	112.828	2.15
July	110.006	2.81
August	112.704	2.03
September	112.519	2.02
October	113.435	1.68
November	113.956	1.44
December	112.799	1.71
<b>Average</b>	<b>114.139</b>	<b>1.79 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>68</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DA3
	<b>Coupon Rate:</b>	5.700%
	<b>Maturity Date:</b>	8/15/2018
	<b>Amount Outstanding (\$ 000)</b>	\$368,628
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	120.748	1.75 %
February	121.138	1.63
March	120.920	1.61
April	121.198	1.51
May	118.667	1.91
June	116.712	2.23
July	116.874	2.14
August	115.344	2.39
September	116.020	2.21
October	116.248	2.11
November	116.019	2.10
December	115.138	2.23
<b>Average</b>	<b>117.919</b>	<b>1.99 %</b>

Source: Bloomberg

<b>Union Pacific Corp.</b>
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<b>69</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818CZ9
	<b>Coupon Rate:</b>	5.750%
	<b>Maturity Date:</b>	11/15/2017
	<b>Amount Outstanding (\$ 000)</b>	\$251,887
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	119.466	1.51 %
February	119.465	1.45
March	119.475	1.38
April	120.481	1.11
May	117.631	1.62
June	115.572	2.01
July	115.221	2.02
August	114.942	2.02
September	115.200	1.89
October	115.978	1.65
November	116.109	1.53
December	115.190	1.67
<b>Average</b>	<b>117.061</b>	<b>1.66 %</b>

Source: Bloomberg

<b>Union Pacific Corp.</b>
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<b>70</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DF2
	<b>Coupon Rate:</b>	5.780%
	<b>Maturity Date:</b>	7/15/2040
	<b>Amount Outstanding (\$ 000)</b>	\$65,402
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	123.137	4.33 %
February	123.769	4.30
March	123.849	4.29
April	129.185	4.01
May	123.154	4.32
June	114.768	4.80
July	118.868	4.56
August	112.349	4.94
September	114.019	4.84
October	115.017	4.78
November	Not Traded	-
December	Not Traded	-
<b>Average</b>	<b>119.812</b>	<b>4.52 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>71</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DD7
	<b>Coupon Rate:</b>	6.125%
	<b>Maturity Date:</b>	2/15/2020
	<b>Amount Outstanding (\$ 000)</b>	\$162,108
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	123.778	2.43 %
February	125.707	2.13
March	124.538	2.26
April	126.709	1.91
May	122.842	2.41
June	119.415	2.88
July	120.896	2.62
August	117.521	3.10
September	119.212	2.82
October	119.528	2.72
November	117.500	3.01
December	115.875	3.24
<b>Average</b>	<b>121.127</b>	<b>2.63 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>72</b>	<b>Type:</b>	Notes
	<b>Description:</b>	UP Corp.
	<b>CUSIP:</b>	907818DB1
	<b>Coupon Rate:</b>	7.875%
	<b>Maturity Date:</b>	1/15/2019
	<b>Amount Outstanding (\$ 000)</b>	\$158,359
	<b>Months Outstanding</b>	12.0

<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	128.479	2.66 %
February	128.572	2.62
March	130.625	2.21
April	130.051	2.23
May	127.284	2.62
June	125.020	2.94
July	128.263	2.32
August	125.955	2.65
September	123.544	3.02
October	125.617	2.57
November	125.591	2.52
December	122.878	2.96
<b>Average</b>	<b>126.823</b>	<b>2.61 %</b>

Source: Bloomberg

Union Pacific Corp.		
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<b>73</b>	<b>Type:</b>	Mort. Bond
	<b>Description:</b>	UPRR-MP
	<b>CUSIP:</b>	606198LF4
	<b>Coupon Rate:</b>	4.750%
	<b>Maturity Date:</b>	1/1/2020
	<b>Amount Outstanding (\$ 000)</b>	\$29,905
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	99.755	4.79 %
February	96.871	5.30
March	100.000	4.75
April	100.000	4.75
May	99.705	4.80
June	99.950	4.75
July	Not Traded	-
August	98.550	5.02
September	97.400	5.24
October	98.350	5.07
November	96.250	5.49
December	99.500	4.85
<b>Average</b>	<b>98.757</b>	<b>4.98 %</b>

Source: Bloomberg

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

End of Month in 2013	Price	Yield
January	Not Traded	- %
February	98.500	4.88
March	90.832	5.61
April	95.250	5.18
May	95.250	5.18
June	91.750	5.52
July	Not Traded	-
August	95.000	5.21
September	96.000	5.12
October	Not Traded	-
November	87.809	5.95
December	87.000	6.04
<b>Average</b>	<b>93.043</b>	<b>5.41 %</b>

Source: Bloomberg

Union Pacific Corp.		
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75	<b>Type:</b>	Debentures
	<b>Description:</b>	UPRR-MP
	<b>CUSIP:</b>	606198LH0
	<b>Coupon Rate:</b>	5.000%
	<b>Maturity Date:</b>	1/1/2045
	<b>Amount Outstanding (\$ 000)</b>	\$96,025
	<b>Months Outstanding</b>	12.0

End of Month in 2013	Price	Yield
January	76.000	6.87 %
February	92.500	5.50
March	86.150	5.98
April	93.610	5.42
May	85.875	6.01
June	87.000	5.92
July	84.550	6.12
August	82.600	6.28
September	81.551	6.37
October	85.969	6.00
November	85.750	6.02
December	82.000	6.34
Average	85.296	6.07 %

Source: Bloomberg

<b>Union Pacific Corp.</b>
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<b>76</b>	<b>Type:</b>	Debentures
	<b>Description:</b>	MP C&EI UPRR
	<b>CUSIP:</b>	167123AP3
	<b>Coupon Rate:</b>	5.000%
	<b>Maturity Date:</b>	1/1/2054
	<b>Amount Outstanding (\$ 000)</b>	\$1,641
	<b>Months Outstanding</b>	12.0

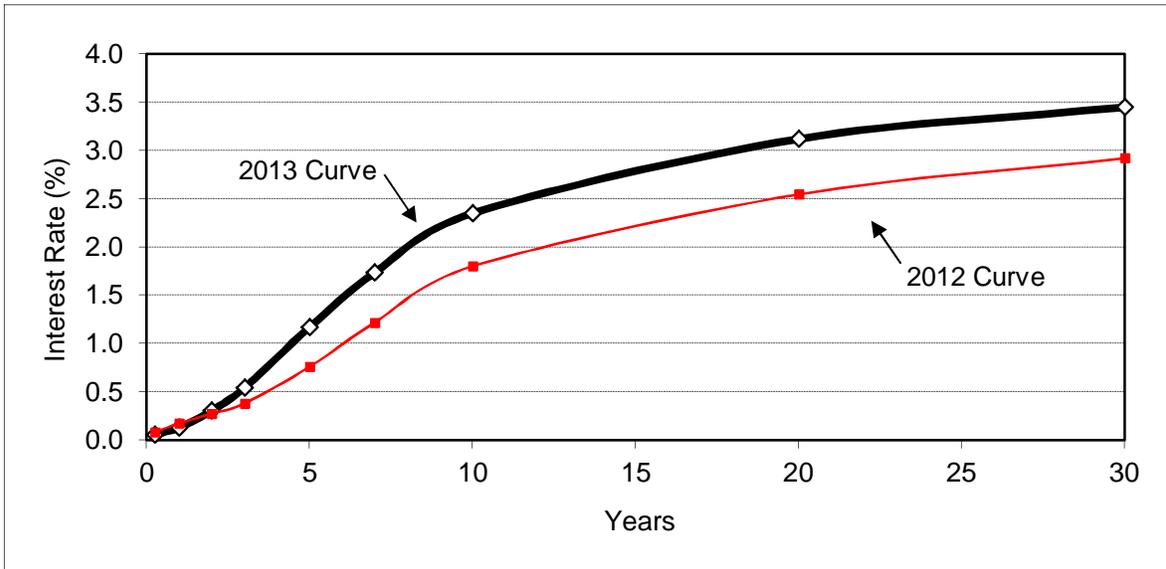
<b>End of Month in 2013</b>	<b>Price</b>	<b>Yield</b>
January	Not Traded	- %
February	Not Traded	-
March	Not Traded	-
April	70.000	7.32
May	Not Traded	-
June	71.000	7.22
July	Not Traded	-
August	78.500	6.51
September	Not Traded	-
October	70.000	7.33
November	70.500	7.28
December	79.000	6.47
<b>Average</b>	<b>73.167</b>	<b>7.02 %</b>

Source: Bloomberg

### Interest Rates on Selected Government Instruments

Yield in Percent Per Annum, Constant Maturity Rates for 2013

	<b>3 Mo.</b>	<b>1 Yr</b>	<b>2 Yr</b>	<b>3 Yr</b>	<b>5 Yr</b>	<b>7 Yr</b>	<b>10 Yr</b>	<b>20 Yr</b>	<b>30 Yr</b>
January	0.07	0.15	0.27	0.39	0.81	1.30	1.91	2.68	3.08
February	0.10	0.16	0.27	0.40	0.85	1.35	1.98	2.78	3.17
March	0.09	0.15	0.26	0.39	0.82	1.32	1.96	2.78	3.16
April	0.06	0.12	0.23	0.34	0.71	1.15	1.76	2.55	2.93
May	0.04	0.12	0.25	0.40	0.84	1.31	1.93	2.73	3.11
June	0.05	0.14	0.33	0.58	1.20	1.71	2.30	3.07	3.40
July	0.04	0.12	0.34	0.64	1.40	1.99	2.58	3.31	3.61
August	0.04	0.13	0.36	0.70	1.52	2.15	2.74	3.49	3.76
September	0.02	0.12	0.40	0.78	1.60	2.22	2.81	3.53	3.79
October	0.05	0.12	0.34	0.63	1.37	1.99	2.62	3.38	3.68
November	0.07	0.12	0.30	0.58	1.37	2.07	2.72	3.50	3.80
December	0.07	0.13	0.34	0.69	1.58	2.29	2.90	3.63	3.89
<b>Average</b>	<b>0.06</b>	<b>0.13</b>	<b>0.31</b>	<b>0.54</b>	<b>1.17</b>	<b>1.74</b>	<b>2.35</b>	<b>3.12</b>	<b>3.45</b>



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

## Equipment Trust Certificates for CSX

### Modeled ETCs

ETC ID	Maturity	Balance For 2013 (\$000)			Current Valuation		Current	
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1. ETC CSX Series B 239	4/1/15	15,300	10,200	\$12,750	1.266%	1.13245	\$14,439	\$183
2. ETC CSX Series B 240	5/15/15	12,600	8,400	10,500	1.266%	1.11669	11,725	148
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
11.				--			--	--
12.				--			--	--
13.				--			--	--
14.				--			--	--
15.				--			--	--
<b>Total</b>		<b>\$27,900</b>	<b>\$18,600</b>	<b>\$23,250</b>	<b>1.266%</b>		<b>\$26,164</b>	<b>\$331</b>

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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
<b>Total</b>		<b>\$0</b>	<b>\$0</b>

## Equipment Trust Certificates for CSX (continued)

### Entire ETC Current – Not Used for Cost or Market Value

ETC ID	Maturity	<u>Balance 2013 (\$000)</u>	
		Beg.	Ending
1. ETC CSX Series B 236	2/15/14	10,000	5,000
2. ETC CSX Series B 237	4/15/14	8,000	4,000
3. ETC CSX Series B 238	6/15/14	7,400	3,700
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
Total		\$25,400	\$12,700

### Grand Totals (for reconciliation to carrier data)

	<u>Balance For 2013 (\$000)</u>	
	Beg.	Ending
Total Modeled	\$27,900	\$18,600
Total Non-Modeled	0	0
Sub Total	27,900	18,600
Total All Current	25,400	12,700
Grand Total	\$53,300	\$31,300
<b>From CSX:</b>		
Total ETCs	\$58,300	\$31,300
Difference		\$0

## Equipment Trust Certificates for KCS

### Modeled ETCs

ETC ID	Maturity	Balance For 2013 (\$000)			Current Valuation		Current	
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1. [None]				--			--	--
2.				--			--	--
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
11.				--			--	--
12.				--			--	--
13.				--			--	--
14.				--			--	--
15.				--			--	--
Total		\$0	\$0	\$0	--		\$0	\$0

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 2013 (\$000)	
		Beg.	Ending
1. [None]			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
Total		\$0	\$0

### Equipment Trust Certificates for KCS (continued)

Entire ETC Current – Not Used for Cost or Market Value

ETC ID	Maturity	Balance 2013 (\$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 2013 (\$000)	
	Beg.	Ending
Total Modeled	\$0	\$0
Total Non-Modeled	0	0
Sub Total	0	0
Total All Current	0	0
Grand Total	\$0	\$0
<b>From KCS:</b>		
Total ETCs		\$0
Difference		\$0

## Equipment Trust Certificates for NS

### Modeled ETCs

ETC ID	Maturity	Balance For 2013 (\$000)			Current Valuation		Current	
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1. [None]				--			--	--
2.				--			--	--
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
11.				--			--	--
12.				--			--	--
13.				--			--	--
14.				--			--	--
15.				--			--	--
Total		\$0	\$0	\$0	--		\$0	\$0

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 2013 (\$000)	
		Beg.	Ending
1. [None]			
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	<u>Balance 2013 (\$000)</u>	
		<u>Beg.</u>	<u>Ending</u>
1. NSR Series I	4/1/14	\$12,600	\$6,300
2. NSR Series J	6/15/14	12,500	6,250
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
Total		\$25,100	\$12,550

### Grand Totals (for reconciliation to carrier data)

	<u>Balance For 2013 (\$000)</u>	
	<u>Beg.</u>	<u>Ending</u>
Total Modeled	\$0	\$0
Total Non-Modeled	0	0
Sub Total	0	0
Total All Current	25,100	12,550
Grand Total	\$25,100	\$12,550
<b>From NS:</b>		
Total ETCs		\$12,550
Difference		\$0

## Equipment Trust Certificates for UP

### Modeled ETCs

ETC ID	Maturity	Balance For 2013 (\$000)			Current Valuation		Current	
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1. ETC UPC Series I	2/23/19	44,586	39,160	41,873	2.233%	1.16875	48,939	1,093
2. ETC UPC Series J	1/2/2031	74,831	70,834	72,833	3.534%	1.21402	88,420	3,125
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
11.				--			--	--
12.				--			--	--
13.				--			--	--
14.				--			--	--
15.				--			--	--
<b>Total</b>		<b>\$119,417</b>	<b>\$109,994</b>	<b>\$114,706</b>	<b>3.070%</b>		<b>\$137,359</b>	<b>\$4,218</b>

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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
<b>Total</b>		<b>\$0</b>	<b>\$0</b>

## Equipment Trust Certificates for UP (continued)

### Entire ETC Current – Not Used for Cost or Market Value

ETC ID	Maturity	Balance 2013 (\$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 2013 (\$000)	
	Beg.	Ending
Total Modeled	\$119,417	\$109,994
Total Non-Modeled	0	0
Sub Total	119,417	109,994
Total All Current	0	0
Grand Total	\$119,417	\$109,994
<b>From UP:</b>		
Total ETCs		\$109,994
Difference		\$0

### Conditional Sales Agreements for CSX

**Modeled CSAs**

CSA ID	Maturity	Balance For 2013 (\$000)			Current Interest	Valuation	Current	
		Beg.	Ending	Avg O/S	Rate	Factor	Market Value	Interest
1.				--			--	--
2.				--			--	--
3.				--			--	--
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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total		\$0	\$0

Current CSAs Not Used	Maturity	Balance For 2013 (\$000)	
		Beg.	Ending
CSA 424	09/15/14	\$11,983	\$5,991
<b>Grand Total All CSAs</b>		<b>\$11,983</b>	<b>\$5,991</b>

**From CSX:**

Total CSAs	\$11,983	\$5,991
Difference from Grand Total		\$0

### Conditional Sales Agreements for KCS

#### Modeled CSAs

CSA ID	Maturity	Balance For 2013 (\$000)			Current Valuation	Current		
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1.				--			--	--
2.				--			--	--
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
Total		\$0	\$0	\$0	--		\$0	\$0

None.

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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total		\$0	\$0

	Balance For 2013 (\$000)	
	Beg.	Ending
Current CSAs Not Used	0	0
Grand Total All CSAs	\$0	\$0

### Conditional Sales Agreements for NS

#### Modeled CSAs

CSA ID	Maturity	Balance For 2013 (\$000)			Current Valuation	Current			
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total		\$0	\$0

	Balance For 2013 (\$000)	
	Beg.	Ending
Current CSAs Not Used	0	0
<b>Grand Total All CSAs</b>	<b>\$0</b>	<b>\$0</b>

## Conditional Sales Agreements for UP

### Modeled CSAs

CSA ID	Maturity	Balance For 2013 (\$000)			Current Valuation		Current	
		Beg.	Ending	Avg O/S	Interest Rate	Valuation Factor	Market Value	Interest
1.				--			--	--
2.				--			--	--
3.				--			--	--
4.				--			--	--
5.				--			--	--
6.				--			--	--
7.				--			--	--
8.				--			--	--
9.				--			--	--
10.				--			--	--
Total		\$0	\$0	\$0	--		\$0	\$0

None.

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 2013 (\$000)	
		Beg.	Ending
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total		\$0	\$0

	Balance For 2013 (\$000)	
	Beg.	Ending
Current CSAs Not Used	0	0
Grand Total All CSAs	\$0	\$0

## 2013 Market Value of Debt (\$000)

Type of Debt	Market Value			Percent of	
	Traded or Modeled	Non-Traded or Non-Modeled	Total	Subtotal	Total
Bonds, Notes & Debentures	\$25,363,716	\$1,398,282	\$26,761,998	99.39%	94.28%
Equipment Trust Certificates	163,523		163,523	0.61%	0.58%
Conditional Sales Agreements	0		0	0.00%	0.00%
Sub Total	\$25,527,240	\$1,398,282	\$26,925,522	100.00%	94.86%
All Other — Capital Leases		\$1,730,175	\$1,730,175	118.61%	6.10%
All Other — Misc. Debt		-271,508	-271,508	-18.61%	-0.96%
All Other — Non-Modeled ETC		0	0	0.00%	0.00%
All Other — Non-Modeled CSA		0	0	0.00%	0.00%
Sub Total			\$1,458,667	100.00%	5.14%
<b>Total Market Value</b>			<b>\$28,384,189</b>		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 94.78 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. (There were none.)

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 \$1,458,667 thousand. The non-modeled ETCs and CSAs were also assigned a market value equal to their book value, and totaled to \$0 thousand. The All Other category totals to \$1,458,667 thousand, or 5.1 percent of total debt.

If negative numbers appear in Miscellaneous Debt, they typically are related to debt premiums and discounts.

## 2013 Flotation Costs for Bonds

<i>From 424(b)</i>	<b>CSX Notes 10/17/2013</b>	<b>NSC Sr Notes 11/18/2013</b>	<b>NSC Sr Notes 8/8/2013</b>	<b>UNP Notes 3/12/2013</b>	<b>UNP Notes 3/12/2013</b>	<b>UNP Notes 10/22/2013</b>
Face Amount	\$500,000,000	\$400,000,000	\$500,000,000	\$325,000,000	\$325,000,000	\$500,000,000
Coupon Rate	3.700%	3.850%	4.800%	2.750%	4.250%	4.750%
Maturity Date	11/1/2023	1/15/2024	8/15/2043	4/15/2023	4/15/2043	12/15/2043
Frequency of Coupon Payment	2	2	2	2	2	2
Interest Accrual Date	10/22/2013	11/21/2013	8/13/2013	3/15/2013	3/15/2013	10/25/2013
Price To Investors	99.924	99.943	99.167	99.396	98.608	99.958
Proceeds from Sale (before expenses)	<b>\$499,620,000</b>	<b>\$399,772,000</b>	<b>\$495,835,000</b>	<b>\$323,037,000</b>	<b>\$320,476,000</b>	<b>\$499,790,000</b>
Underwriter Fee as Pct of Gross Proceeds	0.650%	0.650%	0.650%	0.650%	0.875%	0.875%
Underwriter's Fee	<b>\$3,250,000</b>	<b>\$2,600,000</b>	<b>\$3,250,000</b>	<b>\$2,112,500</b>	<b>\$2,843,750</b>	<b>\$4,375,000</b>
Railroad Expenses Excluding Fee	\$275,000	\$100,000	\$100,000	\$37,500	\$37,500	\$75,000
Page in 424(b)(5) for Expenses	S-20	S-18	S-19	S-7	S-7	S-7
<b><i>Calculated</i></b>						
Yield Based on Price to Investors	<b>3.709%</b>	<b>3.856%</b>	<b>4.853%</b>	<b>2.819%</b>	<b>4.333%</b>	<b>4.752%</b>
Issue Price Per \$100 Less Flotation	<b>\$99.22</b>	<b>\$99.27</b>	<b>\$98.50</b>	<b>\$98.73</b>	<b>\$97.72</b>	<b>\$99.07</b>
Yield on New Issue Including Flotation	<b>3.794%</b>	<b>3.938%</b>	<b>4.896%</b>	<b>2.895%</b>	<b>4.387%</b>	<b>4.809%</b>
<b>Flotation Costs (Difference in Pct Pts)</b>	<b>0.085%</b>	<b>0.081%</b>	<b>0.043%</b>	<b>0.076%</b>	<b>0.054%</b>	<b>0.056%</b>
<b>Average Flotation Cost (Pct. Points)</b>	<b><u>0.066%</u></b>					

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

## Example of Source for Bond Flotation Costs

Prospectus Supplement  
(To Prospectus dated February 15, 2013)



### \$500,000,000 3.700% Notes due 2023

We are offering \$500,000,000 aggregate principal amount of 3.700% Notes due 2023 (the "Notes"). The Notes will mature on November 1, 2023. Interest is payable on the Notes on May 1 and November 1 of each year, commencing May 1, 2014. Interest on the Notes will accrue from October 22, 2013. We may redeem the Notes, in whole or in part, at any time, at the redemption prices set forth under the caption "Description of Notes—Optional Redemption."

The Notes will be senior obligations of our company and will rank equally with all of our other unsecured senior indebtedness.

The Notes will be represented by one or more permanent global Notes in definitive, fully registered form without interest coupons, registered in the name of a nominee for The Depository Trust Company. The Notes will be issued in denominations of \$2,000 and integral multiples of \$1,000 in excess thereof.

Investing in these Notes involves risks. See risks described as risk factors in Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 28, 2012 as they may be amended, updated and modified periodically in our reports filed with the Securities and Exchange Commission.

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 prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	<u>Price to Public(1)</u>	<u>Underwriting Discount</u>	<u>Proceeds to Us</u>
Per Note	99.924%	0.650%	99.274%
Total	\$ 499,620,000	\$ 3,250,000	\$496,370,000

(1) Plus accrued interest from October 22, 2013 if settlement occurs after that.

CSX will not make application to list the Notes on any securities exchange or to include them in any automated quotation system.

We expect that delivery of the Notes will be made to investors on or about October 22, 2013, through the book-entry system of The Depository Trust Company for the accounts of its participants, including Euroclear Bank S.A./N.V., as operator of the Euroclear system, and Clearstream Banking, société anonyme.

## Example of Source for Bond Flotation Costs

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Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Morgan Stanley & Co. LLC, on behalf of the underwriters, may also impose a penalty bid. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when Citigroup Global Markets Inc., J.P. Morgan Securities LLC and Morgan Stanley & Co. LLC, in covering syndicate short positions or making stabilizing purchases, repurchase Notes originally sold by that syndicate member.

Any of these activities may have the effect of preventing or retarding a decline in the market price of the Notes. They may also cause the price of the Notes to be higher than the price that otherwise would exist in the open market in the absence of these transactions. The underwriters may conduct these transactions in the over-the-counter market or otherwise. If the underwriters commence any of these transactions, they may discontinue them at any time.

We estimate that our total expenses (excluding underwriting discounts and commissions) for this offering will be approximately \$275,000.

Certain of the underwriters and their affiliates have in the past provided, are currently providing and may in the future from time to time provide, investment banking and other financing, trading, banking, research, transfer agent and trustee services to us or our subsidiaries, for which they have in the past received, and may currently or in the future receive, customary fees and expenses. Certain of the underwriters or their affiliates engage in commercial lending activities with us and are lenders under our bank credit facilities.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, or to contribute to payments the underwriters may be required to make because of any of those liabilities.

## 2013 Current Cost of Debt

Type of Debt	Reference	Appendix E Weight	Current Cost	Weighted Cost
<b>Type of Instrument</b>				
Bonds, Notes & Debentures	App. A & Table 4	99.39%	3.620%	3.598%
Equipment Trust Certificates	App. C & Table 6	0.61%	2.782%	0.017%
Conditional Sales Agreements	App. D & Table 7	0.00%	--	--
Total Without Floatation Costs		100.00%		3.615%
<b>Floatation Costs</b>				
Bonds, Notes & Debentures	App. F & Table 10	99.39%	0.066%	0.066%
Equipment Trust Certificates	Tables 9 and 10	0.61%	0.073%	0.000%
Conditional Sales Agreements	Tables 9 and 10	0.00%	not calculated	0.000%
Total Floatation Costs		100.00%		0.066%
Weighted Cost of Debt				3.681%
<b>Weighted Cost of Debt (rounded)</b>				<b>3.68%</b>

## Market Value for Common Equity

### CSX Data from Yahoo Finance 1-14-2014

<http://finance.yahoo.com/q/hp?s=CSX&a=11&b=20&c=2008&d=00&e=14&f=2014&g=w>

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization (\$000)
12/31/2012	19.40	21.04	19.36	20.94	8942600	1,031,377,919	21,597,054
1/7/2013	20.81	20.83	20.01	20.54	11038100	1,031,377,919	21,184,502
1/14/2013	20.52	21.17	20.45	20.91	8028100	1,031,377,919	21,566,112
1/22/2013	20.92	22.45	20.57	22.24	14397300	1,020,796,630	22,702,517
1/28/2013	22.36	22.67	21.73	21.92	8741700	1,020,796,630	22,375,862
2/4/2013	21.78	21.97	21.45	21.97	7227600	1,020,796,630	22,426,902
2/11/2013	22.35	23.00	22.26	22.79	8613800	1,020,796,630	23,263,955
2/19/2013	22.83	23.10	22.44	22.86	7144300	1,020,796,630	23,335,411
2/25/2013	22.97	23.08	21.84	22.97	8425700	1,020,796,630	23,447,699
3/4/2013	22.86	23.80	22.62	22.99	10341100	1,020,796,630	23,468,115
3/11/2013	23.02	24.27	23.02	24.02	8956600	1,020,796,630	24,519,535
3/18/2013	23.78	24.33	23.63	24.03	6978400	1,020,796,630	24,529,743
3/25/2013	24.15	24.67	23.84	24.63	6194700	1,020,796,630	25,142,221
4/1/2013	24.64	24.69	23.26	23.84	7011400	1,021,960,630	24,363,541
4/8/2013	23.67	24.65	23.59	24.51	6246400	1,021,960,630	25,048,255
4/15/2013	24.36	24.42	23.30	23.70	10263000	1,021,960,630	24,220,467
4/22/2013	23.80	24.45	23.50	24.37	5723200	1,021,960,630	24,905,181
4/29/2013	24.49	24.98	24.03	24.81	5142900	1,021,960,630	25,354,843
5/6/2013	24.82	25.74	24.81	25.43	6391900	1,021,960,630	25,988,459
5/13/2013	25.33	26.00	25.07	25.92	5416600	1,021,960,630	26,489,220
5/20/2013	25.88	26.36	25.11	25.50	5124500	1,021,960,630	26,059,996
5/28/2013	25.82	25.99	24.85	25.21	7519200	1,021,960,630	25,763,627
6/3/2013	25.30	25.44	24.12	25.02	8229300	1,021,960,630	25,569,455
6/10/2013	25.16	25.44	24.73	24.94	6953300	1,021,960,630	25,487,698
6/17/2013	25.07	25.34	23.34	23.47	9661300	1,021,960,630	23,985,416
6/24/2013	23.23	23.57	22.40	23.19	9434100	1,018,837,313	23,626,837
7/1/2013	23.33	23.50	22.89	23.26	5757600	1,018,837,313	23,698,156
7/8/2013	23.38	24.79	23.09	24.36	6588400	1,018,837,313	24,818,877
7/15/2013	24.43	25.79	24.27	25.39	8843200	1,018,837,313	25,868,279
7/22/2013	25.40	25.63	24.43	24.68	5440600	1,018,837,313	25,144,905
7/29/2013	24.65	26.68	24.56	26.05	9392200	1,018,837,313	26,540,712
8/5/2013	26.26	26.26	25.27	25.70	8045600	1,018,837,313	26,184,119
8/12/2013	25.52	25.67	24.79	25.16	5585100	1,018,837,313	25,633,947
8/19/2013	25.08	25.40	24.56	25.36	4545600	1,018,837,313	25,837,714
8/26/2013	25.38	25.62	24.46	24.61	4827800	1,018,837,313	25,073,586
9/3/2013	24.92	25.68	24.68	25.45	5105400	1,018,837,313	25,929,410
9/9/2013	25.52	26.17	25.38	26.06	5040700	1,018,837,313	26,550,900
9/16/2013	26.38	26.90	25.56	26.42	6751600	1,018,837,313	26,917,682
9/23/2013	26.39	26.40	25.65	25.85	5605400	1,013,674,361	26,203,482
9/30/2013	25.56	26.25	25.04	25.57	5499800	1,013,674,361	25,919,653
10/7/2013	25.40	26.08	25.08	25.83	6816700	1,013,674,361	26,183,209
10/14/2013	25.76	26.21	25.28	25.70	9173200	1,013,674,361	26,051,431
10/21/2013	25.64	26.61	25.58	26.61	5744400	1,013,674,361	26,973,875
10/28/2013	26.63	26.85	25.97	26.28	5269600	1,013,674,361	26,639,362
11/4/2013	26.49	26.64	26.20	26.61	5510600	1,013,674,361	26,973,875
11/11/2013	26.60	27.14	26.50	27.00	6018600	1,013,674,361	27,369,208
11/18/2013	27.07	27.48	26.75	27.35	5225600	1,013,674,361	27,723,994
11/25/2013	27.34	27.53	27.02	27.27	3261600	1,013,674,361	27,642,900
12/2/2013	27.27	27.90	27.02	27.75	5214200	1,013,674,361	28,129,464
12/9/2013	27.85	28.25	27.25	27.57	5144000	1,013,674,361	27,947,002
12/16/2013	27.73	28.26	27.40	28.08	7352200	1,013,674,361	28,463,976
12/23/2013	28.30	28.56	28.18	28.29	2604600	1,013,674,361	28,676,848
12/30/2013	28.32	28.80	28.19	28.43	4214800	1,013,674,361	28,818,762

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

## Market Value for Common Equity

### KSU Data from Yahoo Finance 1-14-2014

<http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=w&s=KSU%2C+&q=1>

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization (\$000)
12/31/2012	81.67	89.24	81.56	88.82	1088700	110,044,355	9,774,140
1/7/2013	86.76	87.19	84.52	85.54	1088600	110,044,355	9,413,194
1/14/2013	85.76	88.00	84.66	87.63	835400	110,044,355	9,643,187
1/22/2013	88.85	94.46	88.85	94.02	1459900	110,044,355	10,346,370
1/28/2013	94.30	95.13	91.89	94.34	946000	110,154,639	10,391,989
2/4/2013	93.68	95.89	93.45	95.09	745400	110,154,639	10,474,605
2/11/2013	95.16	98.34	94.33	97.77	711800	110,154,639	10,769,819
2/19/2013	98.07	99.29	96.35	98.78	794900	110,154,639	10,881,075
2/25/2013	99.34	107.32	96.23	102.02	1580400	110,154,639	11,237,976
3/4/2013	101.96	106.83	101.77	105.32	814500	110,154,639	11,601,487
3/11/2013	105.39	108.93	104.94	107.98	729800	110,154,639	11,894,498
3/18/2013	106.66	109.44	106.20	107.56	615500	110,154,639	11,848,233
3/25/2013	107.54	112.25	106.21	110.90	1199700	110,154,639	12,216,149
4/1/2013	110.87	111.16	100.35	104.73	1130200	110,154,639	11,536,495
4/8/2013	104.57	108.10	104.49	107.77	559600	110,181,963	11,874,310
4/15/2013	106.17	107.09	100.58	106.46	1211700	110,181,963	11,729,972
4/22/2013	106.49	108.38	103.53	106.64	685000	110,181,963	11,749,805
4/29/2013	106.77	111.63	103.57	110.15	921500	110,181,963	12,136,543
5/6/2013	110.34	110.73	108.36	109.93	881800	110,181,963	12,112,303
5/13/2013	109.83	118.88	109.18	117.16	965000	110,181,963	12,908,919
5/20/2013	116.39	117.34	107.50	111.37	4332300	110,181,963	12,270,965
5/28/2013	113.21	114.66	110.70	110.70	812400	110,181,963	12,197,143
6/3/2013	111.15	111.30	105.06	110.47	709700	110,181,963	12,171,801
6/10/2013	110.75	112.45	106.94	110.60	581600	110,181,963	12,186,125
6/17/2013	111.60	112.41	106.44	107.07	667100	110,181,963	11,797,183
6/24/2013	104.96	109.11	102.03	105.96	773000	110,181,963	11,674,881
7/1/2013	108.29	113.07	107.45	112.59	772100	110,181,963	12,405,387
7/8/2013	112.62	115.49	111.29	113.81	989600	110,220,241	12,544,166
7/15/2013	114.01	118.30	113.34	118.30	761800	110,220,241	13,039,055
7/22/2013	118.68	118.68	108.54	110.13	1019500	110,220,241	12,138,555
7/29/2013	109.74	112.05	107.19	110.06	832000	110,220,241	12,130,840
8/5/2013	110.06	110.82	106.24	108.10	723900	110,220,241	11,914,808
8/12/2013	107.00	109.52	104.54	106.52	541100	110,220,241	11,740,660
8/19/2013	106.38	108.71	105.16	108.50	513500	110,220,241	11,958,896
8/26/2013	108.44	108.99	104.02	105.42	520200	110,220,241	11,619,418
9/3/2013	106.63	109.21	105.24	108.05	309100	110,220,241	11,909,297
9/9/2013	108.33	112.00	107.96	110.29	613700	110,220,241	12,156,190
9/16/2013	112.35	113.24	110.78	111.42	806900	110,220,241	12,280,739
9/23/2013	111.15	111.75	109.32	110.11	484000	110,220,241	12,136,351
9/30/2013	108.73	112.42	108.41	111.99	688400	110,220,241	12,343,565
10/7/2013	111.10	113.76	107.84	113.29	758900	110,209,276	12,485,609
10/14/2013	112.73	118.88	111.03	117.35	897000	110,209,276	12,933,059
10/21/2013	117.62	124.55	115.93	123.49	999300	110,209,276	13,609,743
10/28/2013	123.30	124.16	120.91	122.61	597300	110,209,276	13,512,759
11/4/2013	123.50	125.86	121.70	123.32	628300	110,209,276	13,591,008
11/11/2013	123.20	125.96	122.98	125.02	416600	110,209,276	13,778,364
11/18/2013	125.05	125.50	120.60	121.80	589600	110,209,276	13,423,490
11/25/2013	121.62	122.74	120.87	121.02	375800	110,209,276	13,337,527
12/2/2013	121.41	122.40	117.95	118.15	630000	110,209,276	13,021,226
12/9/2013	118.03	122.13	116.16	117.44	798200	110,209,276	12,942,977
12/16/2013	116.05	122.16	116.05	121.73	770400	110,209,276	13,415,775
12/23/2013	122.25	124.10	121.26	122.04	422800	110,209,276	13,449,940
12/30/2013	122.04	123.89	119.30	119.77	557100	110,209,276	13,199,765

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

## Market Value for Common Equity

### NSC Data from Yahoo Finance 1-14-2014

<http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=w&s=NSC%2C+&q=1>

Beg. of Wk. Date	Open	High	Low	End of Wk Close	Volume	Shares Outstanding	Capitalization (\$000)
12/31/2012	60.82	65.75	60.70	65.37	2425500	316,043,185	20,659,743
1/7/2013	65.13	65.28	63.75	64.04	2443900	316,043,185	20,239,406
1/14/2013	65.21	66.74	64.51	66.70	2241600	316,043,185	21,080,080
1/22/2013	66.63	70.00	66.18	69.69	3312800	316,043,185	22,025,050
1/28/2013	70.22	71.24	68.63	69.60	2960000	314,516,374	21,890,340
2/4/2013	69.60	69.74	68.18	69.00	2564700	314,516,374	21,701,630
2/11/2013	69.19	72.75	69.15	71.50	2118100	314,516,374	22,487,921
2/19/2013	71.89	73.42	71.39	73.11	2434500	314,516,374	22,994,292
2/25/2013	73.35	74.10	70.83	73.75	2634000	314,516,374	23,195,583
3/4/2013	73.51	75.71	73.11	74.77	2325600	314,516,374	23,516,389
3/11/2013	74.60	75.62	73.89	75.62	1838900	314,516,374	23,783,728
3/18/2013	74.84	76.26	74.45	74.65	1804500	314,516,374	23,478,647
3/25/2013	75.18	77.42	74.05	77.08	1830500	314,516,374	24,242,922
4/1/2013	76.94	77.33	72.26	74.52	2571400	315,088,379	23,480,386
4/8/2013	74.45	78.08	74.34	76.81	2058400	315,088,379	24,201,938
4/15/2013	76.28	76.31	73.08	74.75	2172100	315,088,379	23,552,856
4/22/2013	74.75	76.34	73.66	75.56	1848800	315,088,379	23,808,078
4/29/2013	75.65	78.79	74.89	77.81	2144900	315,088,379	24,517,027
5/6/2013	77.75	79.34	77.56	79.01	1528200	315,088,379	24,895,133
5/13/2013	78.75	80.46	77.98	80.23	1536400	315,088,379	25,279,541
5/20/2013	80.23	81.00	76.20	77.64	2114900	315,088,379	24,463,462
5/28/2013	78.79	78.97	76.56	76.59	2268500	315,088,379	24,132,619
6/3/2013	77.01	78.36	74.06	77.41	2096500	315,088,379	24,390,991
6/10/2013	77.95	78.05	75.25	76.17	1914400	315,088,379	24,000,282
6/17/2013	76.55	77.38	72.33	72.90	2498700	315,088,379	22,969,943
6/24/2013	72.11	74.36	70.27	72.65	2706200	315,088,379	22,891,171
7/1/2013	72.99	73.40	71.51	72.33	1873100	311,952,780	22,563,545
7/8/2013	72.48	75.52	72.11	75.20	1844800	311,952,780	23,458,849
7/15/2013	75.12	78.18	75.12	78.08	1661900	311,952,780	24,357,273
7/22/2013	78.13	78.20	72.46	73.92	2723500	311,952,780	23,059,549
7/29/2013	73.87	76.55	73.04	75.50	1940800	311,952,780	23,552,435
8/5/2013	75.49	75.64	73.37	73.98	1338200	311,952,780	23,078,267
8/12/2013	73.60	74.56	72.50	74.00	1379700	311,952,780	23,084,506
8/19/2013	73.82	74.49	72.38	74.46	1334700	311,952,780	23,228,004
8/26/2013	74.51	75.00	71.86	72.16	1354300	311,952,780	22,510,513
9/3/2013	72.89	75.33	71.88	74.39	1324300	311,952,780	23,206,167
9/9/2013	74.81	76.50	74.23	75.64	1295400	311,952,780	23,596,108
9/16/2013	76.59	78.82	75.91	77.72	1617100	311,952,780	24,244,970
9/23/2013	77.40	78.91	77.29	77.79	1476700	311,952,780	24,266,807
9/30/2013	77.03	78.77	76.40	77.51	1980900	308,910,328	23,943,640
10/7/2013	76.91	79.25	76.08	78.75	1634700	308,910,328	24,326,688
10/14/2013	78.37	79.99	77.46	79.89	2079300	308,910,328	24,678,846
10/21/2013	79.89	87.93	79.41	87.65	2929300	308,910,328	27,075,990
10/28/2013	87.76	88.99	85.89	87.00	1974000	308,910,328	26,875,199
11/4/2013	87.46	87.88	85.00	85.62	1783800	308,910,328	26,448,902
11/11/2013	85.43	87.86	85.41	87.15	1468500	308,910,328	26,921,535
11/18/2013	87.00	87.76	85.77	87.12	1161600	308,910,328	26,912,268
11/25/2013	87.15	88.42	86.45	87.69	903700	308,910,328	27,088,347
12/2/2013	87.70	89.75	86.55	89.67	1936000	308,910,328	27,699,989
12/9/2013	90.12	91.05	87.36	87.97	1480500	308,910,328	27,174,842
12/16/2013	88.83	92.00	88.68	91.32	1794900	308,910,328	28,209,691
12/23/2013	91.97	93.17	91.64	92.33	976800	308,910,328	28,521,691
12/30/2013	92.31	93.03	91.07	91.37	1020900	308,910,328	28,225,137

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

## Market Value for Common Equity

### UNP Data from Yahoo Finance 1-14-2014

<http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=w&s=UNP%2C+&q1=1>

Beg. of Wk. Date	Open	High	Low	End of Wk. Close	Volume	Shares Outstanding	Capitalization (\$000)
12/31/2012	123.25	130.98	123.01	130.89	1779600	470,397,162	61,570,285
1/7/2013	130.40	132.09	129.00	130.97	1332600	470,397,162	61,607,916
1/14/2013	131.02	132.52	130.41	132.49	1253100	470,397,162	62,322,920
1/22/2013	132.46	136.19	132.13	134.77	3171200	470,397,162	63,395,426
1/28/2013	135.20	135.20	130.50	133.96	2469100	469,298,732	62,867,258
2/4/2013	132.75	133.55	131.51	133.15	1876700	469,298,732	62,487,126
2/11/2013	133.06	137.03	132.92	136.83	1942800	469,298,732	64,214,145
2/19/2013	137.32	138.00	133.88	136.02	2398800	469,298,732	63,834,014
2/25/2013	136.60	138.51	132.79	136.57	2115300	469,298,732	64,092,128
3/4/2013	136.27	140.84	136.08	138.70	1592800	469,298,732	65,091,734
3/11/2013	138.77	141.78	138.12	141.69	1539600	469,298,732	66,494,937
3/18/2013	139.90	141.57	137.73	139.14	2004900	469,298,732	65,298,226
3/25/2013	139.96	143.00	136.90	142.41	1989800	469,298,732	66,832,832
4/1/2013	142.41	142.97	136.00	138.54	2036200	469,298,732	65,016,646
4/8/2013	138.40	142.42	138.27	141.27	1590000	466,778,645	65,941,819
4/15/2013	140.46	146.04	135.75	145.85	2796000	466,778,645	68,079,665
4/22/2013	146.05	149.27	145.27	147.52	1769300	466,778,645	68,859,186
4/29/2013	147.07	151.14	145.39	149.43	1620700	466,778,645	69,750,733
5/6/2013	149.60	155.45	149.56	154.30	1596900	466,778,645	72,023,945
5/13/2013	153.97	159.94	152.58	159.91	1415300	466,778,645	74,642,573
5/20/2013	159.70	161.00	154.31	156.81	1693500	466,778,645	73,195,559
5/28/2013	158.78	159.58	154.62	154.62	1710200	466,778,645	72,173,314
6/3/2013	155.20	159.21	150.69	158.13	2043100	466,778,645	73,811,707
6/10/2013	158.60	159.11	153.36	157.02	1257600	466,778,645	73,293,583
6/17/2013	158.07	158.20	151.32	152.69	1777400	466,778,645	71,272,431
6/24/2013	150.60	157.64	148.45	154.28	2189200	466,778,645	72,014,609
7/1/2013	155.65	157.55	153.66	157.48	1136200	466,778,645	73,508,301
7/8/2013	157.59	161.70	155.21	160.75	1728600	463,844,338	74,562,977
7/15/2013	161.08	163.48	157.70	163.36	1596800	463,844,338	75,773,611
7/22/2013	163.80	165.18	157.22	159.40	1471400	463,844,338	73,936,787
7/29/2013	159.04	164.55	157.15	163.37	1565000	463,844,338	75,778,249
8/5/2013	162.81	163.31	158.61	159.79	1319000	463,844,338	74,117,687
8/12/2013	158.89	161.17	155.62	157.93	1115700	463,844,338	73,254,936
8/19/2013	157.77	158.89	154.51	158.06	1508200	463,844,338	73,315,236
8/26/2013	158.15	158.28	152.04	153.54	1563300	463,844,338	71,218,660
9/3/2013	154.90	157.40	152.62	154.92	1302800	463,844,338	71,858,765
9/9/2013	155.65	158.54	154.14	154.75	1903000	463,844,338	71,779,911
9/16/2013	156.92	161.91	155.57	159.55	1834600	463,844,338	74,006,364
9/23/2013	159.09	160.29	155.73	156.59	1417900	463,844,338	72,633,385
9/30/2013	155.03	157.59	153.40	153.90	2446700	463,844,338	71,385,644
10/7/2013	152.92	158.07	151.66	157.37	1842600	460,568,638	72,479,687
10/14/2013	156.36	157.99	150.43	152.10	3525900	460,568,638	70,052,490
10/21/2013	152.10	156.55	152.07	152.36	2882000	460,568,638	70,172,238
10/28/2013	152.59	153.15	149.23	152.77	3050800	460,568,638	70,361,071
11/4/2013	153.71	156.32	152.75	155.04	2463100	460,568,638	71,406,562
11/11/2013	155.13	159.58	154.60	159.49	1986500	460,568,638	73,456,092
11/18/2013	159.59	162.09	157.43	162.02	1979100	460,568,638	74,621,331
11/25/2013	162.01	163.22	161.15	162.04	1275500	460,568,638	74,630,542
12/2/2013	162.12	165.14	160.02	164.34	1857300	460,568,638	75,689,850
12/9/2013	164.56	165.27	160.17	160.75	1674000	460,568,638	74,036,409
12/16/2013	161.37	164.88	160.04	163.60	2116600	460,568,638	75,349,029
12/23/2013	163.51	167.00	163.04	166.05	976700	460,568,638	76,477,422
12/30/2013	166.10	169.82	165.33	166.85	1474900	460,568,638	76,845,877

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

## Market Value for Common Equity

### Total Market Value for CSX, KSU, 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 (\$000)
Beginning	End	
1. Monday, December 31, 2012	Friday, January 04, 2013	\$113,601,221
2. Monday, January 07, 2013	Friday, January 11, 2013	\$112,445,018
3. Monday, January 14, 2013	Friday, January 18, 2013	\$114,612,300
4. Tuesday, January 22, 2013	Friday, January 25, 2013	\$118,469,362
5. Monday, January 28, 2013	Friday, February 01, 2013	\$117,525,449
6. Monday, February 04, 2013	Friday, February 08, 2013	\$117,090,263
7. Monday, February 11, 2013	Friday, February 15, 2013	\$120,735,840
8. Tuesday, February 19, 2013	Friday, February 22, 2013	\$121,044,792
9. Monday, February 25, 2013	Friday, March 01, 2013	\$121,973,385
10. Monday, March 04, 2013	Friday, March 08, 2013	\$123,677,725
11. Monday, March 11, 2013	Friday, March 15, 2013	\$126,692,699
12. Monday, March 18, 2013	Friday, March 22, 2013	\$125,154,849
13. Monday, March 25, 2013	Thursday, March 28, 2013	\$128,434,125
14. Monday, April 01, 2013	Friday, April 05, 2013	\$124,397,069
15. Monday, April 08, 2013	Friday, April 12, 2013	\$127,066,323
16. Monday, April 15, 2013	Friday, April 19, 2013	\$127,582,960
17. Monday, April 22, 2013	Friday, April 26, 2013	\$129,322,249
18. Monday, April 29, 2013	Friday, May 03, 2013	\$131,759,146
19. Monday, May 06, 2013	Friday, May 10, 2013	\$135,019,840
20. Monday, May 13, 2013	Friday, May 17, 2013	\$139,320,252
21. Monday, May 20, 2013	Friday, May 24, 2013	\$135,989,982
22. Tuesday, May 28, 2013	Friday, May 31, 2013	\$134,266,704
23. Monday, June 03, 2013	Friday, June 07, 2013	\$135,943,955
24. Monday, June 10, 2013	Friday, June 14, 2013	\$134,967,688
25. Monday, June 17, 2013	Friday, June 21, 2013	\$130,024,973
26. Monday, June 24, 2013	Friday, June 28, 2013	\$130,207,498
27. Monday, July 01, 2013	Friday, July 05, 2013	\$132,175,389
28. Monday, July 08, 2013	Friday, July 12, 2013	\$135,384,869
29. Monday, July 15, 2013	Friday, July 19, 2013	\$139,038,218
30. Monday, July 22, 2013	Friday, July 26, 2013	\$134,279,797
31. Monday, July 29, 2013	Friday, August 02, 2013	\$138,002,236
32. Monday, August 05, 2013	Friday, August 09, 2013	\$135,294,880
33. Monday, August 12, 2013	Friday, August 16, 2013	\$133,714,049
34. Monday, August 19, 2013	Friday, August 23, 2013	\$134,339,850
35. Monday, August 26, 2013	Friday, August 30, 2013	\$130,422,176
36. Tuesday, September 03, 2013	Friday, September 06, 2013	\$132,903,639
37. Monday, September 09, 2013	Friday, September 13, 2013	\$134,083,110
38. Monday, September 16, 2013	Friday, September 20, 2013	\$137,449,755
39. Monday, September 23, 2013	Friday, September 27, 2013	\$135,240,025
40. Monday, September 30, 2013	Friday, October 04, 2013	\$133,592,501
41. Monday, October 07, 2013	Friday, October 11, 2013	\$135,475,193
42. Monday, October 14, 2013	Friday, October 18, 2013	\$133,715,826
43. Monday, October 21, 2013	Friday, October 25, 2013	\$137,831,846
44. Monday, October 28, 2013	Friday, November 01, 2013	\$137,388,391
45. Monday, November 04, 2013	Friday, November 08, 2013	\$138,420,347
46. Monday, November 11, 2013	Friday, November 15, 2013	\$141,525,199
47. Monday, November 18, 2013	Friday, November 22, 2013	\$142,681,082
48. Monday, November 25, 2013	Friday, November 29, 2013	\$142,699,315
49. Monday, December 02, 2013	Friday, December 06, 2013	\$144,540,529
50. Monday, December 09, 2013	Friday, December 13, 2013	\$142,101,230
51. Monday, December 16, 2013	Friday, December 20, 2013	\$145,438,472
52. Monday, December 23, 2013	Friday, December 27, 2013	\$147,125,901
53. Monday, December 30, 2013	Friday, January 03, 2014	\$147,089,541
<b>Average</b>		<b>\$132,061,868.49</b>

**AAR Regression for 2013 Beta**

AAR Regression for 2013 Beta 16:35 Tuesday, January 14, 2014 04  
 Step-style 5-Year Beta using SP 500 Price Index, Weighted RR Returns, 90-Day T-Bill as RF  
 CSX, KSI, NSC, and UNP

The GLM Procedure

Dependent Variable: ZRR

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	0.29726983	0.29726983	580.27	<.0001
Error	259	0.13268419	0.00051229		
Corrected Total	260	0.42995402			

R-Square      Coeff Var      Root MSE      ZRR Mean  
 0.691399      438.7907      0.022634      0.005158

Source	DF	Type I SS	Mean Square	F Value	Pr > F
ZSP5	1	0.29726983	0.29726983	580.27	<.0001

Source	DF	Type III SS	Mean Square	F Value	Pr > F
ZSP5	1	0.29726983	0.29726983	580.27	<.0001

### AAR Regression for 2013 Beta

AAR Regression for 2013 Beta 16:08 Tuesday, January 14, 2014 65  
 STD-style: 5-year Beta using SP 500 Price Index, Weighted RR Returns, 90-Day T-Bill as RF  
 CSX, KSU, NSC, and UMP

The GLM Procedure

Dependent Variable: ZRR

Parameter	Estimate	Standard Error	t Value	Pr >  t
Intercept	0.001253030	0.00141031	0.90	0.3713
ZSP5	1.649894286	0.25603818	24.09	<.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:<sup>1</sup>

$$MV_{i0} = \sum_{t=1}^5 \frac{CF_{i0}(1+g_{i1})^t}{(1+r_i)^t} + \sum_{t=6}^{10} \frac{CF_{i5}(1+g_{i2})}{(1+r_i)^t} + \frac{IBEI_{i10}(1+g_{i3})}{(1+r_i)^{10} (r_i - g_{i3})},$$

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  $j$  ( $j = 1, 2, \text{ or } 3$ );

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

$IBEI_{i10} = IBEI_0(1+g_1)^5(1+g_2)^5$ .

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

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<sup>1</sup> *Cost of Capital Yearbook*, 2008, Morningstar, Inc., p. 24.

## Cash Flow Calculation

CSX, Corp.	1	2	3	4	5	Total
	2009	2010	2011	2012	2013	
(\$ in millions)						
Revenue	9,041	10,636	11,795	11,763	12,026	55,261
Net Income	1,143	1,563	1,854	1,863	1,864	8,287
Extraordinary Items	15	0	0	0	0	15
Depreciation	903	947	976	1,059	1,104	4,989
Deferred Taxes	430	474	609	592	300	2,405
Capital Expenditures	1,426	1,840	2,297	2,341	2,313	10,217
Cash Flow	1,035	1,144	1,142	1,173	955	5,449
Cash Flow / Revenue	0.11448	0.10756	0.09682	0.09972	0.07941	0.09860
NIBEI / Revenue	0.12476	0.14695	0.15719	0.15838	0.15500	0.14969
Ibbotson Smoothed Cash Flow = \$12,026 x 0.09860 =					<b>\$1,185.82</b>	
Ibbotson Smoothed Net Income BEI = \$12,026 x 0.14969 =					<b>\$1,800.17</b>	

## Cash Flow Calculation

Kansas City Southern	1	2	3	4	5	Total
	2009	2010	2011	2012	2013	
(\$ in millions)						
Revenue	1,480.2	1,814.8	2,098.3	2,238.6	2,369.3	10,001
Net Income	56.1	169.2	328.7	377.1	351.2	1,282
Extraordinary Items	0.0	0.0	0.0	0.0	0.0	0
Depreciation	181.6	184.9	186.2	198.8	223.3	975
Deferred Taxes	30.9	106.2	120.7	197.3	111.2	566
Capital Expenditures	368.8	337.5	518.3	567.4	838.2	2,630
Cash Flow	-100	123	117	206	-153	193
Cash Flow / Revenue	-0.06769	0.06767	0.05590	0.09193	-0.06437	0.01932
NIBEI / Revenue	0.03790	0.09323	0.15665	0.16845	0.14823	0.12821
<b>Ibbotson Smoothed Cash Flow = \$2,369 x 0.01932 =</b>					<b>\$45.77</b>	
<b>Ibbotson Smoothed Net Income BEI = \$2,369 x 0.12821 =</b>					<b>\$303.78</b>	

Note: Net Income is net available to common stockholders after preferred dividends and non-KCS portion of Meridian Speedway.

*Capital Expenditures*

Core CapX	346.8	287.3	482.2	517.1	594.8
Special programs	0.0	25.0	12.8	22.9	211.8
Meridian Speedway	22.0	25.2	33.3	35.2	31.6
Meridian, Otr RR	0.0	0.0	-10.0	-7.8	0.0
<b>Total CapX</b>	<b>368.8</b>	<b>337.5</b>	<b>518.3</b>	<b>567.4</b>	<b>838.2</b>

## Cash Flow Calculation

Norfolk Southern	1	2	3	4	5	Total
	2009	2010	2011	2012	2013	
(\$ in millions)						
Revenue	7,969	9,516	11,172	11,040	11,245	50,942
Net Income	1,034	1,496	1,916	1,749	1,910	8,105
Extraordinary Items	0	0	0	0	0	0
Depreciation	845	826	869	922	922	4,384
Deferred Taxes	338	312	527	366	262	1,805
Capital Expenditures	1,299	1,470	2,160	2,241	1,971	9,141
Cash Flow	918	1,164	1,152	796	1,123	5,153
Cash Flow / Revenue	0.11520	0.12232	0.10311	0.07210	0.09987	0.10115
NIBEI / Revenue	0.12975	0.15721	0.17150	0.15842	0.16985	0.15910
Ibbotson Smoothed Cash Flow = \$11,245 x 0.10115 =						<b>\$1,137.48</b>
Ibbotson Smoothed Net Income BEI = \$11,245 x 0.15910 =						<b>\$1,789.11</b>

## Cash Flow Calculation

Union Pacific Corp.	1	2	3	4	5	Total
	2009	2010	2011	2012	2013	
(\$ in millions)						
Revenue	14,143	16,965	19,557	20,926	21,963	93,554
Net Income	1,890	2,780	3,292	3,943	4,388	16,293
Extraordinary Items	0	0	0	0	0	0
Depreciation	1,427	1,487	1,617	1,760	1,777	8,068
Deferred Taxes	718	672	986	887	723	3,986
Capital Expenditures	2,354	2,482	3,176	3,738	3,496	15,246
Cash Flow	1,681	2,457	2,719	2,852	3,392	13,101
Cash Flow / Revenue	0.11886	0.14483	0.13903	0.13629	0.15444	0.14004
NIBEI / Revenue	0.13364	0.16387	0.16833	0.18843	0.19979	0.17416
Ibbotson Smoothed Cash Flow = \$21,963 x 0.14004 =					<b>\$3,075.63</b>	
Ibbotson Smoothed Net Income BEI = \$21,963 x 0.17416 =					<b>\$3,824.99</b>	

**2013 Median Growth Rates for MSDCF**

Company	Analyst Growth Rates from IBES December 31								Median
	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5	Rate 6	Rate 7	Rate 8	
CSX	8.8	12.5	7.5	4.4	5.0	13.0	--	--	<b>8.15</b>
KSU	18.4	15.0	14.8	20.0	--	--	--	--	<b>16.70</b>
NSC	10.1	15.0	9.3	11.4	--	--	--	--	<b>10.75</b>
UNP	14.1	11.0	14.4	11.9	15.9	15.0	--	--	<b>14.27</b>

**Simple Average of Medians = 12.47 percent.**

Thomson ONE

Security: Local Market Filter: In Locally: CSX | Portfolio: Railroads | Market: All Markets

Searches > Estimates > Detail - Single Period

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

**Detail Estimates - Period Summary**

Estimate Summary

Ests	Mean	Hi	Low
4	10.45	13.00	7.50
3	11.43	13.00	8.80

30 Day Ago Mean: 11.43

Reported: 0.40, Surprise Mean: 0.39, Surprise (%): 3.07

Guidance

Current	Previous	Issuance Date	Guidance	Est #/Ann
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Surprise Summary

	12/2012Q	03/2013Q	06/2013Q	09/2013Q	12/2013A
Reported	0.40	0.45	0.52	0.46	1.76
Surprise Mean	0.39	0.40	0.47	0.43	1.76
Surprise (%)	3.07	12.52	9.86	7.86	1.01

Estimate Detail

Filter	Broker	Analyst	Current	Date	Prior	View	Normal	Estimate
	BARCLAYS	COLANGELO, R	8.80	Aug 19, 13	9.50		Jun 24, 13	Nov 25, 13
	BOFA MERRILL LYNCH	HOCKEY, K	12.50	Apr 17, 13	15.00		Jul 16, 08	Dec 12, 13
	DEWISON BANK RESEARCH	TAGHERANI, J	7.50	Dec 16, 13	NA		NA	Dec 18, 13
	DOMINION SEC, INC	SCHONHUBER, K	4.40	Nov 12, 13	9.00		Oct 16, 13	Nov 12, 13
	SANFORD C. BERNSTEIN CO., LLC	VERMIGLI, D	5.00	Oct 17, 13	5.20		Apr 08, 13	Oct 17, 13
	WELLS FARGO SECURITIES, LLC	GALLO, J	13.00	Oct 16, 13	15.00		Jul 21, 11	Nov 18, 13

2013 Median Growth Rates for MSDCF  
CSX

## 2013 Median Growth Rates for MSDCF KSU

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**Security**

Local Market Ticker | In Quotes | KSU

Stocks > Estimates > Detail > Single Period

**Portfolio**

All Markets

**Market**

All Markets

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**INDUSTRIES** > **RAILROADS** > **UNITED STATES OF AMERICA**

**Details** | **Estimates** | **Period Summary**

Examples for **Share (EPS)** | **Long Term Growth**

Example for **Share (EPS)**

Period: **Q3 2013**

View: **Normal**

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**Estimate Summary**

Estimate Type	Estimate Count	Estimate Range			Surprise Summary	Reported	Surprise Mean	Surprise (%)	Estimate Date	Guidance	Est. At	Time
		Low	High	Mean								
EPS	3	17.80	20.00	15.00	Surprise Summary	0.69	1.10	09/20/13	NA	NA	NA	
EPS	3	17.80	20.00	15.00	Reported	0.68	0.95	06/20/13	NA	NA	11/20/13	
EPS	3	17.80	20.00	15.00	Surprise Mean	0.68	1.11	07/20/13	NA	NA	11/20/13	
EPS	3	17.80	20.00	15.00	Surprise (%)	12.00	-1.22	08/20/13	NA	NA	11/20/13	

1. Only selected items below are included in the filtered mean

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**Estimate Detail**

Estimate	Analyst	Current	Target	Estimate Date	Guidance	Est. At	Time
EPS	BAKERSVILLE	18.40	18.00	Oct 18, 13	NA	NA	NA
EPS	ROSEL HOSPITAL, LINC	15.00	NA	Apr 20, 10	NA	NA	Oct 20, 13
EPS	MCBRIDE, JAMES	14.80	15.70	Oct 20, 13	NA	NA	Nov 25, 13
EPS	MCBRIDE, JAMES	20.00	NA	Sep 20, 13	NA	NA	Sep 20, 13

11/20/13 11:40 AM





## Stage 3 Growth Rate for MS-DCF Summary

*The Surface Transportation Board's Multi-Stage Discounted Cash Flow model for estimating the cost of common equity uses 3 stages of growth. The third stage is the long-run nominal growth rate of the U.S. economy, and it is estimated by adding the long-term expected growth in output (represented by the historical growth rate for U.S. Real Gross Domestic Product since 1929) to the long-run expected U.S. inflation rate.*

Long Term Expected Growth in Output		3.27 %
Historical Growth Rate for Real GDP, 1929-2013	(page 2)	
Long Term Expected Inflation Rate		<u>2.31</u>
Rate for Long-Term U.S. Government Bonds	3.67 (page 5)	
Rate for 20-year U.S. Inflation-Indexed Bonds	<u>1.36</u> (page 5)	
	2.31	
<b>Stage 3 Growth Rate (real growth + inflation)</b>		<b>5.58 %</b>

**The purpose of this appendix is to replicate Morningstar's Stage 3 Growth Rate used by the Surface Transportation Board in its version of the Multi-Stage Discounted Cash Flow model used to estimate the cost of common equity for the railroad industry.**

Morningstar's Ibbotson SBBI Valuation Yearbook has annually been used as a source for the Stage 3 growth rate of the Surface Transportation Board's Multi-Stage Discounted Cash Flow (MSDCF) model. On September 19, 2013, Morningstar customers were notified that the *SBBI Valuation Yearbook* was being discontinued, but much of the same data could be found in a different publication -- the *Ibbotson SBBI Classic Yearbook*.

Customer Service said **"We won't be publishing the long-term growth rate anymore, however it's pretty simple to calculate using data that will be in the Classic Yearbook and publicly available data."** They also said "Essentially, you would take the long-term government yield as of December (which would be included in the Classic Yearbook) and subtract the Treasury Real Yield for 20 year bonds (<http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=realyield>) as of the same date. This value is called the inflation estimate." "From there, you need the GDP growth rate, which you can calculate from the Current-dollar and "real" GDP link in this website: <http://www.bea.gov/national/index.htm#gdp>. Using the GDP in billions of chained 2005 dollars column, calculate an annual growth rate. One thing, however, is that we've always used GDP chained to 2005 dollars and it looks like they've since changed it to be chained to 2009 dollars. This may cause a slight change in the historical growth rates."

### Stage 3 Growth Rate for MS-DCF Long-Term Expected Growth in Output

**AAR Replicates Morningstar**

Year	(a) GDP in billions of chained 2005 dollars	(b) Years of Growth	(c) AAR Calc. Growth Rate	(d) SBBI Text Growth Rate
1929	976.1			
2009	12,757.9	80	3.27%	3.3%
2010	13,063.0	81	3.25%	3.3%
2011	13,299.1	82	3.24%	3.24%
2012	13,591.1	83	3.22%	3.22%

The Bureau of Economic Analysis rebased Real GDP from 2005 dollars to 2009 dollars, and may have revised recent year data. Therefore, GDP data in 2005 \$ was not available for 2013.

- (a) Real GDP in 2005 \$ - 2009-2012 are from the Economic Report of the President 2013, Table B-11  
1929 is from BEA table dated August 2011
- (b) Year minus 1929 = number of years of growth from 1929 to year
- (c) Compound growth rate from 1929 to year
- (d) Ibbotson SBBI Valuation Yearbook, chapter 4. For 2012 data, 2013 edition, page 52.

**AAR Calculates Growth Rate using GDP in 2009 dollars**

Year	(e) GDP in billions of chained 2009 dollars	(f) Years of Growth	(g) AAR Calc. Growth Rate
1929	1,055.6		
2009	14,417.9	80	3.32%
2010	14,779.4	81	3.31%
2011	15,052.4	82	3.29%
2012	15,470.7	83	3.29%
2013	15,761.3	84	3.27%

- (e) Real GDP in 2009 \$ downloaded from BEA 4/4/2014
- (f) Year - 1929 = number of years of growth from 1929 to year
- (g) Compound growth rate from 1929 to year

## Stage 3 Growth Rate for MS-DCF Data Sources for Real GDP in 2005 \$

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GDP and Other Major NIPA Series

August 2011

**Table 2A. Real Gross Domestic Product—Continues**

[Billions of chained (2005) dollars; quarterly estimates are seasonally adjusted at annual rates]

Year and quarter	Gross domestic product	Personal consumption expenditures	Gross private domestic investment	Exports and imports of goods and services		Government consumption expenditures and gross investment	Residual	Final sales of domestic product	Gross domestic purchases	Final sales to domestic purchasers	Gross national product	Percent change from preceding period				
				Exports	Imports							Gross domestic product	Final sales of domestic product	Gross domestic purchases	Final sales to domestic purchasers	Gross national product
1929.....	976.1	736.3	101.4	37.9	49.1	146.5	3.1	986.8	994.1	1,005.2	984.6					
1930.....	892.0	696.8	67.6	31.3	42.7	161.4	-22.4	919.2	911.1	939.2	900.0	-8.6	-6.8	-8.4	-6.6	-8.6
1931.....	834.2	674.9	42.5	26.1	37.2	168.2	-40.3	865.2	853.9	885.9	840.7	-6.5	-5.9	-6.3	-5.7	-6.6
1932.....	725.2	614.4	12.8	20.4	30.9	162.6	-54.1	766.6	743.9	786.5	730.5	-13.1	-11.4	-12.9	-11.2	-13.1
1933.....	715.8	600.8	18.9	20.5	32.2	157.2	-49.4	743.2	735.1	763.4	720.3	-1.3	-3.1	-1.2	-2.9	-1.4
1934.....	793.7	643.7	34.1	22.8	32.9	177.3	-51.3	814.0	812.7	833.7	797.7	10.9	9.5	10.6	9.2	10.7
1935.....	864.2	683.0	63.1	24.1	43.1	182.2	-45.1	864.5	892.2	892.7	868.9	8.9	6.2	9.8	7.1	8.9
1936.....	977.0	752.5	80.9	25.3	42.6	212.6	-51.7	978.9	1,006.1	1,008.1	981.1	13.1	13.2	12.8	12.9	12.9
1937.....	977.0	752.5	80.9	25.3	42.6	212.6	-51.7	978.9	1,006.1	1,008.1	981.1	5.1	4.2	4.7	3.7	5.2
1938.....	977.0	752.5	80.9	25.3	42.6	212.6	-51.7	978.9	1,006.1	1,008.1	981.1	-3.4	-1.4	-4.3	-2.3	-3.4
1939.....	977.0	752.5	80.9	25.3	42.6	212.6	-51.7	978.9	1,006.1	1,008.1	981.1	8.1	7.4	8.1	7.4	8.1

**TABLE B-2. Real gross domestic product, 1964-2012**

[Billions of chained (2005) dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product	Personal consumption expenditures			Gross private domestic investment					
		Total	Goods	Services	Total	Fixed investment				
						Nonresidential				
						Total	Structures	Equipment and software		
1964.....	3,389.4	2,107.5			382.1					
1965.....	3,607.0	2,240.8			435.7					
1966.....	3,842.1	2,367.9			474.1					
1967.....	3,939.2	2,438.8			452.4					
1968.....	4,129.9	2,579.6			478.7					
1969.....	4,258.2	2,676.2			506.6					
1970.....	4,266.3	2,738.9			473.4					
1971.....	4,409.5	2,843.3			527.3					
1972.....	4,643.8	3,018.1			589.8					
1973.....	4,912.8	3,167.7			658.9					
1974.....	4,885.7	3,141.4			610.3					
1975.....	4,875.4	3,212.6			502.2					
1976.....	5,136.9	3,391.5			603.7					
1977.....	5,373.1	3,534.3			694.9					
1978.....	5,672.8	3,690.1			778.7					
1979.....	5,850.1	3,777.8			803.5					
1980.....	5,834.0	3,764.5			715.2					
1981.....	5,982.1	3,821.6			779.6					
1982.....	5,865.9	3,874.9			670.3					
1983.....	6,130.9	4,096.4			732.8					
1984.....	6,571.5	4,313.6			948.7					
1985.....	6,843.4	4,538.3			939.8					
1986.....	7,080.5	4,722.4			933.5					
1987.....	7,307.0	4,868.0			962.2					
1988.....	7,607.4	5,064.3			984.9					
1989.....	7,879.2	5,207.5			1,024.4					
1990.....	8,027.1	5,313.7			989.9					
1991.....	8,008.3	5,321.7			909.4					
1992.....	8,280.0	5,503.2			983.1					
1993.....	8,516.2	5,698.6			1,070.9					
1994.....	8,863.1	5,916.2			1,216.4					
1995.....	9,086.0	6,076.2	1,896.0	4,208.5	1,254.3	1,231.2	787.9	342.0	489.4	
1996.....	9,425.8	6,288.3	1,980.9	4,331.7	1,365.3	1,341.6	861.5	361.4	541.4	
1997.....	9,845.9	6,520.4	2,075.3	4,465.3	1,535.2	1,465.4	965.5	387.9	615.9	
1998.....	10,274.7	6,862.3	2,215.5	4,662.1	1,689.4	1,624.4	1,081.4	407.7	705.2	
1999.....	10,770.7	7,237.6	2,392.0	4,853.1	1,837.6	1,775.5	1,194.3	408.2	805.0	
2000.....	11,216.4	7,604.6	2,518.2	5,093.6	1,963.1	1,906.8	1,311.3	440.0	889.2	
2001.....	11,337.5	7,810.3	2,597.3	5,215.1	1,825.2	1,870.7	1,274.8	433.3	860.6	
2002.....	11,543.1	8,018.3	2,702.9	5,318.5	1,800.4	1,791.5	1,173.7	356.6	824.2	
2003.....	11,836.4	8,244.5	2,827.2	5,418.2	1,870.1	1,854.7	1,189.6	343.0	850.0	
2004.....	12,246.9	8,515.8	2,963.3	5,562.7	2,058.2	1,992.5	1,263.0	346.7	917.3	
2005.....	12,623.0	8,803.5	3,076.7	5,726.8	2,172.3	2,122.3	1,347.3	351.8	995.6	
2006.....	12,958.5	9,054.5	3,178.9	5,875.6	2,231.8	2,172.7	1,455.5	384.0	1,071.1	
2007.....	13,206.4	9,282.9	3,273.5	5,990.2	2,159.5	2,130.6	1,550.0	438.2	1,106.8	
2008.....	13,161.9	9,211.7	3,192.9	6,017.0	1,939.8	1,978.6	1,537.6	466.4	1,059.4	
2009.....	12,757.9	9,032.6	3,098.2	5,930.6	1,458.1	1,602.2	1,259.8	368.1	885.2	
2010.....	13,063.0	9,196.2	3,209.1	5,987.6	1,658.0	1,598.7	1,288.5	310.6	963.9	
2011.....	13,299.1	9,428.8	3,331.0	6,101.5	1,744.0	1,704.5	1,378.2	319.2	1,070.0	
2012 P.....	13,591.1	9,604.9	3,433.0	6,178.0	1,911.0	1,850.1	1,484.9	351.3	1,143.5	

"Survey of Current Business", August 2011, U.S. Bureau of Economic Analysis

"Economic Report of the President", March 2013

### Stage 3 Growth Rate for MS-DCF Data Sources for Real GDP in 2009 \$

Current-Dollar and "Real" Gross Domestic Product						3/27/14
Annual			Quarterly			
			(Seasonally adjusted annual rates)			
	GDP in billions of current dollars	GDP in billions of chained 2009 dollars		GDP in billions of current dollars	GDP in billions of chained 2009 dollars	
1929	104.6	1,055.6	1947q1	243.1	1,932.6	
1930	92.2	965.8	1947q2	246.3	1,930.4	
1931	77.4	904.1	1947q3	250.1	1,928.4	
1932	59.5	787.5	1947q4	260.3	1,958.8	
2004	12,277.0	13,774.0	1965q4	773.1	4,096.7	
2005	13,095.4	14,235.6	1966q1	797.3	4,197.9	
2006	13,857.9	14,615.2	1966q2	807.2	4,215.1	
2007	14,480.3	14,876.8	1966q3	820.8	4,245.2	
2008	14,720.3	14,833.6	1966q4	834.9	4,281.6	
2009	14,417.9	14,417.9	1967q1	846.0	4,320.9	
2010	14,958.3	14,779.4	1967q2	851.1	4,324.7	
2011	15,533.8	15,052.4	1967q3	866.6	4,362.0	
2012	16,244.6	15,470.7	1967q4	883.2	4,397.1	
2013	16,799.7	15,761.3	1968q1	911.1	4,486.4	

Download for Bureau of Economic Analysis web site. Middle years and some quarters omitted to enable data to fit on this page. Use the 2009 dollars column.

<http://www.bea.gov/national/Index.htm>

### Stage 3 Growth Rate for MS-DCF Long-Term Inflation Rate

Year	(a) Long-Term Gov. Yields		(c) Inflation-Indexed Bonds		(e) Long-Term Inflation Rate	
	SBBI Text	SBBI Apndx.	SBBI Text	Daily	SBBI Text	AAR Calc
2009	4.6 %	4.58 %	2.0 %	2.03 %	2.6 %	2.55 %
2010	4.1	4.14	1.6	1.59	2.6	2.55
2011	2.48	2.48	0.53	0.53	1.95	1.95
2012	2.41	2.41	0.15	0.15	2.26	2.26
2013	n/a	3.67	n/a	1.36	n/a	2.31

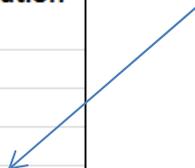
n/a = no longer available

Sources:

- (a) Ibbotson SBBI Valuation Yearbook, chapter 4. For 2012 data, 2013 edition, page 52.
- (b) SBBI Appendix B, Table B-9 (Long-Term Government Bonds), December Beginning in 2014, data from Ibbotson® SBBI® Classic Yearbook (Classic Yearbook). 2013 is from Table 2-2 of the Classic Yearbook, on page 42
- (c) Ibbotson SBBI Valuation Yearbook, chapter 4. For 2012 data, 2013 edition, page 52.
- (d) Treasury Constant Maturities, Inflation Indexed, 20-Year, Business Day, last day of year <http://www.federalreserve.gov/releases/H15/data.htm>
- (e) Ibbotson SBBI Valuation Yearbook, chapter 4. For 2012 data, 2013 edition, page 52.
- (f) Column (b) less column (d)

Market yield on U.S. Treasury securities at 20-year constant maturity, quoted on investment basis, inflation-indexed	
Unit:	Percent: Per Year
Multiplier:	1
Currency:	NA
Unique Identifier:	H15/H15/RIFLGFCY20_XII_N.B
Time Period	RIFLGFCY20_XII_N.B
12/31/2009	2.03
12/31/2010	1.59
12/30/2011	0.53
12/31/2012	0.15
12/31/2013	1.36

Relevant year-end figures from download.



## Market Value Data for MSDCF Stock Price for CSX - End of 2013

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Prices	Date	Open	High	Low	Close	Volume	Adj Close*
	Jan 13, 2014	28.83	28.98	28.33	28.43	6,866,500	28.43
	Jan 10, 2014	28.76	28.94	28.63	28.88	4,576,200	28.88
	Jan 9, 2014	28.30	28.68	28.22	28.66	4,581,300	28.66
	Jan 8, 2014	28.27	28.41	28.05	28.23	5,024,000	28.23
	Jan 7, 2014	28.30	28.43	28.20	28.35	3,842,500	28.35
	Jan 6, 2014	28.56	28.74	28.08	28.22	5,073,200	28.22
	Jan 3, 2014	28.27	28.78	28.26	28.43	4,632,500	28.43
	Jan 2, 2014	28.61	28.67	28.19	28.25	4,479,900	28.25
	Dec 31, 2013	28.43	28.80	28.43	28.77	4,025,200	28.77
	Dec 30, 2013	28.32	28.46	28.26	28.34	3,721,800	28.34
	Dec 27, 2013	28.53	28.66	28.22	28.29	3,043,300	28.29
	Dec 26, 2013	28.37	28.50	28.33	28.43	2,574,000	28.43
	Dec 24, 2013	28.28	28.39	28.27	28.36	1,590,400	28.36
	Dec 23, 2013	28.30	28.40	28.18	28.24	3,210,900	28.24
	Dec 20, 2013	27.85	28.26	27.77	28.08	9,628,100	28.08
	Dec 19, 2013	27.87	27.97	27.77	27.86	6,828,500	27.86
	Dec 18, 2013	27.72	28.02	27.40	27.93	9,028,000	27.93
	Dec 17, 2013	27.93	27.96	27.54	27.67	4,254,800	27.67
	Dec 16, 2013	27.73	27.94	27.73	27.84	7,021,800	27.84
	Dec 13, 2013	27.43	27.88	27.40	27.57	6,276,200	27.57
	Dec 12, 2013	27.25	27.44	27.25	27.28	4,264,300	27.28
	Dec 11, 2013	27.97	27.98	27.32	27.35	6,214,100	27.35
	Dec 10, 2013	28.03	28.25	27.98	27.99	4,781,400	27.99
	Dec 9, 2013	27.85	28.13	27.85	28.08	4,215,200	28.08
	Dec 6, 2013	27.77	27.90	27.67	27.75	5,065,100	27.75
	Dec 5, 2013	27.24	27.68	27.20	27.58	5,883,500	27.58
	Dec 4, 2013	27.28	27.53	27.02	27.20	4,615,900	27.20
	Dec 3, 2013	27.37	27.67	27.26	27.41	6,621,200	27.41
	Dec 2, 2013	27.27	27.58	27.26	27.33	3,905,300	27.33
	Nov 29, 2013	27.31	27.45	27.20	27.27	2,250,900	27.27
	Nov 27, 2013	27.20	27.36	27.09	27.30	3,021,900	27.30
	Nov 26, 2013	27.28	27.33	27.02	27.11	4,646,000	27.11
	Nov 26, 2013				0.15 Dividend		
	Nov 25, 2013	27.34	27.53	27.33	27.40	3,127,600	27.25
	Nov 22, 2013	27.06	27.35	27.01	27.35	3,930,700	27.20
	Nov 21, 2013	26.94	27.10	26.77	27.05	4,838,400	26.90
	Nov 20, 2013	26.95	27.00	26.75	26.91	4,838,000	26.76
	Nov 19, 2013	27.19	27.25	26.75	26.90	6,256,500	26.75
	Nov 18, 2013	27.07	27.48	27.03	27.23	6,864,600	27.08
	Nov 15, 2013	27.04	27.08	26.83	27.00	7,559,700	26.85
	Nov 14, 2013	26.99	27.14	26.94	27.00	7,416,300	26.85

http://finance.yahoo.com/q/hp?s=CSX&a=11&b=20&c=2008&d=00&e=14&f=2014&g=d 1/14/2014

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Prices							
Date	Open	High	Low	Close	Volume	Adj Close*	
Jan 13, 2014	116.32	117.62	115.61	116.01	1,232,500	116.01	
Jan 10, 2014	116.60	117.09	114.64	116.38	1,079,400	116.38	
Jan 9, 2014	117.36	117.85	115.24	116.60	1,068,200	116.60	
Jan 8, 2014	117.76	118.42	115.94	117.09	817,100	117.09	
Jan 7, 2014	116.76	118.11	116.37	117.99	972,300	117.99	
Jan 6, 2014	119.93	120.21	115.68	116.37	1,203,900	116.37	
Jan 3, 2014	120.28	121.71	119.30	119.77	592,400	119.77	
Jan 2, 2014	123.04	123.21	119.46	120.00	800,500	120.00	
Dec 31, 2013	122.88	123.89	122.70	123.83	508,200	123.83	
Dec 30, 2013	122.04	122.65	121.25	122.33	327,400	122.33	
Dec 27, 2013	123.45	124.10	121.45	122.04	390,500	122.04	
Dec 27, 2013			0.215 Dividend				
Dec 26, 2013	123.10	123.96	122.82	123.67	352,500	123.45	
Dec 24, 2013	122.04	123.98	121.96	123.09	447,100	122.88	
Dec 23, 2013	122.25	122.63	121.26	122.28	501,300	122.07	
Dec 20, 2013	121.30	122.16	120.23	121.73	1,144,100	121.52	
Dec 19, 2013	120.41	120.76	118.93	120.60	552,300	120.39	
Dec 18, 2013	117.92	120.89	117.35	120.80	832,500	120.59	
Dec 17, 2013	116.72	118.77	117.04	117.48	664,500	117.28	
Dec 16, 2013	116.05	119.19	116.05	118.80	658,900	118.59	
Dec 13, 2013	117.00	118.55	117.00	117.44	654,800	117.24	
Dec 12, 2013	116.90	117.44	116.16	117.05	586,000	116.85	
Dec 11, 2013	119.33	119.40	116.41	117.01	706,400	116.81	
Dec 10, 2013	119.75	122.13	118.97	119.03	996,600	118.82	
Dec 9, 2013	118.03	120.22	117.80	119.88	1,047,600	119.67	
Dec 6, 2013	118.94	119.92	118.02	118.15	828,000	117.94	
Dec 5, 2013	119.79	120.30	117.95	118.09	842,700	117.68	
Dec 4, 2013	120.12	121.10	118.23	119.98	553,800	119.77	
Dec 3, 2013	121.27	121.88	120.17	121.02	435,300	120.81	
Dec 2, 2013	121.41	122.40	120.65	121.83	490,400	121.62	
Nov 29, 2013	121.52	122.51	120.87	121.02	211,100	120.81	
Nov 27, 2013	121.88	122.38	121.28	121.43	343,800	121.22	
Nov 26, 2013	122.01	122.62	121.35	121.55	393,500	121.34	
Nov 25, 2013	121.62	122.74	121.58	121.98	554,800	121.77	
Nov 22, 2013	122.46	122.46	121.07	121.80	550,400	121.59	
Nov 21, 2013	121.80	122.96	121.00	122.14	497,800	121.93	
Nov 20, 2013	121.60	122.11	120.80	121.18	549,500	120.97	
Nov 19, 2013	124.43	124.88	121.13	121.52	637,100	121.31	
Nov 18, 2013	125.05	125.50	123.79	124.40	713,500	124.18	
Nov 15, 2013	125.18	125.95	123.88	125.02	483,700	124.80	
Nov 14, 2013	125.38	125.96	124.56	125.20	284,500	124.98	



http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=d&s=KSU... 1/14/2014

## Market Value Data for MSDCF Stock Price for NSC - End of 2013

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Start Date:    Eg. Jan 1, 2010

End Date:

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Prices	Date	Open	High	Low	Close	Volume	Adj Close*
	Jan 13, 2014	91.64	92.04	89.91	90.19	1,284,300	90.19
	Jan 10, 2014	91.00	91.83	90.77	91.59	892,900	91.59
	Jan 9, 2014	90.30	91.38	90.06	91.31	1,451,200	91.31
	Jan 8, 2014	90.54	90.63	89.19	89.91	1,435,900	89.91
	Jan 7, 2014	90.40	90.74	90.08	90.54	1,672,400	90.54
	Jan 6, 2014	91.49	92.14	89.95	90.00	1,690,200	90.00
	Jan 3, 2014	91.80	92.53	91.14	91.37	1,016,100	91.37
	Jan 2, 2014	92.33	92.59	91.07	91.31	1,319,900	91.31
	Dec 31, 2013	92.10	93.03	92.05	92.83	892,100	92.83
	Dec 30, 2013	92.31	92.70	91.74	91.96	655,600	91.96
	Dec 27, 2013	92.96	93.11	92.11	92.33	743,400	92.33
	Dec 26, 2013	92.40	93.17	92.31	92.87	1,054,100	92.87
	Dec 24, 2013	91.79	92.40	91.69	92.20	414,300	92.20
	Dec 23, 2013	91.97	92.34	91.64	91.83	1,695,600	91.83
	Dec 20, 2013	90.47	92.00	90.28	91.32	2,650,100	91.32
	Dec 19, 2013	90.35	90.53	89.50	90.51	1,453,600	90.51
	Dec 18, 2013	89.26	90.79	88.68	90.74	1,472,900	90.74
	Dec 17, 2013	89.35	89.60	88.90	89.16	1,790,200	89.16
	Dec 16, 2013	88.83	89.84	88.71	89.41	1,408,000	89.41
	Dec 13, 2013	87.71	88.57	87.49	87.97	765,400	87.97
	Dec 12, 2013	87.74	88.04	87.36	87.51	1,343,900	87.51
	Dec 11, 2013	89.48	89.77	87.97	88.06	1,670,300	88.06
	Dec 10, 2013	90.49	90.96	89.69	89.78	1,102,500	89.78
	Dec 9, 2013	90.12	91.05	89.89	90.49	2,620,400	90.49
	Dec 6, 2013	89.04	89.75	88.75	89.67	1,570,400	89.67
	Dec 5, 2013	87.29	88.99	86.90	88.17	2,381,800	88.17
	Dec 4, 2013	87.53	88.20	86.55	87.19	2,763,400	87.19
	Dec 3, 2013	87.92	88.22	87.26	87.79	1,463,400	87.79
	Dec 2, 2013	87.70	88.67	87.40	88.25	1,501,200	88.25
	Nov 29, 2013	87.59	88.42	87.14	87.69	907,200	87.69
	Nov 27, 2013	86.99	87.67	86.80	87.67	1,079,100	87.67
	Nov 26, 2013	87.22	87.28	86.45	86.98	918,500	86.98
	Nov 25, 2013	87.15	87.43	86.95	87.02	710,100	87.02
	Nov 22, 2013	86.80	87.20	86.41	87.12	890,300	87.12
	Nov 21, 2013	86.33	87.11	85.77	86.82	1,443,100	86.82
	Nov 20, 2013	86.51	86.83	85.84	86.05	1,185,800	86.05
	Nov 19, 2013	87.27	87.27	85.98	86.30	1,270,700	86.30
	Nov 18, 2013	87.00	87.76	86.95	87.23	1,018,200	87.23
	Nov 15, 2013	87.29	87.62	86.80	87.15	1,320,400	87.15
	Nov 14, 2013	87.75	87.86	87.27	87.34	1,636,500	87.34
	Nov 13, 2013	86.22	87.65	86.03	87.62	1,382,100	87.62

Susie Esposito  
VANGUARDIAN SINCE 2001



Start Vanguarding

**Vanguard**

http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=d&s=NSC... 1/14/2014

## Market Value Data for MSDCF Stock Price for UNP - End of 2013

Home Finance Mail Home News Sports Finance Market Data Weather Games Business & Finance Answers Personal Finance Flickr Yahoo Originals More CNBC

Enter Symbol:  Tue, Jan 14, 2014, 5:14 PM EST Dow ↑0.71% Nasdaq ↑1.69%

**Union Pacific Corporation (UNP)** -NYSE o Follow Add to Portfolio Like 51

**168.82** +0.77 (0.46%) 4:02PM EST | After Hours: **168.82** 0.00 (0.00%) 5:03PM EST

Historical Prices Get Historical Prices for:  GO

Set Date Range

Start Date:  Eg. Jan 1, 2010

End Date:

Daily  
 Weekly  
 Monthly  
 Dividends Only

First | Previous | Next | Last

Prices	Date	Open	High	Low	Close	Volume	Adj Close*
	Jan 13, 2014	170.34	170.69	167.55	168.05	2,265,100	168.05
	Jan 10, 2014	168.84	170.88	168.57	170.38	2,544,000	170.38
	Jan 9, 2014	167.19	169.33	166.92	169.27	2,266,900	169.27
	Jan 8, 2014	167.86	169.00	166.50	166.93	2,231,300	166.93
	Jan 7, 2014	165.38	166.89	165.22	166.62	1,567,600	166.62
	Jan 6, 2014	167.17	167.61	164.97	165.16	1,870,600	165.16
	Jan 3, 2014	167.42	168.76	166.25	166.85	1,205,800	166.85
	Jan 2, 2014	168.40	169.82	166.64	167.11	2,346,100	167.11
	Dec 31, 2013	166.41	168.24	166.37	168.00	1,427,600	168.00
	Dec 30, 2013	166.10	166.71	165.33	166.05	920,200	166.05
	Dec 27, 2013	166.66	167.00	165.30	166.05	674,100	166.05
	Dec 26, 2013	164.37	166.61	164.35	166.42	1,173,100	166.42
	Dec 24, 2013	164.86	166.00	164.17	165.64	769,200	165.64
	Dec 23, 2013	163.51	165.13	163.04	164.95	1,290,700	164.95
	Dec 20, 2013	164.23	164.88	163.25	163.60	3,115,900	163.60
	Dec 19, 2013	162.97	164.32	162.41	164.19	1,875,600	164.19
	Dec 18, 2013	161.60	163.63	160.04	163.56	2,330,500	163.56
	Dec 17, 2013	161.84	161.84	160.69	161.03	1,490,900	161.03
	Dec 16, 2013	161.37	162.63	161.28	161.70	1,770,300	161.70
	Dec 13, 2013	161.33	162.33	160.46	160.75	1,291,600	160.75
	Dec 12, 2013	160.50	161.83	160.17	160.97	1,428,300	160.97
	Dec 11, 2013	162.80	163.50	160.50	160.70	2,120,400	160.70
	Dec 10, 2013	163.69	164.81	162.38	162.76	1,753,300	162.76
	Dec 9, 2013	164.56	165.27	163.88	164.50	1,776,400	164.50
	Dec 6, 2013	163.90	165.14	163.08	164.34	1,732,400	164.34
	Dec 5, 2013	162.75	163.45	161.79	162.37	1,843,800	162.37
	Dec 4, 2013	162.07	162.86	160.02	161.39	1,503,600	161.39
	Dec 3, 2013	163.15	163.60	161.84	162.46	1,853,600	162.46
	Dec 2, 2013	162.12	164.48	162.12	163.53	2,363,300	163.53
	Nov 29, 2013	162.55	163.15	161.44	162.04	877,600	162.04
	Nov 29, 2013			0.79 Dividend			
	Nov 27, 2013	162.13	163.22	161.31	162.84	1,469,200	162.05
	Nov 26, 2013	162.11	162.47	161.15	161.63	1,466,600	160.85
	Nov 25, 2013	162.01	162.83	161.77	161.99	1,288,900	161.19
	Nov 22, 2013	161.27	162.09	160.54	162.02	1,729,600	161.23
	Nov 21, 2013	158.91	161.85	158.05	160.78	3,396,600	160.00
	Nov 20, 2013	158.72	159.44	157.77	158.57	1,391,700	157.80
	Nov 19, 2013	159.05	159.60	157.43	158.10	1,724,100	157.33
	Nov 18, 2013	159.59	159.91	158.78	159.30	1,663,800	156.53
	Nov 15, 2013	158.40	159.58	158.20	159.49	1,593,700	158.72
	Nov 14, 2013	158.07	158.61	157.30	158.30	2,533,900	157.53

http://finance.yahoo.com/q/hp?a=11&b=20&c=2008&d=00&e=14&f=2014&g=d&s=UNP... 1/14/2014

## Market Value Data for MSDCF Shares Outstanding for CSX - End of 2013

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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 27, 2013

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

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 1,013,674,361 shares of common stock outstanding on September 27, 2013 (the latest practicable date that is closest to the filing date).

## Market Value Data for MSDCF Shares Outstanding for KSU - End of 2013

KCS 10Q 09.30.2013

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549  
**Form 10-Q**

**Z** QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
For the quarterly period ended **September 30, 2013**

or

**1** 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 1-4717

### KANSAS CITY SOUTHERN

*(Exact name of registrant as specified in its charter)*

**Delaware**  
*(State or other jurisdiction of  
incorporation or organization)*

**427 West 12th Street,  
Kansas City, Missouri**  
*(Address of principal executive office)*



**44-0663509**  
*(I.R.S. Employer  
Identification No.)*

**64105**  
*(Zip Code)*

**816.983.1303**

*(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  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  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  Accelerated filer  Non-accelerated filer  Smaller reporting company   
*(Do not check if a 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

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

**Class**  
Common Stock, \$0.01 per share par value

**October 11, 2013**  
110,309,276 Shares

## Market Value Data for MSDCF Shares Outstanding for NSC - End of 2013

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

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 for the quarterly period ended **SEPTEMBER 30, 2013**

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**  
(State or other jurisdiction of incorporation)  
**Three Commercial Place**  
**Norfolk, Virginia**  
(Address of principal executive offices)

**52-1188014**  
(IRS Employer Identification No.)  
**23510-2191**  
(Zip Code)

**(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  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  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  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

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

<u>Class</u>	<u>Outstanding at September 30, 2013</u>
Common Stock (\$1.00 par value per share)	308,910,328 (excluding 20,320,777 shares held by the registrant's consolidated subsidiaries)

## Market Value Data for MSDCF Shares Outstanding for UNP - End of 2013

Form 10-Q

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

**FORM 10-Q**

(Mark One)

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

**For the quarterly period ended September 30, 2013**

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**  
(State or other jurisdiction of  
incorporation or organization)

**13-2626465**  
(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 11, 2013, there were 460,568,638 shares of the Registrant's Common Stock outstanding.

<http://www.sec.gov/Archives/edgar/data/100885/000119312513402477/d612281d10q.htm> 1/2/2014

### 2013 Cost of Equity Using STB's MSDCF

Company Year	CSX 2013		KSU 2013		NSC 2013		UNP 2013	
<b>Inputs</b>								
Initial Cash Flow	\$1,185.82		\$45.77		\$1,137.48		\$3,075.63	
Input for Terminal C.F.	\$1,800.17		\$303.78		\$1,789.11		\$3,824.99	
Stage One Growth	8.150%		16.700%		10.750%		14.270%	
Stage Two Growth	12.470%		12.470%		12.470%		12.470%	
Stage Three Growth	5.580%		5.580%		5.580%		5.580%	
Year	Val. 12/31	Pres Val.	Val. 12/31	Pres Val.	Val. 12/31	Pres Val.	Val. 12/31	Pres Val.
1	\$1,282	\$1,132	\$53	\$49	\$1,260	\$1,105	\$3,515	\$3,086
2	1,387	1,082	62	52	1,395	1,074	4,016	3,095
3	1,500	1,033	73	55	1,545	1,044	4,589	3,105
4	1,622	986	85	59	1,711	1,014	5,244	3,115
5	1,754	942	99	63	1,895	986	5,992	3,125
6	1,973	936	111	64	2,132	973	6,740	3,086
7	2,219	929	125	66	2,397	960	7,580	3,047
8	2,496	923	141	68	2,696	947	8,525	3,009
9	2,807	916	159	70	3,033	935	9,588	2,971
10	3,157	910	178	72	3,411	923	10,784	2,933
Terminal	66,016	19,030	31,363	12,583	67,522	18,264	170,106	46,273
Sum of Pres. Values	\$28,818.76		\$13,199.76		\$28,225.14		\$76,845.88	
Market Value (input)	\$28,818.76		\$13,199.76		\$28,225.14		\$76,845.88	
Cost of Equity	13.25%		9.56%		13.97%		13.90%	
Prev. Yr. Cost of Equity	18.32%		not calculated		17.65%		15.53%	

## Preferred Stock

---

### *Cost of Preferred Equity Capital*

#### Step 1: Calculate Average Stock Price and Annual Dividend

		Stock Price			Dividend
		High	Low	Avg.	
KSU	\$25 par pref., 4%, noncum.				
	Q1	\$29.33	\$22.80	\$26.065	\$0.25
	Q2	\$26.00	\$24.81	\$25.405	\$0.25
	Q3	\$27.00	\$25.00	\$26.000	\$0.25
	Q4	\$26.50	\$25.15	\$25.825	\$0.25
	<b>Total</b>			<b>\$25.824</b>	<b>\$1.00</b>

#### Step 2: Calculate Cost of Preferred Equity Capital Using Dividend Yield method

	Dividend	Price	Yield
KSU \$25 par preferred, 4%, noncumulative	\$1.00	\$25.824	3.872%

**Cost of Preferred Equity** → **3.87%**

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### *Market Value of Preferred Equity*

	Shares	Price	Value
KSU \$25 par preferred, 4%, noncumulative	242,170	\$25.824	\$6,253,738

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