## I. INTRODUCTION

We are Thomas D. Crowley and Daniel L. Fapp. We are economists and, respectively, the President and a Vice President of L. E. Peabody \& Associates, Inc., an economic consulting firm that specializes in solving economic, transportation, marketing, financial, accounting and fuel supply problems. Mr. Crowley has spent most of his consulting career of over thirty-eight (38) years evaluating fuel supply issues and railroad operations, including railroad costs, prices, financing, capacity and equipment planning issues. His assignments in these matters were commissioned by railroads, producers, shippers of different commodities, and government departments and agencies. A copy of his credentials is included as Exhibit No. 1 to this verified statement ("VS").

Mr. Fapp has been with L. E. Peabody \& Associates, Inc. since 1997. During this time, he has worked on numerous projects dealing with railroad revenue, operational, economic and financial issues. Prior to joining L. E. Peabody \& Associates, Inc., Mr. Fapp was employed by BHP Copper Inc. in the role of Transportation Manager - Finance and Administration, where he also served as an officer and Treasurer of the three BHP Copper Inc. subsidiary railroads, The San Manual Arizona Railroad, the Magma Arizona Railroad and the BHP Nevada Railroad. A copy of his credentials is included as Exhibit No. 2 to this VS.

Our consulting assignments regularly involve working with and determining various facets of railroad financial issues, including cost of capital determinations. In these assignments, we have calculated railroad capital structures, market values, cost of railroad debt, cost of preferred railroad equity and common railroad equity. We are also well acquainted with and have used the commonly accepted models for determining a firm's cost of equity, including Single-Stage Discounted Cash Flow Models ("SS-DCF"),

Multi-Stage Discounted Cash Flow Models ("MS-DCF"), the Capital Asset Pricing Model ('.CAPM"), and the Fama-French Three Factor Model.

We have developed railroad industry average cost of capital and company specific cost of capital for use in litigation and for use in general business management. For several clients, we have both individually and together determined the Going Concern Value ("GCV") of privately held railroads. Developing the GCV under the Income Based Methodology requires developing company specific costs of debt and equity for use in discounting future company cash flows, as well as creating forecasts of expected cash flows to the firm and to holders of common equity from company financial statements. We have also developed cost of capital in order to capture the costs associated with shipper investment in railroad equipment and road property. Our findings regarding railroad cost of capital have been presented to U.S. Dịstrict and State courts, the Interstate Commerce Commission, the Surface Transportation Board ("STB") and the Federal Railroad Administration.

We have previously submitted, either individually or jointly, verified statements in prior STB annual cost of capital proceedings, including Ex Parte No. 558 (Sub-No. 9), Railroad Cost of Capital - 2005. Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006 ("2006 Cost of Capital") and Ex Parte No. 558 (Sub-No. 11), Railroad Cost of Capital - 2007 ("2007 Cost of Capital"). We have also submitted evidence in Ex Parte No. 664, Methodology To Be Employed In Determining The Railroad Industry's Cost Of Capital ("Ex Parte 664"), and Ex Parte No. 664 (Sub-No. 1), Use Of A MultiStage Discounted Cashflow Model In Determining The Railroad Industry's Cost Of Capital. ("MS-DCF Cost of Equity").

We have been requested by Counsel for the Western Coal Traffic League ("WCTL") to review the testimony submitted by Mr. John T. Gray ("Gray") and by Dr. Bruce E. Stangle ("Stangle") included with the Association of American Railroads' ("AAR") Opening Evidence filed pursuant to the Surface Transportation Board's ("STB") Decision in Ex Parte No. 558 (Sub-No. 12), Railroad Cost Of Capital - 2008, served March 5, 2009 ("2008 Cost of Capital"). Counsel has specifically requested that we review and comment on Mr. Gray's calculation of the railroad industry's CAPM cost of equity, and overall railroad industry cost of capital, and Dr.Stangle's interpretation and application of the Morningstar/Ibbotson MS-DCF cost of equity model.

Our testimony is discussed further below under the following topical headings:

## II. CAPM Cost Of Equity

III. MS-DCF Cost Of Equity
IV. Railroad Cost Of Capital

## II. CAPM COST OF EOUITY

In its decision in Ex Parte 664, the STB modified the procedure used to estimate the railroad cost of equity by switching from the SS-DCF cost of equity approach to the widely accepted CAPM approach. The STB's Ex Parte 664 procedures directed parties to calculate the CAPM cost of equity using three specific inputs:

1. The average annual yield-to-maturity on 20 -Year Treasury Bonds ("TBonds");
2. A beta estimate developed by regressing over 260 weeks excess returns on a market weighted portfolio of railroad stocks against excess returns on the S\&P 500 Price Return Index over 3-Month Treasury Bill ("T-Bill"); and
3. An estimate of the market risk premium based on the historical average equity market risk premium from 1926 to the subject year.

We have reviewed Mr. Gray`s inputs and agree that he used the proper average TBond yield-to-maturity and average market risk premium from 1926 to 2008 in his CAPM calculation. We also concur with his 260 -week analysis period and the merger and dividend adjusted stock prices he used in his beta estimation analysis. However, or review of his workpapers found that Mr.Gray included an incorrect number of common equity shares outstanding for the Union Pacific Corporation for a portion of 2008. We discuss this error and our restated analysis below.

## A. COMMON SHARES OUTSTANDING

The STB's CAPM methodology requires the calculation of the returns on a merger-adjusted portfolio of Class I railroad common equity, with the portfolio weighting
based upon each railroad's share of the market value of the industry as a whole. ${ }^{1} \mathrm{Mr}$. Gray states that he calculated the railroad industry 2008 market weights using merger and dividend adjusted stock price data obtained from Yahoo!Finance, and common equity outstanding as reported in railroad Securities and Exchange Commission ("SEC") Forms $10-\mathrm{K}$ and $10-\mathrm{Q} .{ }^{2}$

We have reviewed Mr. Gray's analysis and agree that he used the correct merger and dividend adjusted stock prices, but we also determined that Mr. Gray erred in developing the number of shares outstanding for one of the railroads. For the July 21 to October 13, 2008 time period, Mr. Gray states that the Union Pacific Corporation ("UP") had $552,778,012$ common equity shares outstanding. ${ }^{3}$ Mr. Gray's source for this figure is UP's SEC Form 10-Q issued July 18, 2008. ${ }^{4}$ While UP's July 18, 2008 SEC Form 10-Q does indicate this number of common shares outstanding figure, on July 31,2008 the UP issued an SEC Form $10-\mathrm{Q} / \mathrm{A}$, or an amended Form $10-\mathrm{Q}$, correcting the number of shares outstanding. As indicted by UP in its July 31, 2008 SEC Form 10-Q/A:

Union Pacific Corporation (the Registrant) is filing this amendment (the Form $10-\mathrm{Q} / \mathrm{A}$ ) to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2008 (the Form $10-\mathrm{Q}$ ), filed with the U.S. Securities and Exchange Commission on July 24, 2008, solely to correct an error on the cover page. The cover page of the Form 10-Q incorrectly stated that the amount of the Registrant's Common Stock outstanding as of July 18,2008 was $552,778,012$. This incorrect number included both the number of shares of Common Stock outstanding and an additional 43,607,803 shares of Common Stock held in treasury that were issued but not outstanding as of that date. The cover page of this Form $10-\mathrm{Q} / \mathrm{A}$ correctly states that the number of shares of

[^0]outstanding Common Stock of the Registrant on July 18, 2008 was $509,170,209 .{ }^{5}$

We have corrected the number of UP common shares outstanding in our restatement of Mr. Gray's beta estimate.

## B. RESTATED CAPM COST OF EOUITY

We have restated Mr. Gray's calculation of the 2008 railroad industry beta based on our correction of the number of UP common shares outstanding. As shown in Exhibit No. 3 to this VS, the corrected 2008 railroad beta equals 0.9344 . We display our restatement of the 2008 CAPM cost of equity using the corrected beta estimate in Table 1 below.

| Table 1 <br> 2008 CAPM Cost Of Equity |  |
| :---: | :---: |
| $\frac{\text { Item }}{(1)}$ | $\begin{gathered} 2008 \text { CAPM } \\ \text { Cost Of Equity } \\ (2) \end{gathered}$ |
| 1. Risk Free Rate ${ }^{\text {/ }}$ | 4.36\% |
| 2. Beta ${ }^{\text {l }}$ | 0.9344 |
| 3. Market Risk Premium ${ }^{\text {3/ }}$ | 6.47\% |
| 4. Cost of Equity ${ }^{\text {4/ }}$ | 10.41\% |
| ${ }^{I /}$ Gray VS at 26. <br> ${ }^{21}$ Exhibit No. 3. <br> ${ }^{3 /}$ Gray VS at 27. <br> ${ }^{4}$ Line $1+($ Line $2 \times$ Line 3$)$. |  |

As shown in Table 1 above, the restated 2008 CAPM cost of common equity equals $10.41 \%$.

[^1]
## III. MS-DCF COST OF EQUITY

The STB ruled in its MS-DCF Cost of Equity decision that the railroad industry cost of equity after the 2007 determination would be calculated as the simple average of the railroad industry CAPM cost of equity and the railroad industry MS-DCF cost of equity as calculated using the Morningstar/lbbotson MS-DCF model as modified to reflect only qualifying railroads, e.g., BNSF, CSX, NS, and UP. ${ }^{6}$ A MS-DCF model calculates the cost of equity by determining the discount rate that equates a firm's market value to the present value of the stream of cash flows that could impact an investor. The Morningstar/Ibbotson model adopted by the STB defines cash flows, for the first two stages of the model, as income before extraordinary items, plus depreciation and deferred taxes, and minus capital expenditures. ${ }^{7}$ Cash flows are then normalized over a five (5) year period to mitigate the impact of potentially anomalous years. Total cash flows over the five (5) year period are then divided by total sales over the same period to develop an average cash flow-to-sales ratio, which is then multiplied by the analysis year's sales to obtain the average cashflow estimate for the year. For the third and final model stage, the Morningstar/Ibbotson model utilizes normalized earnings before extraordinary items as a surrogate for perpetual cashflows under the assumption that over the long-term capital expenditures will equal depreciation and deferred taxes are zero.

We have reviewed the MS-DCF cost of equity estimates developed by Dr. Stangle, and accept, for present purposes, his calculation of the normalized cashflows, the formulas he used in the iterative process to calculate each railroad's estimated cost of equity and the weighting methodology used to develop the industry average cost of

[^2]equity. However, we disagree with Dr. Stangle's application of the Institutional Broker's Estimating System ("I/B/E/S") growth rates and his calculation of each railroad's equity market value because he deviates from accepted finance theory and from Morningstar/Ibbotson's application of the MS-DCF model. We have also made an adjustment to the Stage 3 cashflow calculation to conform the MS-DCF model to STB procedures for applying deferred taxes. We discuss each of these issues below.

## A. CORRECT <br> MARKET VALUES

A firm's equity market value is equal to the number of common shares outstanding multiplied by the market price of those common equity shares. Dr. Stangle states that he obtained the railroad company market values he used in his MS-DCF calculation from Thomson Financial "following the Morningstar/Ibbotson practice of using stock market values that reflect the release of the year-end financial statements. ${ }^{\circ 8}$ Dr. Stangle's workpapers indicate that the market values were calculated as of March 31, 2009. ${ }^{9}$

There are several issues with Dr. Stangle's use of market values as of March 31, 2009 for a 2008 cost of equity estimate. First. as a matter of application, the Morningstar/Ibbotson MS-DCF model uses the most recent market capitalization figures within the study year, and not three months after. Second, as a matter of finance theory, market values developed three months after the end of the study year will incorporate information and data that were not available to, and thus not considered by, the market during the subject period.

[^3]
## 1. The Morningstar/Ibbotson Model Uses Market Values From The Last Fiscal Year

Dr. Stangle states that he used market value data from the end of March 2009 because this follows the Morningstar/Ibbotson practice of using stock prices that reflect the release of year-end data. As support for his position, Dr. Stangle provides a quotation from the Ibbotson Cost Of Capital 2008 Yearbook ("2008 Yearbook"), which purports to show Morningstar/Ibbotson's use of March data to calculate the prior year's cost of equity. ${ }^{10}$ However, the reference Dr. Stangle provides does not support his view that Morningstar/Ibbotson's uses March market value data to calculate the prior year's cost of equity. Rather the quote refers to Morningstar/Ibbotson's use of data as of March 2008 as the starting point for the 2008 analysis included in the 2008 Yearbook. In other words, Morningstar/Ibbotson uses March 2008 market value data to calculate its initial 2008 values for all metrics reported, and not the cost of equity estimate for the prior year. As fully stated by Morningstar/Ibbotson:

The 2008 Yearbook includes data available through March 2008. By the end of March, many companies have reported their previous year's financial results. For this reason, we have selected March to be our initial Yearbook reporting month. In order to have the most up-to-date information, purchasers of the 2008 Yearbook should also purchase the quarterly supplements which contain data updated through June, September, and December. ${ }^{11}$

As clearly explained by Morningstar/Ibbotson, the March date is the initial, and not the terminal, assessment date for the particular year's analysis. Morningstar/Ibbotson

[^4]subsequently update their initial analyses throughout the year as more current data becomes available. For 2008, the March date represents Morningstar/Ibbotson's first assessment of the 2008 cost of equity, which it will then update throughout the year. Under Dr. Stangle's assumption, the March 2008 calculations would reflect the 2007 cost of equity, which is clearly contrary to Morningstar/Ibbotson's approach. Furthermore, the timing of the Morningstar/Ibbotson updates (June, September, and December) reflects a consistent lag from the end of each preceding calendar quarter and the release of associated quarterly financial ( $10-\mathrm{Q}$ ) data, which pattern indicates that the March issuance reflects data as of the end-of-the calendar year. In particular, the quarterly issuances reflect the number of shares outstanding (see the discussion of UP's $10-\mathrm{Q}$ for the third quarter of 2008).

Because we are interested in the cost of equity in 2008, the proper market value is that reflected in the year-end 2008 stock prices and not stock prices as of March 31, 2009.

## 2. Finance Theory Calls <br> For Market Values <br> Within The Study Year

Finance theory holds that, at any particular time, a firm's stock price incorporates all historic price information, as well as all current publicly available information, including projections of future value, that can impact the firm. In other words, under the theory of efficient markets, prices at any given point in time impound all available information about the value of the security. ${ }^{12}$ Because a firm's equity market value is

[^5]equal to its stock price multiplied by the number of shares of common equity outstanding, equity market value is also impacted by new information that impacts the underlying stock prices. As new information becomes available, the market value of the firm will change.

This issue is pertinent because Dr. Stangle's use of railroad company market values as of March 31, 2009 to calculate the 2008 MS-DCF cost of equity effectively incorporates information into the 2008 cost of capital that occurred well after the end of 2008. ${ }^{13}$ The railroad company market values on March 31, 2009 include all of the publicly available information that was generated between January 1 and March 31, 2009. While this information may be pertinent for the cost of capital determination as of March 31, 2009, it is irrelevant to the cost of capital incurred by the railroads in 2008.

The impact of newly available information is clearly shown in a comparison of railroad common equity prices over the three months after the end of 2008. Table 2 below compares railroad stock prices on December 31, 2008 and March 31, 2009.

| Railroad | Comparison of Railroad Stock Prices |  |  |
| :---: | :---: | :---: | :---: |
|  | December 31, 2008 Closing Stock Price | March 31, 2009 Closing Stock Price ${ }^{1 /}$ | Percentage Change |
| (1) | (2) | (3) | (4) |
| 1. BNSF | \$75.71 | \$60.15 | (20.5\%) |
| 2. CSX | \$32.47 | \$25.85 | (20.4\%) |
| 3. NS | \$47.05 | \$33.75 | (28.3\%) |
| 4. UP | \$47.80 | \$41.11 | (14.0\%) |
| ${ }^{\text {T }}$ Source: Yahoo!Finance. <br> ${ }^{2}$ [Column (3) $\div$ Column (2)] -1 . |  |  |  |

[^6]As is shown in Table 2 above, railroad company stock prices significantly declined between the end of December 2008 and the end of March 2009. While it is not possible in such a short space to list all of the factors that impacted railroad stock prices during this period, it appears that the broadening of the recession and the associated decline in railroad traffic volumes likely had an impact on railroad stock prices. There is no reason the 2008 railroad industry cost of equity should be impacted by information that did not become embedded in railroad stock prices well into the following year.

## 3. Correct <br> Market Values

We have corrected the market values used in the MS-DCF model to reflect the railroad company market values for the last week of trading 2008. This is consistent with Morningstar/Ibbotson's application of its MS-DCF model, which calls for use of each company's common equity capitalization in the most recent fiscal year, and consistent with financial theory. This also brings the MS-DCF model into line with the CAPM cost of equity, which uses stock price data through the last week of 2008 in estimating the railroad industry beta.

## B. CORRECT <br> GROWTH RATES

Like the market values he used in his MS-DCF, Dr. Stangle used forecasted longterm earnings per share ("EPS") growth rates reflecting information and opinions available as of March 31, 2009. Such use is inconsistent with the intent of this proceeding, which is to develop the railroad industry cost of capital for 2008. Like stock prices, the opinions of analysts that produce the long-term growth forecasts are
influenced by newly available information. As such, the growth estimates at the end of March 2009 will be different than the estimates developed in 2008.

To correct for this, we have developed a MS-DCF model to incorporate the median I/B/E/S growth estimates available at year-end 2008. Table 3 below compares the March 31, $2009 \mathrm{I} / \mathrm{B} / \mathrm{E} / \mathrm{S}$ growth rates to the I/B/E/S growth rates as of December 2008, as well as the simple average of the median growth rates used in the second stage of the MS-DCF model.

Table 3

## Comparison of I/B/E/S Long-Term Earnings Growth Rates

|  | December 31, 2008 <br> I/B/E/S Median <br> Railroad <br> (1) | Growth Rates ${ }^{1 /}$ |
| :---: | :---: | :---: |
| (2) | Median |  |
|  |  | (3) |


| I. BNSF | $12.00 \%$ | $10.00 \%$ |
| :--- | :--- | :--- |
| 2. CSX | $15.00 \%$ | $10.00 \%$ |
| 3. NS | $10.00 \%$ | $10.00 \%$ |
| 4. UP | $17.45 \%$ | $10.20 \%$ |
| 5. Average | $13.61 \%$ | $10.05 \%$ |
| II Source: Thomson IBES. |  |  |
| 2-I Source: Stangle VS at 5. |  |  |

As shown in Table 3 above, median $\mathrm{I} / \mathrm{B} / \mathrm{E} / \mathrm{S}$ growth rates used in the first stage of the MS-DCF model range from $10.00 \%$ to $17.45 \%$ at the end of 2008 . The -simple average growth rate, which is used in the MS-DCF model's second stage, equaled 13.61\%

## C. DEFERRED <br> TAXES

The Morningstar/Ibbotson model, which the Board has adopted for its MS-DCF analysis, defines cashflows used in the first two stages of the MS-DCF model as earnings
before extraordinary items less capital expenditures plus depreciation and deferred taxes. ${ }^{14}$ These adjustments are required under the Board's approach because a discounted cashflow model should reflect the cashflows available to equity holders, which are usually different than the company's reported earnings shown in the income statement. Capital expenditures are subtracted to reflect the outflow of cash used to acquire additional assets. Depreciation is added back in the cashflow equation because it is a noncash expense that reduces reported earnings but does not impact the firm's cash position. Finally, the cashflow calculation is adjusted for deferred taxes because the tax expense included in a railroad's reported earnings may be different than the actual cash tax payments made by the railroad. ${ }^{15}$

The model assumes that in the third stage depreciation will equal capital expenditures, but is silent on deferred taxes notwithstanding the STB's claim in its $M S$ $D C F$ Cost of Equity decision. ${ }^{16}$ This implicitly assumes that the railroads will never have to pay these deferred taxes. However, as the STB ruled in its decision in Ex Parte 646 (Sub-No. 2), Simplified Standards For Rail Rate Cases - Taxes In Revenue Shortfall Allocation Method, served November 21, 2008 ("EP 646-Sub 2"), the issue of deferred taxes does not reduce the railroad's taxes payable, only the timing of the tax payments. As stated by the STB:

[^7]Based on this analysis, we find that, even with continual investment, the annual tax rates can equal statutory tax rates and that the accelerated depreciation only affects the timing of payments. ${ }^{17}$

The use of accelerated depreciation will lower the cash tax rate of an asset early in its life, but will raise the cash tax rate above the tax rate implicit in the railroad's earnings in future periods. The AAR is also well acquainted with the cashflow impact of deferred taxes based on its evidence in the EP 646-Sub 2 proceedings:

When accelerated depreciation is available, reduced tax payments in the early years of the asset are offset by increased tax payments in the later years of the asset. Deferred taxes affect only the timing of the railroad's payments. While railroads realize a time value of money benefit of deferring tax payments, they nonetheless remain liable for the full amount of the tax obligation incurred at the statutory tax rate. ${ }^{18}$

The "reduced tax" payments the AAR refers to are the deferred tax adjustment shown in the railroads' statement of cashflows and are added back to the cashflow estimate used in the Morningstar/Ibbotson MS-DCF model.

While the Morningstar/Ibbotson MS-DCF accounts for deferred taxes in its first two stages, it fails to account for the impact of deferred taxes in the model's final stage. Stages 1 and 2 of the model utilize normalized railroad cashflows that have added back the cash gained from deferred taxes. Stage 3 assumes on the other hand that cashflows are

[^8]equal to normalized earnings before extraordinary items, which are not adjusted for deferred taxes. ${ }^{19}$ But as the STB clearly specified in EP 646-Sub 2, it is not a matter of if these taxes will be paid, but only a matter of when they will be paid. Dr. Stangle's workpapers show that that the railroads' cashflows over the last five years (the normalization period) include significant deferred tax benefits that increase the cashflows depicted in Stages 1 and 2 of the model. To be consistent with the STB's rulings on deferred taxes in EP 646-Sub 2, the MS-DCF model must be adjusted to reflect the reduction in future cashflows from paying these deferred taxes in the future.

To be consistent with the STB's ruling in EP 646-Sub 2 that deferred taxes are only a matter of timing and will be paid in the future, we have adjusted the normalized earnings before extraordinary items used in Stage 3 of the Morningstar/Ibbotson model to reflect the payment of deferred taxes. This adjustment reflects the approximate eventual payment of only the level of deferred taxes established during the normalization period as adjusted by the applicable growth rates during the first two stages of the MS-DCF model, that is, the deferred taxes associated with the cashflows during the first ten years of the model. We emphasize that this approach is quite r conservative because it makes no attempt-to reflect the payment of the accumulated deferred tax liabilities reflected on the railroads' balance sheets. As of 2008, those net deferred income taxes (deferred income tax liabilities less deferred income tax assets) contained on the BNSF, CSX, NS and UP's balance sheets were quite substantial, amounting to $\$ 8.148$ billion, $\$ 6.05$ billion, $\$ 6.223$ billion, and $\$ 10.006$ billion, respectively. ${ }^{20}$

[^9]
## D. MS-DCF COST

OF EQUITY
Based on the corrections discussed above, we have restated the MS-DCF cost of equity. We show the restated MS-DCF models in Exhibit No. 4 to this VS and, summarize the results in Table 4 below.

| Table 4 <br> 2008 MS-DCF Cost of Equity |  |  |  |
| :---: | :---: | :---: | :---: |
| Railroad <br> (1) | 2008 Cost of Equity ${ }^{1 /}$ (2) | 2008 Equity Weight ${ }^{1 /}$ (3) | 2008 Weighted Cost of Equity ${ }^{3 /}$ <br> (4) |
| 1. BNSF | 14.55\% | 31.9\% | 4.65\% |
| 2. CSX | 15.99\% | 16.3\% | 2.60\% |
| 3. NS | 16.00\% | 21.6\% | 3.46\% |
| 4. UP | 14.21\% | 30.2\% | 4.29\% |
| 5. Total ${ }^{3 /}$ | --- | 100.0\% | 15.00\% |
| ${ }^{1 /}$ Source: E <br> ${ }^{2 /}$ Column <br> ${ }^{3 /}$ Sums of |  |  |  |

As shown in Table 4 above, the 2008 MS-DCF cost of equity is $15.00 \%$.

## IV. RAILROAD COST OF CAPITAL

Based on the corrections to the CAPM and MS-DCF costs of equity discussed above, we have restated the 2008 cost of capital developed by Mr. Gray. We discuss our restatement below.

## A. COST OF EOUITY

As we discussed above, we made corrections to both Mr. Gray's calculation of the CAPM cost of equity and to Dr. Stangle's MS-DCF cost of equity. Table 5 below shows the development of the 2008 average cost of equity based on our corrections.

| Table 5 |  |
| :---: | :---: |
| 2008 Average Cost of Equity |  |
| $\frac{\text { Item }}{(1)}$ | 2008 Average Cost Of Equity (2) |
| 1. CAPM Cost of Equity ${ }^{1 /}$ | 10.41\% |
| 2. MS-DCF Cost of Equity ${ }^{\mathbf{2} /}$ | 15.00\% |
| 3. Average Cost of Equity ${ }^{\mathbf{3 /}}$ | 12.70\% |
| ${ }^{1 /}$ Exhibit No. 3. |  |
| ${ }^{2 /}$ Exhibit No. 4. |  |
| ${ }^{3 /}$ Simple Average of Lines I and 2. |  |

As shown in Table 5 above, the 2008 average cost of railroad equity equals 12.70\%.

## B. COST OF

DEBT
We have reviewed Mr. Gray's calculation of the railroad industry cost of debt, and, with the exception of the flotation cost of debt, concur that he calculated the cost in a manner consistent with prior railroad cost of capital proceedings. We therefore use his calculation of the railroad industry cost of debt. We also reviewed his calculations of the railroad flotation costs, and accept the costs for this proceeding.

## C. COST OF

## PREFERRED EOUITY

As noted by Mr. Gray, the railroads included in the 2008 cohort had no preferred equity outstanding at the end of 2008. ${ }^{21}$ Therefore, we have included no cost for preferred equity in our restated cost of capital, and assigned preferred equity a market value of zero (\$0).

## D. CAPITAL STRUCTURE

In developing his calculation of the 2008 market value of common equity, Mr. Gray used the stock price and common shares outstanding data for the 52-week period beginning the week of December 31, 2007 and ending the week of December 22, 2008. ${ }^{22}$ We found two issues with Mr. Gray's calculation of the average equity market value. First, Mr. Gray shifted the market cap analysis period back one week, so that the there is a mismatch between Mr. Gray's average market value calculation and the analysis period used in developing the railroad industry beta estimate. Second, Mr. Gray's equity market

[^10]cap calculation includes the same error in the number of shares outstanding as discussed above.

Mr. Gray used a 260 -week period ending the week of December 29, 2008 for the calculation of his railroad industry beta. ${ }^{23}$ Mr. Gray states that he included this week of data because 3 of the 4 trading days during the week were in 2008. ${ }^{24}$ However, in calculating the average railroad industry market cap, Mr. Gray used a 52-week period ending December 26, 2008 leaving out the final three days of the year. More importantly, using a December 26, 2008 end-date creates a mismatch between the railroad industry beta estimate and the equity market value calculation.

In applying the STB's CAPM methodology in the STB's 2007 Cost of Capital proceeding, Mr. Gray used a 260 -month analysis period ending with the week of December 24, 2007. ${ }^{25}$ Mr. Gray's beta estimation analysis period was consistent with his calculation of the 2007 market value of railroad common equity, which utilized a 52week period also ending with the week of December 24, 2007. ${ }^{26}$ While the STB found some errors in Mr. Gray's calculation of the market value of common equity dealing with the number shares outstanding, the STB's decision infers that it agreed with the beta analysis period and the equity market value calculations ending on the same time period. ${ }^{27}$.

[^11]To avoid this inconsistency, we corrected Mr. Gray's common equity market value calculation to reflect an ending as the week of December 29,2008 as shown in Exhibit No. 3 to this VS. This brings the market value calculation into alignment with the CAPM beta estimate and is consistent with the STB's approach in 2007.

With regard to the market value of railroad debt, we have reviewed Mr. Gray's workpapers and concur that Mr. Gray calculated the market value of debt in a manner consistent with prior cost of capital proceedings. We therefore utilize his market value of debt in this restatement. Table 6 below shows our restated 2008 railroad industry capital structure.

| Table 6 <br> 2008 Railroad Industry Capital Structure |  |  |
| :---: | :---: | :---: |
| $\frac{\text { Railroad }}{\text { (1) }}$ | $\begin{gathered} \begin{array}{c} \text { Market } \\ \text { Value } \\ \text { (millions) } \end{array} \\ (2) \end{gathered}$ | Capital Structure Weight ${ }^{1 /}$ (3) |
| 1. Common Equity ${ }^{\text {2 }}$ | \$108,840.6 | 78.5\% |
| 2. Debt ${ }^{3 /}$ | \$29,805.8 | 21.5\% |
| 3. Preferred Equity | \$0 | 0\% |
| 4. Total ${ }^{4 /}$ | \$138,646.4 | 100.0\% |
| ${ }^{1 /}$ Current Line Column (2) - Line 4, Column (2). <br> ${ }^{2}$ Exhibit No. 3. <br> ${ }^{3}$ Gray VS at 34 . <br> ${ }^{\#}$ Sum of Lines 1 to 3 . |  |  |

As shown in Table 6 above, the 2008 railroad industry capital structure is $78.5 \%$ common equity capital, $21.5 \%$ debt capital, and $0.0 \%$ preferred equity capital.

## E. COST OF <br> CAPITAL

Based on the restated cost of equity, assumed cost of debt and restated capital structure discussed above, we have restated the 2008 railroad industry cost of capital as shown in Table 7 below.

## 2008 Cost of Capital

$$
\frac{\text { Item }}{(1)}
$$

## 2008

1. Weighted Cost of Equity
a. Railroad Industry Cost of Equity ${ }^{\text {I/ }}$
b. Common Equity Portion of Capital Structure ${ }^{\text {2/ }}$
c. Weighted Cost of Railroad Industry Common Equity ${ }^{3}$ ² $\quad 9.97 \%$
2. Weighted Cost of Debt
a. Rairoad Industry Cost of Debt ${ }^{\underline{ \pm}}$, $\quad 6.57 \%$
b. Debt Portion of Capital Structure ${ }^{\underline{2}}$
c. Weighted Cost of Railroad Industry Debt ${ }^{\underline{\underline{\xi}} /}$

## VERIFICATION

## COMMONWEALTH OF VIRGINIA ) CITY OF ALEXANDRIA )

I, THOMAS D. CROWLEY, verify under penalty of perjury that I have read the foregoing Verified Statement of Thomas D. Crowley, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Sworn to and subscribed before me this $20^{\text {dh }}$ day of May, 2009


Diane R. Kavounis
Notary Public for the State of Virginia

My Commission Expires: November 30, 2012
Registration Number: 7160645

## VERIFICATION

## COMMONWEALTH OF VIRGINIA ) ) CITY OF ALEXANDRIA )

I, DANIEL L. FAPP, verify under penalty of perjury that I have read the foregoing Verified Statement of Daniel L. Fapp, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Sworn to and subscribed before me this day of May 19, 2009.


Notary Public for the State of Virginia

My Commission expires:
Naverlew 30,2010
Registration 7160645

## STATEMENT OF OUALIFICATIONS

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody \& Associates, Inc. The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, Virginia 22314, and 10445 N. Oracle Road, Suite 151, Tucson, Arizona 85737.

I am a graduate of the University of Maine from which I obtained a Bachelor of Science degree in Economics. I have also taken graduate courses in transportation at George Washington University in Washington, D.C. I spent three years in the United States Army and since February 1971 have been employed by L. E. Peabody \& Associates, Inc.

I am a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering and Maintenance-of-Way Association.

The firm of L. E. Peabody \& Associates, Inc. specializes in analyzing matters related to the rail transportation of coal. As a result of my extensive economic consulting practice since 1971 and my participating in maximum-rate, rail merger, service disputes and rule-making proceedings before various government and private governing bodies, I have become thoroughly familiar with the rail carriers that move coal over the major coal routes in the United States. This familiarity extends to subjects of railroad service, costs and profitability, railroad capacity, railroad traffic prioritization and the structure and operation of the various contracts and tariffs that historically have governed the movement of coal by rail.

## STATEMENT OF OUALIFICATIONS

As an economic consultant, I have organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, for shippers, for associations and for state governments and other public bodies dealing with transportation and related economic problems. Examples of studies I have participated in include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from both eastern and western origins to various destinations in the United States. The nature of these studies enabled me to become familiar with the operating practices and accounting procedures utilized by railroads in the normal course of business.

Additionally, I have inspected and studied both railroad terminal and line-haul facilities used in handling various commodities, and in particular unit train coal movements from coal mine origins in the Powder River Basin and in Colorado to various utility destinations in the eastern, mid-western and western portions of the United States and from the Eastern coal fields to various destinations in the Mid-Atlantic, northeastern, southeastern and mid-western portions of the United States. These operational reviews and studies were used as a basis for the determination of the traffic and operating characteristics for specific movements of coal and numerous other commodities handled by rail.

## STATEMENT OF OUALIFICATIONS

I have frequently been called upon to develop and coordinate economic and operational studies relative to the acquisition of coal and the rail transportation of coal on behalf of electric utility companies. My responsibilities in these undertakings included the analyses of rail routes, rail operations and an assessment of the relative efficiency and costs of railroad operations over those routes. I have also analyzed and made recommendations regarding the acquisition of railcars according to the specific needs of various coal shippers. The results of these analyses have been employed in order to assist shippers in the development and negotiation of rail transportation contracts which optimize operational efficiency and cost effectiveness.

I have developed property and business valuations of privately held freight and passenger railroads for use in regulatory, litigation and commercial settings. These valuation assignments required me to develop company and/or industry specific costs of debt, preferred equity and common equity, as well as target and actual capital structures. I am also well acquainted with and have used the commonly accepted models for determining a company's cost of common equity, including the Discounted Cash Flow Model ("DCF"), Capital Asset Pricing Model ("CAPM"), and the Farma-French Three Factor Model.

Moreover, I have developed numerous variable cost calculations utilizing the various formulas employed by the Interstate Commerce Commission ("ICC") and the Surface Transportation Board ("STB") for the development of variable costs for common carriers,

## STATEMENT OF OUALIFICATIONS

with particular emphasis on the basis and use of the Uniform Railroad Costing System ("URCS") and its predecessor, Rail Form A. I have utilized URCS/Rail form A costing principles since the beginning of my career with L. E. Peabody \& Associates Inc. in 1971.

I have frequently presented both oral and written testimony before the ICC, STB, Federal Energy Regulatory Commission, Railroad Accounting Principles Board, Postal Rate Commission and numerous state regulatory commissions, federal courts and state courts. This testimony was generally related to the development of variable cost of service calculations, rail traffic and operating patterns, fuel supply economics, contract interpretations, economic principles concerning the maximum level of rates, implementation of maximum rate principles, and calculation of reparations or damages, including interest. I presented testimony before the Congress of the United States, Committee on Transportation and Infrastructure on the status of rail competition in the western United States. I have also presented expert testimony in a number of court and arbitration proceedings concerning the level of rates, rate adjustment procedures, service, capacity, costing, rail operating procedures and other economic components of specific contracts.

Since the implementation of the Staggers Rail Act of 1980, which clarified that rail carriers could enter into transportation contracts with shippers, I have been actively

## STATEMENT OF OUALIFICATIONS

involved in negotiating transportation contracts on behalf of coal shippers. Specifically, I have advised utilities concerning coal transportation rates based on market conditions and carrier competition, movement specific service commitments, specific cost-based rate adjustment provisions, contract reopeners that recognize changes in productivity and cost-based ancillary charges. I have also reviewed, analyzed and evaluated both UP's Circular 111 and BNSF 90068 rate levels and other terms and conditions on behalf of coal shippers.

I have been actively engaged in negotiating coal supply contracts for various users throughout the United States. In addition, I have analyzed the economic impact of buying out, brokering, and modifying existing coal supply agreements. My coal supply assignments have encompassed analyzing alternative coals to determine the impact on the delivered price of operating and maintenance costs, unloading costs, shrinkage factor and by-product savings.

I have developed different economic analyses regarding rail transportation matters for over sixty (60) electric utility companies located in all parts of the United States, and for major associations, including American Paper Institute, American Petroleum Institute, Chemical Manufacturers Association, Coal Exporters Association, Edison Electric Institute, Mail Order Association of America, National Coal Association, National Industrial Transportation League, North America Freight Car Association, the Fertilizer Institute and Western Coal Traffic League. In addition, I have assisted numerous

# Exhibit No. 1 <br> Page 6 of 6 

## STATEMENT OF QUALIFICATIONS

government agencies, major industries and major railroad companies in solving various transportation-related problems.

In the two Western rail mergers that resulted in the creation of the present BNSF Railway Company and Union Pacific Railroad Company and in the acquisition of Conrail by Norfolk Southern Railway Company and CSX Transportation, Inc., I reviewed the railroads' applications including their supporting traffic, cost and operating data and provided detailed evidence supporting requests for conditions designed to maintain the competitive rail environment that existed before the proposed mergers and acquisition. In these proceedings, I represented shipper interests, including plastic, chemical, coal, paper and steel shippers.

I have participated in various proceedings involved with the division of through rail rates. For example, I participated in ICC Docket No. 35585, Akron, Canton \& Youngstown Railroad Company, et al. v. Aberdeen and Rockfish Railroad Company, et al. which was a complaint filed by the northern and mid-western rail lines to change the primary north-south divisions. I was personally involved in all traffic, operating and cost aspects of this proceeding on behalf of the northern and mid-western rail lines. I was the lead witness on behalf of the Long Island Rail Road in ICC Docket No. 36874, Notice of Intent to File Division Complaint by the Long Island Rail Road Company.

## STATEMENT OF QUALIFICATIONS

My name is Daniel L. Fapp. I am Vice President of the economic consulting firm of L. E. Peabody \& Associates, Inc. The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA 22314; 10445 N. Oracle Road, Suite 151, Tucson, Arizona 85737; and 21 Founders Way, Queensbury, New York 85737.

I received a Bachelor of Science degree in Business Administration with an option in Marketing (cum laude) from the California State University, Northridge in 1987, and a Master of Business Administration degree from the University of Arizona's Eller College of Management in 1993, specializing in finance and operations management. I am also a member of Beta Gamma Sigma, the national honor society for collegiate schools of business.

I have been employed by L. E. Peabody \& Associates, Inc. since December 1997. Prior to joining L. E. Peabody \& Associates, Inc., I was employed by BHP Copper Inc. in the role of Transportation Manager - Finance and Administration, and where I also served as an officer of the three BHP Copper Inc. subsidiary railroads, The San Manual Arizona Railroad, the Magma Arizona Railroad (also known as the BHP Arizona Railroad) and the BHP Nevada Railroad. I have also held operations management positions with Arizona Lithographers in Tucson, $A Z$ and MCA-Universal Studios in Universal City, CA.

While at BHP Copper Inc., I was responsible for all financial and administrative functions of the company's transportation group. I also directed the BHP Copper Inc. subsidiary railroads' cost and revenue accounting staff, and managed the San Manuel Arizona Railroad's and BHP Arizona Railroad's dispatchers and the railroad dispatching functions. I served on the company's Commercial and Transportation Management Team and the company's Railroad Acquisition Team where I was responsible for evaluating the acquisition of new railroads,

## STATEMENT OF OUALIFICATIONS

including developing financial and economic assessment models. While with MCA-Universal Studios, I held several operations management positions, including Tour Operations Manager, where my duties included vehicle routing and scheduling, personnel scheduling, forecasting facilities utilization, and designing and performing queuing analyses.

As part of my work for L. E. Peabody \& Associates, Inc., I have performed and directed numerous projects and analyses undertaken on behalf of utility companies, short line railroads, bulk shippers, and industry and trade associations. Examples of studies which I have participated in organizing and directing include, traffic, operational and cost analyses in connection with the rail movement of coal, metallic ores, pulp and paper products, and other commodities. I have also analyzed multiple car movements, unit train operations, divisions of through rail rates and switching operations throughout the United States. The nature of these studies enabled me to become familiar with the operating procedures utilized by railroads in the normal course of business.

Since 1997, I have participated in the development of cost of service analyses for the movement of coal over the major eastern and western coal-hauling railroads. I have conducted on-site studies of switching, detention and line-haul activities relating to the handling of coal. I have also participated in and managed several projects assisting short-line railroads. In these engagements, I assisted short-line railroads in their negotiations with connecting Class I carriers, .performed railroad property and business evaluations, and worked on rail line abandonment projects.

I have been frequently called upon to perform financial analyses and assessments of Class I, Class II and Class III railroad companies. In addition, I have developed various financial

## STATEMENT OF OUALIFICATIONS

models exploring alternative methods of transportation contracting and cost assessment, developed corporate profitability and cost studies, and evaluated capital expenditure requirements. I have determined the Going Concern Value of privately held freight and passenger railroads, including developing company specific costs of debt and equity for use in discounting future company cash flows. My consulting assignments regularly involve working with and determining various facets of railroad financial issues, including cost of capital determinations. In these assignments, I have calculated railroad capital structures, market values, cost of railroad debt, cost of preferred railroad equity and common railroad equity. I am also well acquainted with and have used the commonly accepted models for determining a firm's cost of equity, including the Discounted Cash Flow Model ("DCF"), Capital Asset Pricing Model ("CAPM"), Farma-French Three Factor Model and Arbitrage Pricing Model.

In my tenure with L. E. Peabody \& Associates, Inc., I have assisted in the development and presentation of traffic and revenue forecasts, operating expense forecasts, and discounted cash-flow models which were presented in numerous proceedings before the STB. I presented evidence applying the STB's stand-alone cost procedures in Docket Number 42057, Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, and in Docket Number 42071, Otter Tail Power Company v. BNSF Railway Company. I have also presented evidence before the STB in Ex Parte No. 661, Rail Fuel Surcharges, in Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006, and Ex Parte No. 664, Methodology To Be Employed In Determining The Railroad Industry Cost Of Capital. n addition, my reports have been used as evidence before the Nevada State Tax Commission.
Attachment No. 3

| Week | Closing Stock Price 1/ |  |  |  | Common Equity Outstanding 2/ |  |  |  | Weekly Market Cap (millions) 3/1 |  |  |  | Aggregate Market Cap 4l |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BNSF | CSX | NS | UP | BNSF | CSX | NS | UP | BNSF | CSX | NS | UP |  |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| 1/7/1900 | \$78.11 | \$42.48 | \$46.46 | \$114.11 | 350,631,059 | 420,425,477 | 387,240,494 | 262,623,905 | \$27,387.8 | \$17,859.7 | \$17,991.2 | \$29,968.0 | \$93,206.7 |
| 1/14/1900 | \$76.93 | \$41.18 | \$44.15 | \$110.45 | 350,631,059 | 420,425,477 | 387,240,494 | 262,623,905 | \$26,974.0 | \$17,313.1 | \$17,096.7 | \$29,006.8 | \$90,390.6 |
| 1/21/1900 | \$81.80 | \$45.45 | \$50.74 | \$119.81 | 350,631,059 | 420,425,477 | 387,240,494 | 262,623,905 | \$28,681.6 | \$19,108.3 | \$19,648.6 | \$31,465.0 | \$98,903.5 |
| 1/28/1900 | \$88.30 | \$49.93 | \$56.29 | \$127.97 | 350,631,059 | 420,425,477 | 387,240,494 | 262,623,905 | \$30,960.7 | \$20,991.8 | \$21,797.8 | \$33,608.0 | \$107,358.3 |
| 2/4/1900 | \$88.03 | \$48.02 | \$54.41 | \$125.35 | 350,631,059 | 420,425,477 | 376,332,668 | 260,700,527 | \$30,866.1 | \$20,188.8 | \$20,476.3 | \$32,678.8 | \$104,210.0 |
| 2/11/1900 | \$89.11 | \$48.78 | \$53.94 | \$124.80 | 348.201.513 | 420.425,477 | 376,332,668 | 260,700,527 | \$31,028.2 | \$20,508.4 | \$20,299.4 | \$32,535.4 | \$104,371.4 |
| 2/18/1900 | \$88.18 | \$50.16 | \$53.18 | \$124.13 | 348.201 .513 | 403,363,273 | 376,332,668 | 260,700,527 | \$30,704.4 | \$20.232.7 | \$20,013.4 | \$32,360.8 | \$103,311.2 |
| 2/25/1900 | \$87.78 | \$48.52 | \$52.89 | \$124.76 | 348,201,513 | 403,363,273 | 376,332,668 | 260,700,527 | \$30.565.1 | \$19,571.2 | \$19,904.2 | \$32,525.0 | \$102,565.5 |
| 3/3/1900 | \$88.02 | \$47.09 | \$51.94 | \$119.66 | 348.201.513 | 403.363,273 | 376,332,668 | 260,700,527 | \$30,648.7 | \$18,994.4 | \$19,546.7 | \$31,195.4 | \$100,385.2 |
| 3/10/1900 | \$90.80 | \$48.97 | \$52.93 | \$122.75 | 348,201.513 | 403,363,273 | 376,332,668 | 260,700,527 | \$31,616.7 | \$19.752.7 | \$19,919.3 | \$32,001.0 | \$103,289.7 |
| 3/17/1900 | \$91.61 | \$54.59 | \$53.07 | \$122.06 | 348,201,513 | 403,363,273 | 376,332,668 | 260,700,527 | \$31,898.7 | \$22,019.6 | \$19,972.0 | \$31,821.1 | \$105,711.4 |
| 3/24/1900 | \$91.99 | \$56.55 | \$54.25 | \$125.02 | 348.201,513 | 403,363,273 | 376,332,668 | 260,700,527 | \$32.031.1 | \$22,810.2 | \$20,416.0 | \$32,592.8 | \$107.850.1 |
| 3/31/1900 | \$95.94 | \$57.29 | \$56.80 | \$133.66 | 348,201,513 | 404,888,568 | 376,332,668 | 260,700,527 | \$33,406.5 | \$23.196.1 | \$21,375.7 | \$34,845.2 | \$112,823.4 |
| 4/7/1900 | \$93.19 | \$56.31 | \$54.99 | \$130.21 | 348,201,513 | 404,888,568 | 375,755,263 | 260,700,527 | \$32,448.9 | \$22,799.3 | \$20,662.8 | \$33,945.8 | \$109,856.8 |
| 4/14/1900 | \$99.77 | \$61.24 | \$61.64 | \$138.08 | 348,201,513 | 404,888,568 | 375,755,263 | 260,700,527 | \$34,740.1 | \$24.795.4 | \$23,161.6 | \$35,997.5 | \$118,694.5 |
| 4/2 1/1900 | \$99.75 | \$61.94 | \$60.13 | \$140.59 | 348,201,513 | 404,888,568 | 375,755,263 | 258,373,520 | \$34,733.1 | \$25,078.8 | \$22,594.2 | \$36,324.7 | \$118,730.8 |
| 4/28/1900 | \$104.24 | \$64.14 | \$60.19 | \$146.88 | 344,930,287 | 404,888,568 | 375,755,263 | 258,373,520 | \$35,955.5 | \$25,969.6 | \$22,616.7 | \$37,949.9 | \$122,491.7 |
| 5/5/1900 | \$103.47 | \$63.24 | \$61.90 | \$146.28 | 344,930,287 | 404,888,568 | 375,755,263 | 258,373,520 | \$35,689.9 | \$25,605.2 | \$23,259.3 | \$37,794.9 | \$122,349.2 |
| 5/12/1900 | \$108.56 | \$65.54 | \$64.31 | \$153.00 | 344,930,287 | 404,888,568 | 375,755,263 | 258,373,520 | \$37,445.6 | \$26,536.4 | \$24,164.8 | \$39,531.1 | \$127,678.0 |
| 5/19/1900 | \$106.14 | \$66.73 | \$62.74 | \$152.16 | 344,930,287 | 404,888,568 | 375,755,263 | 258,373,520 | \$36,610.9 | \$27,018.2 | \$23,574.9 | \$39,314.1 | \$126,518.1 |
| 5/26/1900 | \$113.05 | \$69.06 | \$67.38 | \$82.31 | 344,930,287 | 404,888,568 | 375,755,263 | 516,747,040 | \$38,994.4 | \$27,961.6 | \$25,318.4 | \$42,533.4 | \$134,807.8 |
| 6/2/1900 | \$110.40 | \$65.41 | \$64.18 | \$77.95 | 344,930,287 | 404,888,568 | 375,755,263 | 516,747,040 | \$38,080.3 | \$26,483.8 | \$24,116.0 | \$40,280.4 | \$128,960.5 |
| 6/9/1900 | \$104.68 | \$65.42 | \$63.42 | \$75.57 | 344,930,287 | 404,888,568 | 375,755,263 | 516,747,040 | \$36.107.3 | \$26,487.8 | \$23,830.4 | \$39,050.6 | \$125,476.1 |
| 6/16/1900 | \$103.02 | \$64.83 | \$63.74 | \$76.88 | 344,930.287 | 404,888,568 | 375,755,263 | 516,747,040 | \$35,534.7 | \$26,248.9 | \$23,950.6 | \$39,727.5 | \$125,461.8 |
| 6/23/1900 | \$97.40 | \$62.14 | \$61.04 | \$73.83 | 344,930,287 | 404,888,568 | 375,755,263 | 516,747,040 | \$33,596.2 | \$25,159.8 | \$22,936.1 | \$38,151.4 | \$119,843.5 |
| 6/30/1900 | \$93.83 | \$57.36 | \$58.91 | \$70.85 | 344,930,287 | 407,642,147 | 375,755,263 | 516,747,040 | \$32,364.8 | \$23,382.4 | \$22,135.7 | \$36,611.5 | \$114,494.4 |
| 7/7/1900 | \$95.45 | \$60.62 | \$61.78 | \$71.92 | 344,930,287 | 407,642,147 | 375,199,214 | 516,747,040 | \$32,923.6 | \$24,711.3 | \$23,179.8 | \$37,164.4 | \$17,979.1 |
| 7/14/1900 | \$94.57 | \$60.88 | \$63.42 | \$72.54 | 344,930,287 | 407,642,147 | 375,199,214 | 516,747,040 | \$32,620.1 | \$24,817.3 | \$23,795.1 | \$37,484.8 | \$118,717.3 |
| 7/21/1900 | \$98.05 | \$63.34 | \$70.11 | \$77.49 | 344,404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$33,768.9 | \$25,820.1 | \$26,305.2 | \$39,455.6 | \$125,349.8 |
| 7/28/1900 | \$101.76 | \$66.17 | \$70.62 | \$79.44 | 344,404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$35,046.6 | \$26,973.7 | \$26,496.6 | \$40,448.5 | \$128.965.4 |
| 8/4/1900 | \$101.43 | \$65.61 | \$73.55 | \$83.18 | 344,404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$34,933.0 | \$26,745.4 | \$27,595.9 | \$42,352.8 | \$131,627.1 |
| 8/11/1900 | \$98.87 | \$60.91 | \$70.58 | \$76.87 | 344,404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$34,051.3 | \$24,829.5 | \$26,481.6 | \$39,139.9 | \$124,502.3 |
| 8/18/1900 | \$103.47 | \$63.73 | \$70.99 | \$79.55 | 344.404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$35,635.6 | \$25,979.0 | \$26,635.4 | \$40,504.5 | \$128,754.5 |
| 8/25/1900 | \$107.40 | \$64.68 | \$73.53 | \$83.90 | 344,404,716 | 407,642,147 | 375,199,214 | 509,170,209 | \$36,989.1 | \$26,366.3 | \$27,588.4 | \$42,719.4 | \$133,663.1 |
| 9/1/1900 | \$99.87 | \$57.71 | \$66.39 | \$75.46 | 344,404,716 | 407,642,147 | 375,199,214 | '509,170,209 | \$34,395.7 | \$23,525.0 | \$24,909.5 | \$38,422.0 | \$121,252.2 |

 | $\begin{array}{c}\text { Aggregate } \\ \text { Market } \\ \text { Cap 4/ }\end{array}$ |
| :---: |
| $(14)$ |
| $\$ 125,304.7$ |
| $\$ 124,354.4$ |
| $\$ 120,400: 3$ |
| $\$ 100,048.4$ |
| $\$ 93,496.9$ |
| $-\$ 92,387.5$ |
| $\$ 93,287.7$ |
| $\$ 104,531.7$ |
| $: \$ 95,464.1$ |
| $\$ 90,823.2$ |
| $\$ 79,352.5$ |
| $\$ 84.575 .2$ |
| $\$ 80,171.2$ |
| $\$ 75,164.2$ |
| $\$ 77,613.2$ |
| $\$ 78.117 .8$ |
| $\$ 84,069.0$ |

| Weekly Market Cap (millions) |  |  |  |
| :---: | :---: | :---: | :---: |
| BNSF | CSX | $\underline{\text { NS }}$ | $\frac{\text { UP }}{(12)}$ |
| ('10) | $(11)$ | $(12)$ | $(13)$ |
| $\$ 35,074.2$ | $\$ 25,114.8$ | $\$ 25,502.3$ | $\$ 39,613.4$ |
| $\$ 34,685.0$ | $\$ 24,201.7$ | $\$ 26,399.0$ | $\$ 39,068.6$ |
| $\$ 33,868.8$ | $\$ 22.986 .9$ | $\$ 26,237.7$ | $\$ 37,306.9$ |
| $\$ 28.685 .5$ | $\$ 18.816 .2$ | $\$ 21,074.9$ | $\$ 31.471 .8$ |
| $\$ 27,607.5$ | $\$ 17,084.5$ | $\$ 19,273.0$ | $\$ 29,531.9$ |
| $\$ 27,586.8$ | $\$ 17,092.4$ | $\$ 19,454.5$ | $\$ 28,253.9$ |
| $\$ 27,386.1$ | $\$ 16,717.6$ | $\$ 19,669.2$ | $\$ 29,514.8$ |
| $\$ 30,487.6$ | $\$ 18,035.1$ | $\$ 22,194.5$ | $\$ 33,814.4$ |
| $\$ 27,814.0$ | $\$ 16.871 .5$ | $\$ 19,891.4$ | $\$ 30,887.2$ |
| $\$ 27,259.4$ | $\$ 15,313.3$ | $\$ 19,247.1$ | $\$ 29,003.3$ |
| $\$ 25,089.1$ | $\$ 13,293.6$ | $\$ 16,914.4$ | $\$ 24.055 .5$ |
| $\$ 26,225.6$ | $\$ 14,690.0$ | $\$ 18,317.7$ | $\$ 25,341.8$ |
| $\$ 25.564 .9$ | $\$ 13,471.1$ | $\$ 17,084.7$ | $\$ 24,050.4$ |
| $\$ 24,435.3$ | $\$ 12,563.8$ | $\$ 16.484 .8$ | $\$ 21,680.3$ |
| $\$ 25.215 .8$ | $\$ 12,465.2$ | $\$ 16,499.6$ | $\$ 23,432.6$ |
| $\$ 25,479.4$ | $\$ 12,425.8$ | $\$ 16,425.6$ | $\$ 23,787.1$ |
| $\$ 26,855.5$ | $\$ 13,656.5$ | $\$ 18,169.6$ | $\$ 25,387.4$ |


| Stock Price 1/ |  |  | Common Equity Outstanding 2/ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ? | NS | UP | BNSF | CSX | NS | UP |
|  | (4) | (5) | (6) | (7) | (8). | (9) |
| 1 | \$67.97 | \$77.80 | 344,404,716 | 407,642,147 | 375.199,214 | 509,170,209 |
| 7 | \$70.36 | \$76.73 | 344,404,716 | 407.642,147 | 375,199,214 | 509,170,209 |
| 9 | \$69.93 | \$73.27 | 344,404,716 | 407,642.147 | 375,199,214 | 509,170,209 |
| 0 | \$56.17 | \$61.81 | 344,404,716 | 394,469.360 | 375,199,214 | 509,170,209 |
| 1 | \$52.05 | \$58.00 | 344,404,716 | 394.469,360 | 370.279.291 | 509,170,209 |
| 3 | \$52.54 | \$55.49 | 344,404,716 | 394,469,360 | 370.279 .291 | 509,170.209 |
| 8 | \$53.12 | \$58.28 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 2 | \$59.94 | \$66.77 | 342,326,358 | 394,469.360 | 370.279,291 | 506,430.904 |
| 7 | \$53.72 | \$60.99 | 342,326,358 | 394.469.360 | 370,279,291 | 506,430,904 |
| 2 | \$51.98 | \$57.27 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 0 | \$45.68 | \$47.50 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 4 | \$49.47 | \$50.04 | 342,326,358 | 394,469.360 | 370,279,291 | 506,430,904 |
| 5 | \$46.14 | \$47.49 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 5 | \$44.52 | \$42.81 | 342,326,358 | 394,469,360 | 370.279.291 | 506,430,904 |
| 0 | \$44.56 | \$46.27 | 342,326,358 | 394,469,360 | 370,279,291 | 506.430.904 |
| 0 | \$44.36 | \$46.97 | 342.326.358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 2 | \$49.07 | \$50.13 | 342,326,358 | 394,469,360 | 370.279,291 | 506,430,904 |
|  | --- | --- | -- | --- | --- | --- |

and 10-K. Note, UP split its stock 2:1 on May 29, 2008.
( Column (6) through Column (9), respectively] $\div 1,000,000$.




| Common Equity Outstanding 2 |  |  |  |
| :---: | :---: | :---: | :---: |
| BNSF | CSX |  |  |
|  |  |  |  |
| 372,393,283 |  |  |  |
|  |  |  |  |
| .283 | 429,62 |  |  |
| 283 |  |  |  |
| 372,393,283 |  |  |  |
| 仿, 93,2 |  |  |  |
|  | 429,658 |  |  |
| 372,393,283 | 429,658, |  | 518,4 |
| , | 429,688, |  |  |
| 21,6 | 429.6 |  | 519 |
| 375,921,640 | 42 |  |  |
| 921,6 | 429,658, | 396, |  |
| 921, | 429,658. |  |  |
| 921,60 | 429,658, | 396,0 |  |
| 921 | 429,658, | 396,0 |  |
| 375,921,640 | 429,65 |  |  |
| 375,921,640 | 429,68 |  |  |
| 375,921,640 | 429,658,9 |  | 519 |
| 375.921,60 | 429,6 |  |  |
| 375,921,640 | 429,65 |  |  |
| , | 429,658,9 |  |  |
| 921 | 429.658 |  |  |
| ,927,03 | 429,658,9 | 400,27 | 521, |
| 927 |  |  |  |
| 7,927,03 | 429,6 | 400,276,939 | 521 |
| 927,03 | 429,6 |  |  |
| 377,927,038 |  |  |  |
| 7,927,03 | 431,23 |  |  |
| 7,927,038 | 41,23, |  |  |
| 7,927,038 | 431,239,58 | 400,276, |  |
| 7,927,038 |  |  |  |
| 7,927,038 | 433,122, |  |  |
| 7,038 |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |


| Closing Adjusted Stock Price 1/ |  |  |  |
| :---: | :---: | :---: | :---: |
| BNSF | CsX | NS | UP |
| (2) | (3) | (4) | (5) |
| \$34.78 | \$15.80 | \$27.21 | \$27.62 |
| \$35.44 | \$16.00 | \$27.48 | \$27.78 |
| \$35.77 | \$16.20 | \$27.43 | \$27.76 |
| \$36.45 | \$16.06 | \$28.26 | \$27.89 |
| \$37.74 | \$16.78 | \$28.6 | \$28. |
| \$37.45 | \$16.51 | \$29.19 | \$28.36 |
| \$38.72 | \$16.34 | \$30.42 | \$28.60 |
| \$39.42 | \$17.34 | \$31.6 | \$29.52 |
| \$41.39 | \$17.52 | \$32.61 | \$30.45 |
| \$41.96 | \$18.03 | \$32.68 | 530 |
| \$41.86 | \$17.84 | \$31.04 | \$29.59 |
| \$42.42 | \$18.10 | \$32.16 | \$29.7 |
| \$43.75 | \$18.29 | \$33.57 | \$29.92 |
| \$43.21 | \$18.15 | \$32.86 | \$28.95 |
| \$43.63 | \$18.69 | \$32.63 | \$29.41 |
| \$44.24 | \$18.99 | \$33.74 | \$31.47 |
| \$44.77 | \$19.10 | \$33.88 | \$31.68 |
| \$42.69 | \$18.51 | \$34.13 | \$30.53 |
| \$43.64 | \$18.31 | \$33.91 | \$29.13 |
| \$43.55 | \$17.78 | \$33.07 | \$28.46 |
| \$44.61 | \$18.61 | \$31.89 | \$27.75 |
| \$44.96 | \$18.79 | \$33.06 | \$27.87 |
| \$44.74 | \$18.99 | \$33.57 | \$28.49 |
| \$46.58 | \$19.19 | \$33.24 | \$30.04 |
| \$47.99 | \$20.02 | \$34.34 | \$30.14 |
| \$49.79 | \$20.55 | \$34.70 | \$30.44 |
| \$50.48 | \$20.30 | \$35.46 | \$31.32 |
| \$52.22 | \$20.38 | \$35.37 | \$31.42 |
| \$52.87 | \$20.41 | \$35.71 | \$32.64 |
| \$50.58 | \$19.97 | \$34.54 | \$32.49 |
| \$49.51 | \$19.84 | \$32.72 | \$32.18 |
| 544.83 | \$18.26 | \$28.79 | \$29.80 |
| \$46.46 | \$18.91 | \$30.73 | \$30.52 |
| \$45.81 | \$19.17 | \$29.49 | \$30.26 |
| \$48.82 | \$19.75 | \$30.19 | \$30.29 |
| \$45.77 | \$19.05 | \$28.47 |  |


$\qquad$
 N
N
N
O
O
过 O
0
0
0
0

0 | 0 |
| :--- |
|  |
|  |
| N |

 $\infty$
$\substack{\infty \\ N \\ N \\ 0 \\ 0 \\ 0 \\ 0}$ 1＇80s＇19\＄ － r
0
0
各
0

0 | 9 |
| :--- |
| $\frac{9}{3}$ |
| 0 |
| 8 |

耳 $\infty$
o．
$n$
on
on m
0
0
on
on
B

 | $\stackrel{\wedge}{n}$ |
| :---: |
| $\underset{\sim}{n}$ |
|  | N

$\underset{\sim}{N}$
$\underset{\sim}{N}$


| Closing Adjusted Stock Price 1／ |  |  |  | Common Equity Outstanding 2／ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BNSF | CSX | NS | UP | BNSF | CSX | NS | UP |
| （2） | （3） | （4） | （5） | （6） | （7） | （8） | （9） |
| \＄48．04 | \＄20．10 | \＄30．20 | \＄31．57 | 376，548，744 | 433，122，110 | 404，274，324 | 525，972，450 |
| \＄47．14 | \＄19．90 | \＄30．09 | \＄31．48 | 376，548，744 | 433，122，110 | 404，274，324 | 525，972，450． |
| \＄47．67 | \＄20．14 | \＄30．24 | \＄31．53 | 376，548，744 | 433，122，110 | 404，274，324 | 525．972，450 |
| \＄45．78 | \＄19．86 | \＄29．58 | \＄31．02 | 376，548，744 | 433，122，110 | 404．274．324 | 525，972，450 |
| \＄48．22 | \＄21．11 | \＄31．04 | \＄31．77 | 376，548，744 | 433．122，110 | 404．274，324 | 525，972，450 |
| \＄44．47 | \＄20．13 | \＄28．59 | \＄30．51 | 376，548，744 | 433．122，110 | 404，274，324 | 525，972，450 |
| \＄45．72 | \＄20．55 | \＄29．64 | \＄30．91 | 376，548，744 | 433，122，110 | 404．274，324 | 525，972，450 |
| \＄47．00 | \＄21．06 | \＄30．30 | \＄31．07 | 376，548．744 | 433，919，038 | 404．535，055 | 525，972，450 |
| \＄46．34 | \＄21．47 | \＄31．26 | \＄30．95 | 376，548，744 | 433，919，038 | 404，535，055 | 525，972，450 |
| \＄49．67 | \＄21．81 | \＄32．88 | \＄32．55 | 376，548，744 | 433，919．038 | 404，535，055 | 525，972，450 |
| \＄51．68 | \＄21．80 | \＄35．07 | \＄33．43 | 373，434，542 | 433，919，038 | 404，535，055 | 525，972，450 |
| \＄51．81 | \＄21．45 | \＄35．01 | \＄33．15 | 373，434，542 | 433，919，038 | 404，535，055 | 527，550，034 |
| \＄52．59 | \＄21．40 | \＄35．04 | \＄32．89 | 373，434，542 | 433，919，038 | 404，535，055 | 527，550，034 |
| \＄51．71 | \＄21．50 | \＄34．64 | \＄32．74 | 373，434，542 | 433，919，038 | 404，535，055 | 527，550，034 |
| \＄51．73 | \＄22．06 | \＄34．50 | \＄32．90 | 373，434，542 | 433，919．038 | 404，535，055 | 527，550，034 |
| \＄50．82 | \＄21．12 | \＄34．10 | \＄32．56 | 373，434，542 | 433，919，038 | 404．535．055 | 527，550，034 |
| \＄52．53 | \＄21．66 | \＄34．09 | \＄32．26 | 373，434，542 | 433，919，038 | 404．535，055 | 527，550，034 |
| \＄53．28 | \＄21．59 | \＄35．28 | \＄32．40 | 373，434，542 | 433，919，038 | 404，535，055 | 527，550，034 |
| \＄55．34 | \＄21．38 | \＄36．78 | \＄33．35 | 373，434，542 | 433，919，038 | 404，535，055 | 527，550，034 |
| \＄57．18 | \＄22．30 | \＄38．36 | \＄34．24 | 373，434，542 | 433．919，038 | 404，535，055 | 527，550，034 |
| \＄56．33 | \＄21．64 | \＄38．19 | \＄33．71 | 373，434，542 | 434，478，238 | 406，420，210 | 527，550，034 |
| \＄54．91 | \＄20．95 | \＄37．33 | \＄33．05 | 373，434，542 | 434，478，238 | 406，420，210 | 527，550，034 |
| \＄55．35 | \＄20．73 | \＄36．72 | \＄32．05 | 373，434，542 | 434，478，238 | 406，420，210 | 527，550，034 |
| \＄57．74 | \＄21．40 | \＄37．60 | \＄32．59 | 373，424，406 | 434，478，238 | 406，420，210 | 527，550，034 |
| \＄61．93 | \＄22．33 | \＄39．42 | \＄33．40 | 373，424，406 | 434，478，238 | 406，420，210 | 527，550，034 |
| \＄61．49 | \＄22．52 | \＄40．22 | \＄33．78 | 373，424，406 | 434，478．238 | 406，420，210 | 529，880，210 |
| \＄63．74 | \＄23．33 | \＄41．62 | \＄35．81 | 373，424，406 | 434，478．238 | 406，420，210 | 529，880，210 |
| \＄62．58 | \＄23．53 | \＄41．64 | \＄36．70 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄63．73 | \＄23．50 | \＄41．87 | \＄36．86 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄64．26 | \＄23．60 | \＄40．71 | \＄36．21 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄64．54 | \＄23．74 | \＄40．81 | \＄37．31 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄67．72 | \＄24．56 | \＄42．88 | \＄38．52 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄67．92 | \＄24．43 | \＄42．53 | \＄38．60 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄66．23 | \＄23．68 | \＄40．00 | \＄37．67 | 373，424，406 | 434，478．238 | 406，420，210 | 529，880，210 |
| \＄65．73 | \＄24．43 | \＄40．30 | \＄37．74 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |
| \＄67．54 | \＄24．83 | \＄42．00 | \＄40．19 | 373，424，406 | 434，478，238 | 406，420，210 | 529，880，210 |


| Common Equity Outstanding 2/ |  |  |  | Week | Market Cap (millions) 3/ |  |  | Aggregate Market |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BNSF | CSX | NS | UP |  | CSX | NS | UP | ap 4/ |
| (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| 373,424,406 | 434,478,238 | 406,420,210 | 529,880,210 | \$27,625.9 | \$11,209.5 | \$19,077.4 | \$22,143.7 | \$80,056.5 |
| 373,424,406 | 438,862,742 | 406,420,210 | 529,880,210 | \$28,204.7 | \$10,949.6 | \$19,048.9 | \$21,762.2 | \$79,965.5 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535,168,974 | \$28,456.9 | \$11,138.3 | \$19,226.7 | \$22,145.3 | \$80,967.2 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535,168,974 | \$28,740.3 | \$11,493.8 | \$19,362.8 | \$22.766.1 | \$82,363.0 |
| 372.960,559 | 438,862.742 | 412.236,777 | 535,168,974 | \$28,248.0 | \$11,717.6 | \$19,601.9 | \$22,696.5 | \$82,264.0 |
| 372,960,559 | 438,862,74 | 412.236,7 | 535.168,974 | \$28,412.1 | \$11,928.3 | \$20,451.1 | \$23,044.4 | \$83,835.9 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535.168,974 | \$27,438.7 | \$11,691.3 | \$19,944.0 | \$22,075.7 | \$81,149.7 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535,168,974 | \$28,975.3 | \$12,586.6 | \$21,164.2 | \$23,445.8 | \$86,171.9 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535,168,974 | \$28,818.7 | \$12,490.0 | \$20,912.8 | \$23,729.4 | \$85,950.9 |
| 372,960,559 | 438,862,742 | 412,236,777 | 535,168,974 | \$29,885.3 | \$12,656.8 | \$21,213.7 | \$24,029.1 | \$87,784.9 |
| 372,960,559 | 443,172,312 | 414.692,476 | 535,168,974 | \$29,930.1 | \$13,552.2 | \$21,472.8 | \$24,104.0 | \$89,059.1 |
| 372,960,559 | 443,172,312 | 414,692,476 | 535,168,974 | \$29,907.7 | \$13,902.3 | \$21,248.8 | \$24,077.3 | \$89,136.1 |
| 372,960,559 | 443,172,312 | 414,692,476 | 535,168,974 | \$30,985.6 | \$14,549.3 | \$22,173.6 | \$24,698.0 | \$92,406.6 |
| 364.660,574 | 443,172,312 | 414.692,476 | 535,168,974 | \$27,889.2 | \$14,638.0 | \$21,315.2 | \$23,477.9 | \$87,320.3 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$29,172.8 | \$15,856.7 | \$22,248.3 | \$24,130.6 | \$91,408.4 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,896.5 | \$15,116.6 | \$21,522.5 | \$24,415.7 | \$88,951.4 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$25,880.0 | \$14,363.2 | \$19,996.5 | \$23,727.2 | \$83,966.8 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,156.3 | \$14,420.8 | \$20,954.4 | \$24,055.3 | \$86,586.8 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,550.1 | \$14,691.2 | \$21,215.7 | \$24,415.7 | \$87,872.6 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$25,413.2 | \$13,255.3 | \$19,212.7 | \$22,447.0 | \$80,328.1 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,163.6 | \$13,782.7 | \$19.959.1 | \$23,302.2 | \$84,207.6 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,152.6 | \$14,017.5 | \$20,145.8 | \$23.049.4 | \$84,365.3 |
| 364,660,574 | 443,172,312 | 414,692,476 | 537,909,234 | \$27,863.7 | \$15,085.6 | \$21,066.4 | \$24,130.6 | \$88,146.3 |
| 364,660,574 | 443,530.816 | 413,821,033 | 537,909,234 | \$26,620.2 | \$14,432.5 | \$20,364.1 | \$23,393.7 | \$84,810.5 |
| 364,660,574 | 443,530,816 | 413,821,033 | 537,909,234 | \$25,701.3 | \$13,820.4 | \$19,474.4 | \$22,366.3 | \$81,362.4 |
| 364.660.574 | 443,530,816 | 413,821,033 | 537,909,234 | \$24,271.8 | \$13,274.9 | \$18,315.7 | \$21,554.0 | \$77,416.4 |
| 361,961,615 | 443,530,816 | 413,821,033 | 537,909,234 | \$24,041.5 | \$12,955.5 | \$17,285.3 | \$22,124.2 | \$76,406.5 |
| 361,961,615 | 443,530,816 | 413,821,033 | 537,909,234 | \$24,095.8 | \$13,274.9 | \$16,635.6 | \$21,769.2 | \$75,775.5 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$22,629.8 | \$12,631.8 | \$16,238.3 | \$20,594.5 | \$72,094.4 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$23,889.5 | \$13,248.3 | \$17,570.8 | \$21,768.8 | \$76,477.4 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$23,057.0 | \$12,769.3 | \$16,821.8 | \$21,041.6 | \$73,689.6 |
| 361,961,615 | 443,530.816 | 413,821,033 | 538,699,164 | \$23,491.3 | \$13,070.9 | \$16,904.6 | \$21,014.7 | \$74,481.4 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$23,096.8 | \$13.030.9 | \$16,387.3 | \$20.901.5 | \$73,416.5 |
| 361.961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$24,461.4 | \$13,594.2 | \$17,078.4 | \$21,865.8 | \$76,999.8 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$24,074.1 | \$13,146.3 | \$16,569.4 | \$21,768.8 | \$75,558.5 |
| 361,961,615 | 443,530,816 | 413,821,033 | 538,699,164 | \$25,728.2 | \$14,117.6 | \$17,475.7 | \$22,964.7 | \$80,286.2 |





| I\＄ | £＇St0＇てを\＄ | 8． $000^{\circ} 07 \$$ |  |
| :---: | :---: | :---: | :---: |
| ［＇LE9＇zol\＄ | 1＇98I＇てを\＄ | L＇z81＇0zs | I＇98 |
| 8．2ヤL＇s0I\＄ | I＇I0I＇E\＆\＄ | l＇t8t＇Iz\＄ | L08 |
| † Z0E＇L6\＄ | 9＊686 0 ¢\＄ | S＇LSZ＇61\＄ | $\dagger$ |
| 9．086＇88\＄ | て＇895＇82\＄ | 6．SSL＇91\＄ | L＇ |
| †＇E0L＇16\＄ | L＇EIS＇6Z\＄ | 6 $\dagger$ ¢9 ${ }^{6}$ LI\＄ | 8.76 |
| カ0¢て＇£6\＄ | ャ゙レヤ0＇IE\＄ | でELI＇8IS | S＇L9 |
| て＇6Lt「66\＄ | ［＇8E0＇$¢$ ¢\＄ | で85E＇61\＄ | 8 |
| 8＇Z¢¢＇86\＄ | 696S＇z\＆\＄ | $8^{\circ} \mathrm{t}$ L6＇81\＄ | L＇980 |
| L＇ZL6＇66\＄ | ャ¢LL＇£と\＄ | 9｀てzで61\＄ | 0110 |
| S＇9LI＇E0I\＄ | S＂9L8＇t¢\＄ | でしEで0Z\＄ |  |
| でLLI＇86\＄ | ナ－8て9「てを\＄ | 9＊SEt「61\＄ | 0 |
| でとちを＇96\＄ | L゚†¢1＇乙を\＄ | £ $808{ }^{\prime} 81 \$$ | £ 8 ¢0 |
| 0＇ヤ60＇66\＄ |  | でStl＇61\＄ | 6てち8 |
| 0＊L9E＇86\＄ | でもてI＇てを\＄ | 8．9SI＇6I\＄ | で |
| 6．165 $66 \$$ | I「9んナ「てを\＄ | て＇96て＇61\＄ | －866 |
| でをS9＇00I\＄ | と「SIt＇E¢\＄ | 9＇SIE＇61\＄ | £ 69 |
| 0．LE9＇86\＄ | ع＇9E0「てを\＄ | I＇z09＇61\＄ | －01＊ |
| $8.800^{4} 86 \$$ |  | 1＇ıtでoz\＄ | 0 |
| 6．958＇86\＄ | £＇LS9＊0®\＄ | 9＇E91＇02\＄ | －956 |
| L．LO0＇96\＄ | て＇6ES「62\＄ |  |  |
| L＇EEL＇t6\＄ | 0．98t＇62\＄ | でてL9「61\＄ | S858 |
|  | S゙もしで6て\＄ | どてちS「61\＄ |  |
| L＇Lt9「て6\＄ | カ・らもで82\＄ | I＇z90＇61\＄ | ［「SLZ |
| l＇と8tit6\＄ | て＇StI＇62\＄ | S＂9S9＇61\＄ | 8＇S99 |
| S＇IIO＇S6\＄ | 6．976＇82\＄ | S＇8LL＇61\＄ | ¢＇S6t |
| 0 てSt＇て6\＄ | でS85＇LZS | $0^{\circ} \mathrm{Z9S}$＇61\＄ | $0^{\circ} \mathrm{LE} 8$ |
| て＇S90＊86\＄ | て＇SLE＇0E\＄ | 616961\＄ | 69 Cl |
| 6＇2ち9＇96\＄ | でZSL゙6Z\＄ | 8tbls＇6I\＄ | でL90 |
| 8＇9L8＇66\＄ | S＂96E＇IE\＄ | 0．16661\＄ | てZ6 |
| 0¢EII＇801\＄ | 6＊$\downarrow$ Ll｀$¢$ ¢ | ［「IL＇Iて\＄ | Z6L |
| 8．SZL＇toI\＄ | ＊＊E8＇1E\＄ | でモ£と＇1て\＄ | C0L |
| ガヤIS＇I0I\＄ | 9＇L8L＇0E\＄ | 9＇zE9「0z\＄ | IE6 |
| がIOE $66 \$$ | 1．ISE＊0E\＄ | でて90＊0てS | $6 \cdot 69$ |
| L＇06て＇00I\＄ | 0665 0 ¢\＄ | がとLS「0z\＄ | く ${ }^{\text {ctil }}$ |
| －0てO＇E0I\＄ | ع＇869＇IE\＄ | s＇tてE＇ıて\＄ | 19で |
| （tI） | （£I） | （ZI） | （II） |
| ¢ 7 dB | $\overline{\mathbf{d}}$ | $\overline{\mathbf{S N}}$ | $\overline{\mathbf{X S T}}$ |
|  218ร9．18\％\％ |  | U ${ }^{\text {d }}$ | YREW |


| Aggregate <br> Market <br> Can 4/ |
| :---: |
| $(14)$. |
| $\$ 101,750.9$ |
| $\$ 101,070.9$ |
| $\$ 99,034.7$ |
| $\$ 102,015.1$ |
| $\$ 104,403.9$ |
| $\$ 106,520.3$ |
| $\$ 11.435 .3$ |
| $\$ 108,506.2$ |
| $\$ 117,230.7$ |
| $\$ 117,266.4$ |
| $\$ 121,089.3$ |
| $\$ 120,946.8$ |
| $\$ 126,218.6$ |
| $\$ 125,073.6$ |
| $\$ 133,345.5$ |
| $\$ 127,769.8$ |
| $\$ 124,320.2$ |
| $\$ 124,308.3$ |
| $\$ 118,738.3$ |
| $\$ 113,439.7$ |
| $\$ 116,889.1$ |
| $\$ 117,622.9$ |
| $\$ 124,195.5$ |
| $\$ 127,891.2$ |
| $\$ 130,537.6$ |
| $\$ 123,469.0$ |
| $\$ 127,689.1$ |
| $\$ 132,784.3$ |
| $\$ 120,449.1$ |
| $\$ 124,619.0$ |
| $\$ 123,674.0$ |
| $\$ 119,740.1$ |
| $\$ 99,501.9$ |
| $\$ \$ 9,988.4$ |
| $\$ 91,880.4$ |
| $\$ \$ 92,781.3$ |


| Weekly Market Cap (millions) |  |  |  |
| :---: | :---: | :---: | :---: |
| BNSF |  |  |  |
| $(10)$ | CSX | $\underline{\text { NS }}$ | $\underline{\text { UP }}$ |
| $\$ 11)$ | $(12)$ | $(13)$ |  |
| $\$ 30,223.9$ | $\$ 19,930.2$ | $\$ 19,723.6$ | $\$ 31,873.2$ |
| $\$ 30,084.6$ | $\$ 19,333.2$ | $\$ 19,618.2$ | $\$ 32,034.9$ |
| $\$ 30,279.6$ | $\$ 18,764.5$ | $\$ 19,264.5$ | $\$ 30.726 .2$ |
| $\$ 31,233.7$ | $\$ 19,514.7$ | $\$ 19,633.3$ | $\$ 31,633.4$ |
| $\$ 31.512 .2$ | $\$ 21,753.4$ | $\$ 19,682.2$ | $\$ 31,456.1$ |
| $\$ 31.644 .6$ | $\$ 22.535 .9$ | $\$ 20,122.5$ | $\$ 32,217.4$ |
| $\$ 33,002.5$ | $\$ 22.916 .7$ | $\$ 21,067.1$ | $\$ 34,449.0$ |
| $\$ 32,058.9$ | $\$ 22,524.0$ | $\$ 20,365.9$ | $\$ 33,557.4$ |
| $\$ 34,322.2$ | $\$ 24,495.8$ | $\$ 22,827.1$ | $\$ 35,585.6$ |
| $\$ 34,315.3$ | $\$ 24,775.1$ | $\$ 22,267.3$ | $\$ 35,908.8$ |
| $\$ 35,520.9$ | $\$ 25,653.7$ | $\$ 22,398.8$ | $\$ 37,515.8$ |
| $\$ 35,258.8$ | $\$ 25.293 .4$ | $\$ 23,033.8$ | $\$ 37,360.8$ |
| $\$ 36,993.8$ | $\$ 26,216.5$ | $\$ 23.931 .9$ | $\$ 39.076 .4$ |
| $\$ 36,169.4$ | $\$ 26,690.3$ | $\$ 23,349.4$ | $\$ 38,864.5$ |
| $\$ 38,525.3$ | $\$ 27.698 .4$ | $\$ 25,074.1$ | $\$ 42,047.7$ |
| $\$ 37,725.0$ | $\$ 26,232.7$ | $\$ 23,883.0$ | $\$ 39,929.0$ |
| $\$ 35,772.7$ | $\$ 26,236.8$ | $\$ 23,601.2$ | $\$ 38,709.5$ |
| $\$ 35,203.6$ | $\$ 26,001.9$ | $\$ 23,721.4$ | $\$ 39,381.3$ |
| $\$ 33,282.3$ | $\$ 24,920.9$ | $\$ 22,714.4$ | $\$ 37,820.7$ |
| $\$ 32,064.7$ | $\$ 23,162.2$ | $\$ 21,921.6$ | $\$ 36,291.1$ |
| $\$ 32,616.6$ | $\$ 24,478.9$ | $\$ 22,954.7$ | $\$ 36,838.9$ |
| $\$ 32,316.5$ | $\$ 24.580 .8$ | $\$ 23,566.3$ | $\$ 37,159.3$ |
| $\$ 33,455.5$ | $\$ 25,575.5$ | $\$ 26,050.1$ | $\$ 39,114.5$ |
| $\$ 34,719.4$ | $\$ 26,716.9$ | $\$ 26,357.7$ | $\$ 40,097.2$ |
| $\$ 34,609.2$ | $\$ 26,492.7$ | $\$ 27,449.6$ | $\$ 41,986.2$ |
| $\$ 33,734.4$ | $\$ 24,593.1$ | $\$ 26,342.7$ | $\$ 38,798.8$ |
| $\$ 35,304.9$ | $\$ 25,734.4$ | $\$ 26,496.6$ | $\$ 40,153.2$ |
| $\$ 36,644.7$ | $\$ 26,207.3$ | $\$ 27,442.1$ | $\$ 42,490.3$ |
| $\$ 34,075.4$ | $\$ 23,382.4$ | $\$ 24,778.2$ | $\$ 38,213.2$ |
| $\$ 34,888.2$ | $\$ 24,964.0$ | $\$ 25,367.2$ | $\$ 39,399.6$ |
| $\$ 34,499.0$ | $\$ 24,055.0$ | $\$ 26,260.2$ | $\$ 38,859.9$ |
| $\$ 33,689.7$ | $\$ 22,848.3$ | $\$ 26,098.9$ | $\$ 37,103.2$ |
| $\$ 28,533.9$ | $\$ 18,701.8$ | $\$ 20,962.4$ | $\$ 31,303.8$ |
| $\$ 27,459.4$ | $\$ 16,981.9$ | $\$ 19,173.1$ | $\$ 29,374.0$ |
| $\$ 27,438.7$ | $\$ 16,989.8$ | $\$ 19,350.8$ | $\$ 28,101.1$ |
| $\$ 27,238.9$ | $\$ 16,619.0$ | $\$ 19,565.6$ | $\$ 29,357.8$ |



| Weekly |  | Market Cap (millions) 3/ |
| :---: | :---: | :---: | :---: | :---: |$\quad$| Aggregate |
| :---: |
| Market |

Weekly Market Caps For The Study Railroads -- 2008

| Week | Closing Adjusted Stock Price 1/ |  |  |  | Common Equity Outstanding ${ }^{\text {2/ }}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BNSF | CSX | NS | $\underline{\text { UP }}$ | BNSF | CSX | NS | UP |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| 2. $10 / 27 / 200$ | \$88.59 | \$45.45 | \$59.63 | \$66.41 | 342,326,358 | 394,469,36 | 370,279,29 | 506,430,90 |
| 3. 11/3/2008 | \$80.82 | \$42.51 | \$53.72 | \$60.66 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,90 |
| 254. 11/10/2008 | \$79.21 | \$38.59 | \$51.98 | \$56.96 | 342,326.358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 255. 11/17/2008 | \$72.90 | \$33.50 | \$45.68 | \$47.24 | 342,326.358 | 394,469,360 | 370,279,291 | 506,430,904 |
| 11/24/200 | \$76.20 | \$37.24 | \$49.47 | \$50.0 | 342,326,358 | 394,469,360 | 370,279,29 | 506,43 |
| 7. 12/1/2 | \$74.2 | \$34.15 | \$46. | 7.49 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,90 |
| 258. 12/8/2008 | \$71.38 | \$31.85 | \$44.52 | \$42.81 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430,90 |
| 9. 12/15/2008 | \$73.66 | \$31.60 | \$44.56 | \$46.27 | 342,326,358 | 394,469,360 | 370,279,291 | 506,430.90 |
| 0. 12/22/2008 | \$74.43 | \$31.50 | \$44.36 | \$46.97 | 342,326,358 | 394,469,360 | 370.279,291 | 506,430,904 |
| 261. 12/29/2008 | 78.45 | 34.62 | 49.07 | 50.13 | 342.326,358 | 394,469,360 | 370,279,291 | 506,430,90 |

[^12]
## Weekly Change In Railroad Common Equity Portfolio -- 2008

Week
(1)

Weekly Change In Stock Price 1/ BNS
(3)
(4)
(5)

1. $1 / 12 / 2004$
2. $1 / 20 / 2004$
3. $1 / 26 / 2004$
4. $2 / 2 / 2004$
5. $2 / 9 / 2004$
6. $2 / 17 / 2004$
7. $2 / 23 / 2004$
8. $3 / 1 / 2004$
9. $3 / 8 / 2004$
10. 3/15/2004
11. $3 / 22 / 2004$
12. $3 / 29 / 2004$
13. $4 / 5 / 2004$
14. $4 / 12 / 2004$
15. $4 / 19 / 2004$
16. $4 / 26 / 2004$
17. $5 / 3 / 2004$
18. $5 / 10 / 2004$
19. $5 / 17 / 2004$
20. $5 / 24 / 2004$
21. $6 / 1 / 2004$
22. 6/7/2004
23. $6 / 14 / 2004$
24. $6 / 21 / 2004$
25. 6/28/2004
26. 7/6/2004
27. 7/12/2004
28. 7/19/2004
29. 7/26/2004
30. 8/2/2004
31. $8 / 9 / 200$
32. $8 / 16 / 2004$
33. $8 / 23 / 2004$
34. 8/30/2004
35. $9 / 7 / 2004$
36. $9 / 13 / 2004$
37. $9 / 20 / 2004$
38. $9 / 27 / 2004$
39. 10/4/2004
40. $10 / 11 / 2004$
41. $10 / 25 / 2004 \quad 1.8$
42. $11 / 1 / 20045$.
43. $11 / 8 / 2004 \quad 1.38 \% \quad 2.91 \%$
44. $11 / 15 / 2004 \quad-0.24 \% \quad-1.05 \%$
45. $11 / 22 / 2004 \quad 1.34 \% \quad 1.46 \%$

## Weekly Change <br> In Railroad Stock Portfolio 2/ <br> (6)

$-0.66 \%$
1.13\%
-3.70\%
0.72\%
$-0.14 \%$
$-0.71 \%$
$-0.27 \%$
$-2.33 \%$
-0.21\%
-1.93\%
1.08\%
0.80\%
$-1.98 \%$
0.61\%
5.15\%
$-1.90 \%$
-1.43\%
0.93\%
-1.48\%
2.78\%
2.01\%
0.10\%
$-0.51 \%$
2.39\%
-1.60\%
0.58\%
$-0.36 \%$
-2.06\%
2.89\%
-2.64\%
0.79\%
2.50\%
1.21\%
2.41\%
1.84\%
1.16\%
0.39\%
1.29\%
3.28\%
-0.70\%
2.14\%
3.46\%
3.32\%
0.77\%
-2.21\%
1.64\%

## Weekly Change In Railroad Common Equity Portfolio -- 2008

|  | Week | Weekly Change In Stock Price 1/ |  |  |  | Weekly Change <br> In Railroad <br> Stock Portfolio 21 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BNSF | CSX | NS | UP |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 47. | 11/29/2004 | 3.14\% | 1.05\% | 4.38\% | 0.64\% | 2.39\% |
| 48. | 12/6/2004 | -1.23\% | -0.77\% | -2.11\% | -3.24\% | -1.97\% |
| 49. | 12/13/2004 | 0.97\% | 2.98\% | -0.70\% | 1.59\% | 1.03\% |
| 50. | 12/20/2004 | 1.40\% | 1.61\% | 3.40\% | 7.00\% | 3.55\% |
| 51. | 12/27/2004 | 1.20\% | 0.58\% | 0.41\% | 0.67\% | 0.75\% |
| 52. | 1/3/2005 | -4.65\% | -3.09\% | 0.74\% | -3.63\% | -2.79\% |
| 53. | 1/10/2005 | 2.23\% | -1.08\% | -0.64\% | -4.59\% | -1.02\% |
| 54. | 1/18/2005 | -0.21\% | -2.89\% | -2.48\% | -2.30\% | -1.78\% |
| 55. | 1/24/2005 | 2.43\% | 4.67\% | -3.57\% | -2.49\% | -0.16\% |
| 56. | 1/31/2005 | 0.78\% | 0.97\% | 3.67\% | 0.43\% | 1.42\% |
| 57. | 2/7/2005 | -0.49\% | 1.06\% | 1.54\% | 2.22\% | 1.00\% |
| 58. | 2/14/2005 | 4.11\% | 1.05\% | -0.98\% | 5.44\% | 2.73\% |
| 59. | 2/22/2005 | 3.03\% | 4.33\% | 3.31\% | 0.33\% | 2.52\% |
| 60. | 2/28/2005 | 3.75\% | 2.65\% | 1.05\% | 1.00\% | 2.15\% |
| 61. | 3/7/2005 | 1.39\% | - $-1.22 \%$ | 2.19\% | 2.89\% | 1.60\% |
| 62. | 3/14/2005 | 3.45\% | 0.39\% | -0.25\% | 0.32\% | 1.21\% |
| 63. | 3/21/2005 | 1.24\% | 0.15\% | 0.96\% | 3.88\% | 1.75\% |
| 64. | 3/28/2005 | -4.33\% | -2.16\% | -3.28\% | -0.46\% | -2.66\% |
| 65. | 4/4/2005 | -2.12\% | -0.65\% | -5.27\% | -0.95\% | -2.31\% |
| 66. | 4/11/2005 | -9.45\% | -7.96\% | -12.01\% | -7.40\% | -9.22\% |
| 67. | 4/18/2005 | 3.64\% | 3.56\% | 6.74\% | 2.42\% | 3.95\% |
| 68. | 4/25/2005 | -1.40\% | 1.37\% | -4.04\% | -0.85\% | -1.42\% |
| 69. | 5/2/2005 | 6.57\% | 3.03\% | 2.37\% | 0.10\% | 3.16\% |
| 70. | 5/9/2005 | -6.25\% | -3.54\% | -5.70\% | -4.36\% | -5.16\% |
| 71. | 5/16/2005 | 4.96\% | 5.51\% | 6.08\% | 8.97\% | 6.46\% |
| 72. | 5/23/2005 | -1.87\% | -1.00\% | -0.36\% | -0.29\% | -0.93\% |
| 73. | 5/31/2005 | 1.12\% | 1.21\% | 0.50\% | 0.16\% | 0.71\% |
| 74. | 6/6/2005 | -3.96\% | -1.39\% | -2.18\% | -1.62\% | -2.47\% |
| 75. | 6/13/2005 | 5.33\% | 6.29\% | 4.94\% | 2.42\% | 4.52\% |
| 76. | 6/20/2005 | -7.78\% | -4.64\% | -7.89\% | -3.97\% | -6.17\% |
| 77. | 6/27/2005 | 2.81\% | 2.09\% | 3.67\% | 1.31\% | 2.43\% |
| 78. | 7/5/2005 | 2.80\% | 2.48\% | 2.23\% | 0.52\% | 1.94\% |
| 79. | 7/11/2005 | -1.40\% | 1.95\% | 3.17\% | -0.39\% | 0.46\% |
| 80. | 7/18/2005 | 7.19\% | 1.58\% | 5.18\% | 5.17\% | 5.20\% |
| 81. | 7/25/2005 | 4.05\% | -0.05\% | 6.66\% | 2.70\% | 3.59\% |
| 82. | 8/1/2005 | 0.25\% | -1.61\% | -0.17\% | -0.84\% | -0.45\% |
| 83. | 8/8/2005 | 1.51\% | -0.23\% | 0.09\% | -0.78\% | 0.24\% |
| 84. | 8/15/2005 | -1.67\% | 0.47\% | -1.14\% | -0.46\% | -0.87\% |
| 85. | 8/22/2005 | 0.04\% | 2.60\% | -0.40\% | 0.49\% | 0.46\% |
| 86. | 8/29/2005 | -1.76\% | -4.26\% | -1.16\% | -1.03\% | -1.81\% |
| 87. | 9/6/2005 | 3.36\% | 2.56\% | -0.03\% | -0.92\% | 1.20\% |
| 88. | 9/12/2005 | 1.43\% | -0.32\% | 3.49\% | 0.43\% | 1.35\% |
| 89. | 9/19/2005 | 3.87\% | -0.97\% | 4.25\% | 2.93\% | 2.95\% |
| 90. | 9/26/2005 | 3.32\% | 4.30\% | 4.30\% | 2.67\% | 3.52\% |
| 91. | 10/3/2005 | -1.49\% | -2.96\% | -0.44\% | -1.55\% | -1.47\% |
| 92. | 10/10/2005 | -2.52\% | -3.19\% | -2.25\% | -1.96\% | -2.40\% |
| 93. | 10/17/2005 | 0.80\% | -1.05\% | -1.63\% | -3.03\% | -1.14\% |

## Weekly Change In Railroad Common Equity Portfolio - 2008

|  | Week | Weekly Change In Stock Price 1/ |  |  |  | Weekly Change <br> In Railroad <br> Stock Portfolio 2/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BNSF | CSX | NS | UP |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 94. | 10/24/2005 | 4.32\% | 3.23\% | 2.40\% | 1.68\% | 2.97\% |
| 95. | 10/31/2005 | 7.26\% | 4.35\% | 4.84\% | 2.49\% | 4.95\% |
| 96. | 11/7/2005 | -0.71\% | 0.85\% | 2.03\% | 1.14\% | 0.67\% |
| 97. | 11/14/2005 | 3.66\% | 3.60\% | 3.48\% | 6.01\% | 4.23\% |
| 98. | 11/21/2005 | -1.82\% | 0.86\% | 0.05\% | 2.49\% | 0.19\% |
| 99. | 11/28/2005 | 1.84\% | -0.13\% | 0.55\% | 0.44\% | 0.85\% |
| 100. | 12/5/2005 | 0.83\% | 0.43\% | -2.77\% | -1.76\% | -0.81\% |
| 101. | 12/12/2005 | 0.44\% | 0.59\% | 0.25\% | 3.04\% | 1.13\% |
| 102. | 12/19/2005 | 4.93\% | 3.45\% | 5.07\% | 3.24\% | 4.28\% |
| 103. | 12/27/2005 | 0.30\% | -0.53\% | -0.82\% | 0.21\% | -0.11\% |
| 104. | 1/3/2006 | -2.49\% | -3.07\% | -5.95\% | -2.41\% | -3.36\% |
| 105. | 1/9/2006 | -0.75\% | 3.17\% | 0.75\% | 0.19\% | 0.42\% |
| 106. | 1/17/2006 | 2.75\% | 1.64\% | 4.22\% | 6.49\% | 3.97\% |
| 107. | 1/23/2006 | 9.54\% | 3.91\% | 11.76\% | 3.98\% | 7.64\% |
| 108. | 1/30/2006 | 2.10\% | -3.29\% | -0.15\% | -1.72\% | -0.25\% |
| 109. | 2/6/2006 | 1.02\% | 1.72\% | -0.49\% | 0.75\% | 0.68\% |
| 110. | 2/13/2006 | 1.00\% | 3.19\% | 0.71\% | 2.80\% | 1.72\% |
| 111. | 2/21/2006 | -1.71\% | 1.95\% | 1.23\% | -0.31\% | -0.12\% |
| 112. | 2/27/2006 | 0.58\% | 1.80\% | 4.33\% | 1.53\% | 1.91\% |
| 113. | 3/6/2006 | -3.43\% | -1.99\% | -2.48\% | -4.20\% | -3.20\% |
| 114. | 3/13/2006 | 5.60\% | 7.66\% | 6.12\% | 6.21\% | 6.19\% |
| 115. | 3/20/2006 | -0.54\% | -0.77\% | -1.19\% | 1.21\% | -0.26\% |
| 116. | 3/27/2006 | 3.70\% | 1.34\% | 1.44\% | 1.26\% | 2.13\% |
| 117. | 4/3/2006 | 0.15\% | 6.03\% | 0.62\% | 0.31\% | 1.16\% |
| 118. | 4/10/2006 | -0.07\% | 2.58\% | -1.04\% | -0.11\% | 0.09\% |
| 119. | 4/17/2006 | 3.60\% | 4.65\% | 4.35\% | 2.58\% | 3.67\% |
| 120. | 4/24/2006 | -7.94\% | 0.61\% | -3.87\% | -4.94\% | -4.82\% |
| 121. | 5/1/2006 | 4.60\% | 8.33\% | 4.38\% | 2.26\% | 4.54\% |
| 122. | 5/8/2006 | -4.38\% | -4.67\% | -3.26\% | 1.18\% | -2.69\% |
| 123. | 5/15/2006 | -7.23\% | -4.98\% | -7.09\% | -2.82\% | -5.60\% |
| 124. | 5/22/2006 | 4.93\% | 0.40\% | 4.79\% | 1.38\% | 3.12\% |
| 125. | 5/30/2006 | 1.45\% | 1.87\% | 1.25\% | 1.50\% | 1.49\% |
| 126. | 6/5/2006 | -7.76\% | -9.77\% | -9.44\% | -8.06\% | -8.59\% |
| 127. | 6/12/2006 | 6.89\% | 3.98\% | 3.89\% | 3.81\% | 4.83\% |
| 128. | 6/19/2006 | -0.04\% | 1.70\% | 0.93\% | -1.08\% | 0.19\% |
| 129. | 6/26/2006 | 2.62\% | 7.62\% | 4.57\% | 4.69\% | 4.48\% |
| 130. | 7/3/2006 | -4.46\% | -4.41\% | -3.13\% | -3.05\% | -3.75\% |
| 131. | 7/10/2006 | -3.45\% | -4.24\% | -4.37\% | -4.39\% | -4.07\% |
| 132. | 7/17/2006 | -5.56\% | -3.95\% | -5.95\% | -3.63\% | -4.85\% |
| 133. | 7/24/2006 | -0.21\% | -2.41\% | -5.63\% | 2.65\% | -1.07\% |
| 134. | 7/31/2006 | 0.23\% | 2.46\% | -3.76\% | -1.60\% | -0.83\% |
| 135. | 8/7/2006 | -6.08\% | -4.84\% | -2.39\% | -5.53\% | -4.90\% |
| 136. | 8/14/2006 | 5.57\% | 4.88\% | 8.21\% | 5.70\% | 6.08\% |
| 137. | 8/21/2006 | -3.48\% | -3.62\% | -4.26\% | -3.34\% | -3.65\% |
| 138. | 8/28/2006 | 1.88\% | 2.36\% | 0.49\% | -0.13\% | 1.07\% |
| 139. | 9/5/2006 | -1.68\% | -0.31\% | -3.06\% | -0.54\% | -1.43\% |
| 140. | 9/11/2006 | 5.91\% | 4.32\% | 4.22\% | 4.61\% | 4.88\% |

## Weekly Change In Railroad Common Equity Portfolio - 2008

|  | Week | Weekly Change In Stock Price 1/ |  |  |  | Weekly Change <br> In Railroad <br> Stock Portfolio 2l |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BNSF | CSX | NS | UP |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 141. | 9/18/2006 | -1.58\% | -3.30\% | -2.98\% | -0.44\% | -1.87\% |
| 142. | 9/25/2006 | 6.87\% | 7.39\% | 5.47\% | 5.49\% | 6.26\% |
| 143. | 10/2/2006 | 3.21\% | 2.70\% | 3.74\% | 0.96\% | 2.59\% |
| 144. | 10/9/2006 | 3.45\% | 3.12\% | 2.44\% | 2.51\% | 2.91\% |
| 145. | 10/16/2006 | 1.52\% | 3.53\% | 2.96\% | -0.27\% | 1.67\% |
| 146. | 10/23/2006 | -2.02\% | 1.23\% | 10.63\% | 0.02\% | 1.85\% |
| 147. | 10/30/2006 | -2.15\% | -1.92\% | -2.46\% | -0.73\% | -1.79\% |
| 148. | 11/6/2006 | 1.15\% | 2.94\% | 1.50\% | 1.05\% | 1.52\% |
| 149. | 11/13/2006 | -0.95\% | -1.09\% | -2.88\% | 0.23\% | -1.10\% |
| 150. | 11/20/2006 | -0.01\% | -0.17\% | -2.58\% | 0.11\% | -0.59\% |
| 151. | $11 / 27 / 2006$ | -2.00\% | -0.45\% | -1.67\% | -0.74\% | -1.29\% |
| 152. | 12/4/2006 | 1.61\% | 1.97\% | 3.48\% | 2.57\% | 2.37\% |
| 153. | 12/11/2006 | -0.90\% | -3.66\% | 0.94\% | 1.22\% | -0.38\% |
| 154. | 12/18/2006 | -3.34\% | -4.21\% | -4.29\% | -3.53\% | -3.76\% |
| 155. | 12/26/2006 | 1.54\% | 1.49\% | 2.78\% | 1.54\% | 1.82\% |
| 156. | 1/3/2007 | -1.95\% | -0.45\% | -2.17\% | -1.48\% | -1.60\% |
| 157. | 1/8/2007 | 2.21\% | 1.23\% | 2.24\% | 1.43\% | 1.82\% |
| 158. | 1/16/2007 | 5.36\% | 2.96\% | 5.31\% | 4.77\% | 4.76\% |
| 159. | 1/22/2007 | -0.34\% | -1.18\% | -9.40\% | -0.94\% | -2.75\% |
| 160. | 1/29/2007 | 4.84\% | 7.40\% | 6.50\% | 7.31\% | 6.37\% |
| 161. | 2/5/2007 | -2.81\% | -2.25\% | -3.80\% | -2.69\% | -2.89\% |
| 162. | 2/12/2007 | 4.40\% | 9.71\% | 4.57\% | 2.09\% | 4.69\% |
| 163. | 2/20/2007 | 1.57\% | -0.61\% | -0.44\% | 2.12\% | 0.90\% |
| 164. | 2/26/2007 | -7.60\% | -10.23\% | -9.06\% | -5.53\% | -7.78\% |
| 165. | 3/5/2007 | 2.30\% | 4.62\% | 4.76\% | 0.94\% | 2.82\% |
| 166. | 3/12/2007 | 0.96\% | 5.99\% | 0.47\% | 1.23\% | 1.85\% |
| 167. | 3/19/2007 | 3.54\% | 3.83\% | 6.56\% | 4.25\% | 4.43\% |
| 168. | 3/26/2007 | -2.68\% | -3.84\% | -2.63\% | -2.54\% | -2.85\% |
| 169. | 4/2/2007 | 2.85\% | 2.28\% | 0.76\% | 1.64\% | 1.94\% |
| 170. | 4/9/2007 | 9.64\% | 3.65\% | 5.70\% | 6.36\% | 6.74\% |
| 171. | 4/16/2007 | 3.72\% | 6.09\% | 4.03\% | 6.78\% | 5.11\% |
| 172. | 4/23/2007 | -5.52\% | -2.89\% | .-4.36\% | -1.17\% | -3.51\% |
| 173. | 4/30/2007 | 1.77\% | 5.18\% | 0.98\% | 0.69\% | 1.91\% |
| 174. | 5/7/2007 | -0.53\% | -1.34\% | 2.41\% | 0.23\% | 0.13\% |
| 175. | 5/14/2007 | 4.97\% | 2.55\% | 5.26\% | 2.51\% | 3.84\% |
| 176. | 5/21/2007 | -3.18\% | -3.92\% | -1.54\% | -1.27\% | -2.41\% |
| 177. | 5/29/2007 | 2.84\% | 3.51\% | 2.47\% | 3.45\% | 3.07\% |
| 178. | 6/4/2007 | -5.32\% | -2.52\% | -6.40\% | -4.42\% | -4.76\% |
| 179. | 6/11/2007 | -0.48\% | 0.11\% | 1.80\% | 3.10\% | 1.18\% |
| 180. | 6/18/2007 | -2.49\% | -0.59\% | -3.52\% | -3.47\% | -2.65\% |
| 181. | 6/25/2007 | -1.18\% | 0.64\% | -2.48\% | -0.81\% | -0.99\% |
| 182. | 7/2/2007 | 1.84\% | 2.99\% | 2.74\% | 1.44\% | 2.12\% |
| 183. | 7/9/2007 | 2.28\% | 3.88\% | 3.40\% | 3.41\% | 3.16\% |
| 184. | 7/16/2007 | 1.89\% | 5.26\% | 1.77\% | 4.20\% | 3.23\% |
| 185. | 7/23/2007 | -8.43\% | -8.58\% | -7.92\% | -5.36\% | -7.42\% |
| 186. | 7/30/2007 | -4.40\% | 0.73\% | -2.38\% | -4.09\% | -2.88\% |
| 187. | 8/6/2007 | 1.88\% | 0.55\% | 0.91\% | 2.09\% | 1.47\% |

## Weekly Change In Railroad Common Equity Portfolio --2008

|  | Week | Weekly Change In Stock Price 1/ |  |  |  | Weekly Change In Railroad Stock Portfolio 21 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BNSF | CSX | NS | UP |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 188. | 8/13/2007 | -1.27\% | -11.60\% | -0.66\% | -9.18\% | -5.72\% |
| 189. | 8/20/2007 | 1.25\% | 3.69\% | 1.11\% | 4.86\% | 2.77\% |
| 190. | 8/27/2007 | 0.74\% | -4.49\% | -0.62\% | 0.75\% | -0.56\% |
| 191. | 9/4/2007 | 0.18\% | -2.21\% | -3.02\% | -3.09\% | -1.94\% |
| 192. | 9/10/2007 | 1.33\% | -4.96\% | 2.52\% | 3.43\% | 1.04\% |
| 193. | 9/17/2007 | -0.78\% | 5.72\% | 0.66\% | 0.93\% | 1.19\% |
| 194. | 9/24/2007 | -0.30\% | 6.07\% | 1.28\% | 0.18\% | 1.34\% |
| 195. | 10/1/2007 | 6.92\% | 1.84\% | 2.86\% | 3.79\% | 4.14\% |
| 196. | 10/8/2007 | -3.71\% | -2.11\% | 0.38\% | 1.86\% | -0.86\% |
| 197. | 10/15/2007 | -1.29\% | 4.74\% | -3.16\% | 2.59\% | 0.64\% |
| 198. | 10/22/2007 | 3.84\% | 0.32\% | -1.46\% | 4.30\% | 2.28\% |
| 199. | 10/29/2007 | 1.25\% | -2.55\% | -0.10\% | -1.48\% | -0.61\% |
| 200. | 11/5/2007 | -2.38\% | -0.14\% | -0.72\% | -1.08\% | -1.23\% |
| 201. | 11/12/2007 | 1.36\% | -0.73\% | -0.06\% | 1.47\% | 0.74\% |
| 202. | 11/19/2007 | -3.92\% | -4.45\% | -1.76\% | -1.42\% | -2.78\% |
| 203. | 11/26/2007 | 1.30\% | 2.02\% | 3.34\% | 1.54\% | 1.90\% |
| 204. | 12/3/2007 | 4.21\% | 4.25\% | 4.12\% | 6.89\% | 5.09\% |
| 205. | 12/10/2007 | -3.22\% | -0.67\% | -5.01\% | -3.16\% | -3.11\% |
| 206. | 12/17/2007 | -0.31\% | 0.42\% | -1.29\% | -3.48\% | -1.44\% |
| 207. | 12/24/2007 | -0.44\% | 1.37\% | 2.02\% | 1.35\% | 0.96\% |
| 208. | 12/31/2007 | -5.59\% | -8.00\% | -6.12\% | -6.03\% | -6.28\% |
| 209. | 1/7/2008 | -0.67\% | 4.31\% | -2.96\% | -4.94\% | -1.64\% |
| 210. | 1/14/2008 | -1.52\% | -3.06\% | -4.98\% | -3.20\% | -3.02\% |
| 211. | 1/22/2008 | 6.34\% | 10.35\% | 14.93\% | 8.48\% | 9.41\% |
| 212. | 1/28/2008 | 7.95\% | 9.87\% | 11.56\% | 6.81\% | 8.67\% |
| 213. | 2/4/2008 | -0.31\% | -3.84\% | -3.33\% | -2.05\% | -2.16\% |
| 214. | 2/11/2008 | 1.22\% | 1.59\% | -0.88\% | -0.44\% | 0.36\% |
| 215. | 2/19/2008 | -1.04\% | 2.83\% | -1.41\% | -0.54\% | -0.19\% |
| 216. | 2/25/2008 | -0.46\% | -3.00\% | -0.53\% | 0.51\% | -0.67\% |
| 217. | 3/3/2008 | 0.65\% | -2.94\% | -1.80\% | -4.09\% | -2.01\% |
| 218. | 3/10/2008 | 3.15\% | 4.00\% | 1.91\% | 2.95\% | 3.01\% |
| 219. | 3/17/2008 | 0.89\% | 11.47\% | 0.25\% | -0.56\% | 2.34\% |
| 220. | 3/24/2008 | 0.42\% | 3.60\% | 2.24\% | 2.42\% | 2.03\% |
| 221. | 3/31/2008 | 4.29\% | 1.31\% | 4.69\% | 6.93\% | 4.53\% |
| 222. | 4/7/2008 | -2.86\% | -1.71\% | -3.18\% | -2.59\% | -2.60\% |
| 223. | 4/14/2008 | 7.06\% | 8.75\% | 12.08\% | 6.04\% | 8.04\% |
| 224. | 4/21/2008 | -0.02\% | 1.14\% | -2.45\% | 1.82\% | 0.31\% |
| 225. | 4/28/2008 | 4.50\% | 3.55\% | 0.59\% | 4.48\% | 3.55\% |
| 226. | 5/5/2008 | -0.74\% | -1.40\% | 2.84\% | -0.41\% | -0.12\% |
| 227. | 5/12/2008 | 4.92\% | 3.65\% | 3.90\% | 4.59\% | 4.36\% |
| 228. | 5/19/2008 | -2.23\% | 1.81\% | -2.43\% | -0.54\% | -0.91\% |
| 229. | 5/27/2008 | 6.51\% | 3.78\% | 7.39\% | 8.19\% | 6.61\% |
| 230. | 6/2/2008 | -2.08\% | -5.29\% | -4.75\% | -5.04\% | -4.18\% |
| 231. | 6/9/2008 | -5.18\% | 0.02\% | -1.18\% | -3.05\% | -2.70\% |
| 232. | 6/16/2008 | -1.59\% | -0.90\% | 0.51\% | 1.74\% | -0.01\% |
| 233. | 6/23/2008 | -5.46\% | -4.16\% | -4.25\% | -3.96\% | -4.48\% |
| 234. | 6/30/2008 | -3.66\% | -7.68\% | -3.49\% | -4.04\% | -4.59\% |

## Weekly Change In Railroad Common Equity Portfolio - 2008

| Week |  | Weekly Change In Stock Price 1/ |  |  |  | Weekly Change In Railroad Stock Portfolio 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | BNSF | CSX | NS | UP |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 235. | 7/7/2008 | 1.72\% | 5.68\% | 4.87\% | 1.51\% | 3.07\% |
| 236. | 7/14/2008 | -0.92\% | 0.42\% | 2.66\% | 0.87\% | 0.63\% |
| 237. | 7/21/2008 | 3.68\% | 4.05\% | 10.54\% | 6.83\% | 6.13\% |
| 238. | 7/28/2008 | 3.78\% | 4.46\% | 1.18\% | 2.51\% | 2.98\% |
| 239. | 8/4/2008 | -0.32\% | -0.84\% | 4.14\% | 4.71\% | 2.07\% |
| 240. | 8/11/2008 | -2.53\% | -7.17\% | -4.03\% | -7.59\% | -5.42\% |
| 241. | 8/18/2008 | 4.66\% | 4.64\% | 0.58\% . | 3.49\% | 3.42\% |
| 242. | 8/25/2008 | 3.79\% | 1.84\% | 3.57\% | 5.82\% | 3.99\% |
| 243. | 9/2/2008 | -7.01\% | -10.78\% | -9.71\% | -10.07\% | -9.29\% |
| 244. | 9/8/2008 | 2.39\% | 6.76\% | 2.38\% | 3.10\% | 3.46\% |
| 245. | 9/15/2008 | -1.12\% | -3.64\% | 3.52\% | -1.37\% | -0.76\% |
| 246. | 9/22/2008 | -2.35\% | -5.02\% | -0.61\% | -4.52\% | -3.18\% |
| 247. | 9/29/2008 | -15.30\% | -15.41\% | -19.68\% | -15.63\% | -16.38\% |
| 248. | 10/6/2008 | -3.77\% | -9.20\% | -7.32\% | -6.16\% | -6.29\% |
| 249. | 10/13/2008 | -0.08\% | 0.05\% | 0.93\% | -4.33\% | -1.19\% |
| 250. | 10/20/2008 | -0.13\% | -2.18\% | 1.11\% | 5.04\% | 1.33\% |
| 251. | 10/27/2008 | 11.34\% | 7.88\% | 12.85\% | 14.56\% | 12.06\% |
| 252. | 11/3/2008 | -8.77\% | -6.47\% | -9.91\% | -8.66\% | -8.58\% |
| 253. | 11/10/2008 | -1.99\% | -9.22\% | -3.24\% | -6.10\% | -4.86\% |
| 254. | 11/17/2008 | -7.97\% | -13.19\% | -12.12\% | -17.06\% | -12.63\% |
| 255. | 11/24/2008 | 4.53\% | 11.16\% | 8.30\% | 5.93\% | 6.87\% |
| 256. | 12/1/2008 | -2.52\% | -8.30\% | -6.73\% | -5.10\% | -5.21\% |
| 257. | 12/8/2008 | -3.90\% | -6.73\% | -3.51\% | -9.85\% | -6.08\% |
| 258. | 12/15/2008 | 3.19\% | -0.78\% | 0.09\% | 8.08\% | 3.26\% |
| 259. | 12/22/2008 | 1.05\% | -0.32\% | -0.45\% | 1.51\% | 0.65\% |
| 260. | 12/29/2008 | 5.40\% | 9.90\% | 10.62\% | 6.73\% | 7.62\% |

1/ Current Week Pages 3 to 10, Columns (2) to (5) divided by prior week Pages 3 to 10, Columns (2) to (5).
2/ [Column (2) $\times$ Pages 3 to 10, Column (10) $\div$ Pages 3 to 10, Column (14)] + [Column (3) $\times$ Pages 3 to 10, Column (11) $\div$ Pages 3 to 10, Column (14)] + [Column (4) $\times$ Pages 3 to 10, Column (12) $\div$ Pages 3 to 10, Column (14)] + [Column (4) x Pages 3 to 10, Column (13) $\div$ Pages 3 to 10, Column (14)]

S\&P 500 Price lndex And 3-Month T-Bill Weekly Returns - 2008

|  |  |  |  |  | 3-Month |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  |  | S\&P 500 | Change In <br> S\&P 500 | 3-Month <br> T-Bill |
| T-Bill |  |  |  |  |  |
| Average |  |  |  |  |  |

S\&P 500 Price Index And 3-Month T-Bill Weekly Returns -- 2008


S\&P 500 Price Index And 3-Month T-Bill Weekly Returns -- 2008

|  | Week <br> (1) | S\&P 500 Price Retrun Index 1/ <br> (2) | Change In <br> S\&P 500 <br> Price Return <br> Index 2/ <br> (3) | 3-Month <br> T-Bill <br> Annual <br> Rate 3/ <br> (4) | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 4/ <br> (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 88. | 9/6/2005 | 1241.4800 | 1.93\% | 3.50\% | 0.06618\% |
| 89. | 9/12/2005 | 1237.9100 | -0.29\% | 3.47\% | 0.06562\% |
| 90. | 9/19/2005 | 1215.2900 | -1.83\% | 3.51\% | 0.06636\% |
| 91. | 9/26/2005 | 1228.8100 | 1.11\% | 3.51\% | 0.06636\% |
| 92. | 10/3/2005 | 1195.9000 | -2.68\% | 3.61\% | 0.06822\% |
| 93. | 10/10/2005 | 1186.5700 | -0.78\% | 3.74\% | 0.07064\% |
| 94. | 10/17/2005 | 1179.5900 | -0.59\% | 3.86\% | 0.07286\% |
| 95. | 10/24/2005 | 1198.4100 | 1.60\% | 3.91\% | 0.07379\% |
| 96. | 10/31/2005 | 1220.1400 | 1.81\% | 3.96\% | 0.07471\% |
| 97. | 11/7/2005 | 1234.7200 | 1.19\% | 3.97\% | 0.07490\% |
| 98. | 11/14/2005 | 1248.2700 | 1.10\% | 4.01\% | 0.07564\% |
| 99. | 11/21/2005 | 1268.2500 | 1.60\% | 3.96\% | 0.07471\% |
| 100. | 11/28/2005 | 1265.0800 | -0.25\% | 3.97\% | 0.07490\% |
| 101. | 12/5/2005 | 1259.3700 | -0.45\% | 4.00\% | 0.07545\% |
| 102. | - 12/12/2005 | 1267.3200 | 0.63\% | 3.91\% | 0.07379\% |
| 103. | 12/19/2005 | 1268.6600 | 0.11\% | 3.97\% | 0.07490\% |
| 104. | 12/27/2005 | 1248.2900 | -1.61\% | 4.01\% | 0.07564\% |
| 105. | 1/3/2006 | 1285.4500 | 2.98\% | 4.19\% | 0.07897\% |
| 106. | 1/9/2006 | 1287.6100 | 0.17\% | 4.29\% | 0.08081\% |
| 107. | 1/17/2006 | 1261.4900 | -2.03\% | 4.36\% | 0.08210\% |
| 108. | 1/23/2006 | 1283.7200 | 1.76\% | 4.42\% | 0.08321\% |
| 109. | 1/30/2006 | 1264.0300 | -1.53\% | 4.48\% | 0.08432\% |
| 110. | 2/6/2006 | 1266.9900 | 0.23\% | 4.50\% | 0.08468\% |
| 111. | 2/13/2006 | 1287.2400 | 1.60\% | 4.55\% | 0.08560\% |
| 112. | 2/21/2006 | 1289.4300 | 0.17\% | 4.58\% | 0.08616\% |
| 113. | 2/27/2006 | 1287.2300 | -0.17\% | 4.62\% | 0.08689\% |
| 114. | 3/6/2006 | 1281.4200 | -0.45\% | 4.60\% | 0.08652\% |
| 115. | 3/13/2006 | 1307.2500 | 2.02\% | 4.62\% | 0.08689\% |
| 116. | 3/20/2006 | 1302.9500 | -0.33\% | 4.67\% | 0.08781\% |
| 117. | 3/27/2006 | 1294.8700 | -0.62\% | 4.63\% | 0.08708\% |
| 118. | 4/3/2006 | 1295.5000 | 0.05\% | 4.68\% | 0.08800\% |
| 119. | 4/10/2006 | 1289.1200 | -0.49\% | 4.70\% | 0.08836\% |
| 120. | 4/17/2006 | 1311.2800 | 1.72\% | 4.73\% | 0.08892\% |
| 121. | 4/24/2006 | 1310.6100 | -0.05\% | 4.78\% | 0.08983\% |
| 122. | 5/1/2006 | 1325.7600 | 1.16\% | 4.82\% | 0.09057\% |
| 123. | 5/8/2006 | 1291.2400 | -2.60\% | 4.86\% | 0.09130\% |
| 124. | 5/15/2006 | 1267.0300 | -1.87\% | 4.83\% | 0.09075\% |
| 125. | 5/22/2006 | 1280.1600 | 1.04\% | 4.83\% | 0.09075\% |
| 126. | 5/30/2006 | 1288.2200 | 0.63\% | 4.84\% | 0.09094\% |
| 127. | 6/5/2006 | 1252.3000 | -2.79\% | 4.86\% | 0.09130\% |
| 128. | 6/12/2006 | 1251.5400 | -0.06\% | 4.89\% | 0.09185\% |
| 129. | 6/19/2006 | 1244.5000 | -0.56\% | 4.93\% | 0.09259\% |
| 130. | 6/26/2006 | 1270.2000 | 2.07\% | 5.02\% | 0.09424\% |
| 131. | 7/3/2006 | 1265.4800 | -0.37\% | 5.03\% | 0.09442\% |

S\&P 500 Price Index And 3-Month T-Bill Weekly Returns - 2008

|  | Week | S\&P 500 Price Retrun Index 1/ | Change In <br> S\&P 500 <br> Price Return <br> Index 2! | 3-Month <br> - T-Bill <br> Annual <br> Rate 3/ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 4/ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) |
| 132. | 7/10/2006 | 1236.2000 | -2.31\% | 5.06\% | 0.09497\% |
| 133. | 7/17/2006 | 1240.2900 | 0.33\% | 5.11\% | 0.09589\% |
| 134. | 7/24/2006 | 1278.5500 | 3.08\% | 5.10\% | 0.09570\% |
| 135. | 7/31/2006 | 1279.3600 | 0.06\% | 5.10\% | 0.09570\% |
| 136. | 8/7/2006 | 1266.7400 | -0.99\% | 5.08\% | 0.09534\% |
| 137. | 8/14/2006 | 1302.3000 | 2.81\% | 5.10\% | 0.09570\% |
| 138. | 8/21/2006 | 1295.0900 | -0.55\% | 5.10\% | 0.09570\% |
| 139. | 8/28/2006 ${ }^{\text {- }}$ | 1311.0100 | 1.23\% | 5.06\% | 0.09497\% |
| 140. | 9/5/2006 | 1298.9200 | -0.92\% | 4.97\% | 0.09332\% |
| 141. | 9/11/2006 | 1319.6600 | 1.60\% | 4.93\% | 0.09259\% |
| 142. | 9/18/2006 | 1314.7800 | -0.37\% | 4.93\% | 0.09259\% |
| 143. | 9/25/2006 | 1335.8500 | 1.60\% | 4.88\% | 0.09167\% |
| 144. | 10/2/2006 | 1349.5900 | 1.03\% | 4.92\% | 0.09240\% |
| 145. | 10/9/2006 | 1365.6200 | 1.19\% | 5.03\% | 0.09442\% |
| 146. | 10/16/2006 | 1368.6000 | 0.22\% | 5.09\% | 0.09552\% |
| 147. | 10/23/2006 | 1377.3400 | 0.64\% | 5.12\% | 0.09607\% |
| 148. | 10/30/2006 | 1364.3000 | -0.95\% | 5.08\% | 0.09534\% |
| 149. | 11/6/2006 | 1380.9000 | 1.22\% | 5.09\% | 0.09552\% |
| 150. | 11/13/2006 | 1401.2000 | 1.47\% | 5.09\% | 0.09552\% |
| 151. | 11/20/2006 | 1400.9500 | -0.02\% | 5.06\% | 0.09497\% |
| 152. | 11/27/2006 | 1396.7100 | -0.30\% | 5.04\% | 0.09460\% |
| 153. | 12/4/2006 | 1409.8400 | 0.94\% | 4.99\% | 0.09369\% |
| 154. | 12/11/2006 | - 1427.0900 | 1.22\% | 4.93\% | 0.09259\% |
| 155. | 12/18/2006 | 1410.7600 | -1.14\% | 4.97\% | 0.09332\% |
| 156. | 12/26/2006 | 1418.3000 | 0.53\% | 5.00\% | 0.09387\% |
| 157. | 1/3/2007 | 1409.7100 | -0.61\% | 5.05\% | 0.09479\% |
| 158. | 1/8/2007 | 1430.7300 | 1.49\% | 5.09\% | 0.09552\% |
| 159. | 1/16/2007 | 1430.5000 | -0.02\% | 5.12\% | 0.09607\% |
| 160. | 1/22/2007 | 1422.1800 | -0.58\% | 5.13\% | 0.09625\% |
| 161. | 1/29/2007 | 1448.3900 | 1.84\% | 5.13\% | 0.09625\% |
| 162. | 2/5/2007 | 1438.0600 | -0.71\% | 5.15\% | 0.09662\% |
| 163. | 2/12/2007 | 1455.5400 | 1.22\% | 5.17\% | 0.09699\% |
| 164. | 2/20/2007 | 1451.1900 | -0.30\% | 5.19\% | 0.09735\% |
| 165. | 2/26/2007 | 1387.1700 | -4.41\% | 5.15\% | 0.09662\% |
| 166. | 3/5/2007 | 1402.8400 | 1.13\% | 5.11\% | 0.09589\% |
| 167. | 3/12/2007 | 1386.9500 | -1.13\% | 5.07\% | 0.09515\% |
| 168. | 3/19/2007 | 1436.1100 | 3.54\% | 5.06\% | 0.09497\% |
| 169. | 3/26/2007 | 1420.8600 | -1.06\% | 5.06\% | 0.09497\% |
| 170. | 4/2/2007 | 1443.7600 | 1.61\% | 5.05\% | 0.09479\% |
| 171. | 4/9/2007 | 1452.8500 | 0.63\% | 5.03\% | 0.09442\% |
| 172. | 4/16/2007 | 1484.3500 | 2.17\% | 5.00\% | 0.09387\% |
| 173. | 4/23/2007 | 1494.0700 | 0.65\% | 4.97\% | 0.09332\% |
| 174. | 4/30/2007 | 1505.6200 | 0.77\% | 4.90\% | 0.09204\% |
| 175. | 5/7/2007 | 1505.8500 | 0.02\% | 4.88\% | 0.09167\% |

S\&P 500 Price Index And 3-Month T-Bill Weekly Returns -- 2008

|  | Week <br> (1) | S\&P 500 Price Retrun Index 1/ <br> (2) | Change In S\&P 500 Price Return Index 2/ (3) | 3-Month <br> T-Bill <br> Annual <br> Rate 3/ <br> (4) | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 4/ <br> (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 176. | 5/14/2007 | 1522.7500 | 1.12\% | 4.82\% | 0.09057\% |
| 177. | 5/21/2007 | 1515.7300 | -0.46\% | 4.90\% | 0.09204\% |
| 178. | 5/29/2007 | 1536.3400 | 1.36\% | 4.82\% | 0.09057\% |
| 179. | 6/4/2007 | 1507.6700 | -1.87\% | 4.80\% | 0.09020\% |
| 180. | 6/11/2007 | 1532.9100 | 1.67\% | 4.66\% | 0.08763\% |
| 181. | 6/18/2007 | 1502.5600 | -1.98\% | 4.69\% | 0.08818\% |
| 182. | 6/25/2007 | 1503.3500 | 0.05\% | 4.80\% | 0.09020\% |
| 183. | 7/2/2007 | 1530.4400 | 1.80\% | 4.95\% | 0.09295\% |
| 184. | 7/9/2007 | 1552.5000 | 1.44\% | 4.96\% | 0.09314\% |
| 185. | 7/16/2007 | 1534.1000 | -1.19\% | 4.97\% | 0.09332\% |
| 186. | 7/23/2007 | 1458.9500 | -4.90\% | 4.96\% | 0.09314\% |
| 187. | 7/30/2007 | 1433.0600 | -1.77\% | 4.91\% | 0.09222\% |
| 188. | 8/6/2007 | 1453.6400 | 1.44\% | 4.83\% | 0.09075\% |
| 189. | 8/13/2007 | 1445.9400 | -0.53\% | 4.23\% | 0.07970\% |
| 190. | 8/20/2007 | 1479.3700 | 2.31\% | 3.70\% | 0.06989\% |
| 191. | 8/27/2007 | 1473.9900 | -0.36\% | 4.17\% | 0.07860\% |
| 192. | 9/4/2007 | 1453.5500 | -1.39\% | 4.30\% | 0.08100\% |
| 193. | 9/10/2007 | 1484.2500 | 2.11\% | 4.04\% | 0.07619\% |
| 194. | 9/17/2007 | 1525.7500 | 2.80\% | 3.92\% | 0.07397\% |
| 195. | 9/24/2007 | 1526.7500 | 0.07\% | 3.78\% | 0.07138\% |
| 196. | 10/1/2007 | 1557.5900 | 2.02\% | 3.96\% | 0.07471\% |
| 197. | 10/8/2007 | 1561.8000 | 0.27\% | 4.11\% | 0.07749\% |
| 198. | 10/15/2007 | 1500.6300 | -3.92\% | 4.04\% | 0.07619\% |
| 199. | 10/22/2007 | 1535.2800 | 2.31\% | 3.95\% | 0.07453\% |
| 200. | 10/29/2007 | 1509.6500 | -1.67\% | 3.87\% | 0.07305\% |
| 201. | 11/5/2007 | 1453.7000 | -3.71\% | 3.52\% | 0.06655\% |
| 202. | 11/12/2007 | 1458.7400 | 0.35\% | 3.40\% | 0.06432\% |
| 203. | 11/19/2007 | 1440.7000 | -1.24\% | 3.24\% | 0.06134\% |
| 204. | 11/26/2007 | 1481.1400 | 2.81\% | 3.10\% | 0.05873\% |
| 205. | 12/3/2007 | 1504.6600 | 1.59\% | 3.08\% | 0.05835\% |
| 206. | 12/10/2007 | 1467.9500 | -2.44\% | 2.92\% | 0.05536\% |
| 207. | 12/17/2007 | 1484.4600 | 1.12\% | 2.99\% | 0.05667\% |
| 208. | 12/24/2007 | 1478.4900 | -0.40\% | 3.25\% | 0.06152\% |
| 209. | 12/31/2007 | 1411.6300 | -4.52\% | 3.27\% | 0.06190\% |
| 210. | 1/7/2008 | 1401.0200 | -0.75\% | 3.21\% | 0.06078\% |
| 211. | 1/14/2008 | 1325.1900 | -5.41\% | 3.09\% | 0.05854\% |
| 212. | 1/22/2008 | 1330.6100 | 0.41\% | 2.31\% | 0.04393\% |
| 213. | 1/28/2008 | 1395.4200 | 4.87\% | 2.18\% | 0.04148\% |
| 214. | 2/4/2008 | 1331.2900 | -4.60\% | 2.19\% | 0.04167\% |
| 215. | 2/11/2008 | 1349.9900 | 1.40\% | 2.28\% | 0.04336\% |
| 216. | 2/19/2008 | 1353.1100 | 0.23\% | 2.23\% | 0.04242\% |
| 217. | 2/25/2008 | 1330.6300 | -1.66\% | 2.01\% | 0.03828\% |
| 218. | 3/3/2008 | 1293.3700 | -2.80\% | 1.55\% | 0.02958\% |
| 219. | 3/10/2008 | 1288.1400 | -0.40\% | 1.37\% | 0.02617\% |

S\&P 500 Price Index And 3-Month T-Bill Weekly Returns -- 2008

|  | Week | S\&P 500 Price Retrun Index 1/ | Change In S\&P 500 Price Return Index 2 / | 3-Month <br> T-Bill <br> Annual <br> Rate 3/ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 4/ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) |
| 220. | 3/17/2008 | 1329.5100 | 3.21\% | 0.82\% | 0.01571\% |
| 221. | 3/24/2008 | 1315.2200 | -1.07\% | 1.29\% | 0.02465\% |
| 222. | 3/31/2008 | 1370.4000 | 4.20\% | 1.39\% | 0.02655\% |
| 223. | 4/7/2008 | 1332.8300 | -2.74\% | 1.33\% | 0.02541\% |
| 224. | 4/14/2008 | 1390.3300 | 4.31\% | 1.18\% | 0.02256\% |
| 225. | 4/21/2008 | 1397.8400 | 0.54\% | 1.29\% | 0.02465\% |
| 226. | 4/28/2008 | 1413.9000 | 1.15\% | 1.45\% | 0.02769\% |
| 227. | 5/5/2008 | 1388.2800 | -1.81\% | 1.64\% | 0.03129\% |
| 228. | 5/12/2008 | 1425.3500 | 2.67\% | 1.82\% | 0.03469\% |
| 229. | 5/19/2008 | 1375.9300 | -3.47\% | 1.85\% | 0.03526\% |
| 230. | 5/27/2008 | 1400.3800 | 1.78\% | 1.89\% | 0.03601\% |
| 231. | 6/2/2008 | 1360.6800 | -2.83\% | 1.85\% | 0.03526\% |
| 232. | 6/9/2008 | 1360.0300 | -0.05\% | 1.97\% | 0.03752\% |
| 233. | 6/16/2008 | 1317.9300 | -3.10\% | 1.95\% | 0.03715\% |
| 234. | 6/23/2008 | 1278.3800 | -3.00\% | 1.79\% | 0.03412\% |
| 235. | 6/30/2008 | 1262.9000 | -1.21\% | 1.86\% | 0.03545\% |
| 236. | 7/7/2008 | 1239.4900 | -1.85\% | 1.77\% | 0.03375\% |
| 237. | 7/14/2008 | 1260.6800 | 1.71\% | 1.44\% | 0.02750\% |
| 238. | 7/21/2008 | 1257.7600 | -0.23\% | 1.60\% | 0.03053\% |
| 239. | 7/28/2008 | 1260.3100 | 0.20\% | 1.70\% | 0.03242\% |
| 240. | 8/4/2008 | 1296.3200 | 2.86\% | 1.70\% | 0.03242\% |
| 241. | 8/11/2008 | 1298.2000 | 0.15\% | 1.86\% | 0.03545\% |
| 242. | 8/18/2008 | 1292.2000 | -0.46\% | 1.75\% | 0.03337\% |
| 243. | 8/25/2008 | 1282.8300 | -0.73\% | 1.72\% | 0.03280\% |
| 244. | 9/2/2008 | 1242.3100 | -3.16\% | 1.70\% | 0.03242\% |
| 245. | 9/8/2008 | 1251.7000 | 0.76\% | 1.62\% | 0.03091\% |
| 246. | 9/15/2008 | 1255.0800 | 0.27\% | 0.62\% | 0.01189\% |
| 247. | 9/22/2008 | 1213.2700 | -3.33\% | 0.84\% | 0.01609\% |
| 248. | 9/29/2008 | 1099.2300 | -9.40\% | 0.77\% | 0.01475\% |
| 249. | 10/6/2008 | 899.2200 | -18.20\% | 0.58\% | 0.01112\% |
| 250. | 10/13/2008 | 940.5500 | 4.60\% | 0.46\% | 0.00883\% |
| 251. | 10/20/2008 | 876.7700 | -6.78\% | 1.05\% | 0.02009\% |
| 252. | 10/27/2008 | 968.7500 | 10.49\% | 0.62\% | 0.01189\% |
| 253. | 11/3/2008 | 930.9900 | -3.90\% | 0.40\% | 0.00768\% |
| 254. | 11/10/2008 | 873.2900 | -6.20\% | 0.21\% | 0.00403\% |
| 255. | 11/17/2008 | 800.0300 | -8.39\% | 0.07\% | 0.00135\% |
| 256. | 11/24/2008 | 896.2400 | 12.03\% | 0.07\% | 0.00135\% |
| 257. | 12/1/2008 | 876.0700 | -2.25\% | 0.04\% | 0.00077\% |
| 258. | 12/8/2008 | 879.7300 | 0.42\% | 0.02\% | 0.00038\% |
| 259. | 12/15/2008 | 887.8800 | 0.93\% | 0.03\% | 0.00058\% |
| 260. | 12/22/2008 | 872.8000 | -1.70\% | 0.02\% | 0.00038\% |
| 261. | 12/29/2008 | 931.8000 | 6.76\% | 0.09\% | 0.00173\% |

[^13]
## S\&P 500 Price Index And 3-Month T-Bill Weekly Returns - 2008

|  |  |  | Change In | 3-Month |
| :---: | :---: | :---: | :---: | :---: | | 3-Month |
| :---: |
|  |
|  |
|  |
| S\&P 500 |
| T-Bill |
| Price Retrun |
| Week | | S\&P 500 |
| :---: |
| (1) |
| Price Return |
| (2) |

2/ [Current Week Column (2) $\div$ Prior Week Column (2)] -1.
3/ Source: Board of Governros of the Federal Reserve, series WGS3MO.
4) $\left\{\left[(1+\text { Column (4) }]^{(1 / 52)}\right\}-1\right.$

Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills -- 2008

|  | Week <br> (I) | Weekly Change <br> In Railroad <br> Stock Portfolio 1/ | Weekly Change In S\&P 500 Price Return Index 2/ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 3/ <br> (4) | Excess Return <br> In Railroad <br> Stock Portfolio 4/ | Excess Return On S\&P 500 Price Return Index 5/ (6) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) |  |  |  |  |  |
| 1. | 1/12/2004 | -0.66\% | 1.60\% | 0.01704\% | -0.006775 | 0.015848 |
| 2. | 1/20/2004 | 1.13\% | 0.15\% | 0.01704\% | 0.011135 | 0.001339 |
| 3. | 1/26/2004 | -3.70\% | -0.91\% | 0.01761\% | -0.037138 | -0.009304 |
| 4. | 2/2/2004 | 0.72\% | 1.03\% | 0.01799\% | 0.007024 | 0.010102 |
| 5. | 2/9/2004 | -0.14\% | 0.27\% | 0.01780\% | -0.001591 | 0.002491 |
| 6. | 2/17/2004 | -0.71\% | -0.15\% | 0.01799\% | -0.007240 | -0.001664 |
| 7. | 2/23/2004 | -0.27\% | 0.07\% | 0.01838\% | -0.002895 | 0.000542 |
| 8. | 3/1/2004 | -2.33\% | 1.04\% | 0.01838\% | -0.023470 | 0.010227 |
| 9. | 3/8/2004 | -0.21\% | -3.14\% | 0.01838\% | -0.002235 | -0.031553 |
| 10. | 3/15/2004 | -1.93\% | -0.96\% | 0.01799\% | -0.019468 | -0.009809 |
| 11. | 3/22/2004 | 1.08\% | -0.15\% | 0.01799\% | 0.010610 | -0.001730 |
| 12. | 3/29/2004 | 0.80\% | 3.05\% | 0.01818\% | 0.007860 | 0.030277 |
| 13. | 4/5/2004 | -1.98\% | -0.22\% | 0.01799\% | -0.019985 | -0.002361 |
| 14. | 4/12/2004 | 0.61\% | -0.41\% | 0.01799\% | 0.005884 | -0.004314 |
| 15. | 4/19/2004 | 5.15\% | 0.53\% | 0.01857\% | 0.051272 | 0.005094 |
| 16. | 4/26/2004 | -1.90\% | -2.92\% | 0.01876\% | -0.019160 | -0.029383 |
| 17. | 5/3/2004 | -1.43\% | -0.78\% | 0.01933\% | -0.014459 | -0.007960 |
| 18. | 5/10/2004 | 0.93\% | -0.27\% | 0.01971\% | 0.009103 | -0.002928 |
| 19. | 5/17/2004 | -1.48\% | -0.20\% | 0.01990\% | -0.014986 | -0.002152 |
| 20. | 5/24/2004 | 2.78\% | 2.48\% | 0.02047\% | 0.027613 | 0.024595 |
| 21. | 6/1/2004 | 2.01\% | 0.16\% | 0.02256\% | 0.019844 | 0.001398 |
| 22. | 6/7/2004 | 0.10\% | 1.24\% | 0.02427\% | 0.000788 | 0.012203 |
| 23. | 6/14/2004 | -0.51\% | -0.13\% | 0.02522\% | -0.005359 | -0.001528 |
| 24. | 6/21/2004 | 2.39\% | -0.05\% | 0.02503\% | 0.023620 | -0.000770 |
| 25. | 6/28/2004 | -1.60\% | -0.80\% | 0.02522\% | -0.016277 | -0.008230 |
| 26. | 7/6/2004 | 0.58\% | -1.12\% | 0.02484\% | 0.005552 | -0.011418 |
| 27. | 7/12/2004 | -0.36\% | -1.03\% | 0.02560\% | -0.003819 | -0.010518 |
| 28. | 7/19/2004 | -2.06\% | -1.38\% | 0.02598\% | -0.020885 | -0.014051 |
| 29. | 7/26/2004 | 2.89\% | 1.43\% | 0.02769\% | 0.028643 | 0.014011 |
| 30. | 8/2/2004 | -2.64\% | -3.43\% | 0.02826\% | -0.026648 | -0.034547 |
| 31. | 8/9/2004 | 0.79\% | 0.08\% | 0.02788\% | 0.007604 | 0.000501 |
| 32. | 8/16/2004 | 2.50\% | 3.15\% | 0.02845\% | 0.024675 | 0.031224 |
| 33. | 8/23/2004 | 1.21\% | 0.86\% | 0.02958\% | 0.011780 | 0.008281 |
| 34. | 8/30/2004 | 2.41\% | 0.53\% | 0.03072\% | 0.023832 | 0.004983 |
| 35. | 9/7/2004 | 1.84\% | 0.92\% | 0.03148\% | 0.018122 | 0.008925 |
| 36. | 9/13/2004 | 1.16\% | 0.41\% | 0.03186\% | 0.011317 | 0.003801 |
| 37. | 9/20/2004 | 0.39\% | -1.63\% | 0.03280\% | 0.003619 | -0.016668 |
| 38. | 9/27/2004 | 1.29\% | 1.93\% | 0.03280\% | 0.012586 | 0.018940 |
| 39. | 10/4/2004 | 3.28\% | -0.83\% | 0.03261\% | 0.032508 | -0.008598 |
| 40. | 10/11/2004 | -0.70\% | -1.24\% | 0.03318\% | -0.007376 | -0.012754 |
| 41. | 10/18/2004 | 2.14\% | -1.12\% | 0.03488\% | 0.021033 | -0.011592 |
| 42. | 10/25/2004 | 3.46\% | 3.14\% | 0.03639\% | 0.034207 | 0.031085 |
| 43. | 11/1/2004 | 3.32\% | 3.18\% | 0.03790\% | 0.032780 | 0.031447 |

Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills - 2008

|  | Week | Weekly Change In Railroad Stock Portfolio $1 /$ | Weekly <br> Change In S\&P 500 Price Return Index $2 /$ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 3/ | Excess Return <br> In Railroad <br> Stock Portfolio 4/ | Excess Return On <br> S\&P 500 Price <br> Return Index 5/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 44. | 11/8/2004 | 0.77\% | 1.54\% | 0.03960\% | 0.007285 | 0.015039 |
| 45. | 11/15/2004 | -2.21\% | -1.17\% | 0.04054\% | -0.022487 | -0.012084 |
| 46. | 11/22/2004 | 1.64\% | 1.05\% | 0.04186\% | 0.016004 | 0.010100 |
| 47. | 11/29/2004 | 2.39\% | 0.72\% | 0.04223\% | 0.023446 | 0.006782 |
| 48. | 12/6/2004 | -1.97\% | -0.27\% | 0.04280\% | -0.020151 | -0.003089 |
| 49. | 12/13/2004 | 1:03\% | 0.52\% | 0.04205\% - | 0.009902 | 0.004798 |
| 50. | 12/20/2004 | 3.55\% | 1.33\% | 0.04186\% | 0.035066 | 0.012921 |
| 51. | 12/27/2004 | 0.75\% | 0.15\% | 0.04242\% | 0.007118 | 0.001055 |
| 52. | 1/3/2005 | -2.79\% | -2.12\% | 0.04412\% | -0.028373 | -0.021672 |
| 53. | 1/10/2005 | -1.02\% | -0.14\% | 0.04468\% | -0.010617 | -0.001855 |
| 54. | 1/18/2005 | -1.78\% | -1.41\% | 0.04506\% | -0.018284 | -0.014507 |
| 55. | 1/24/2005 | -0.16\% | 0.30\% | 0.04581\% | -0.002016 | 0.002530 |
| 56. | 1/31/2005 | 1.42\% | 2.70\% | 0.04750\% | 0.013705 | 0.026562 |
| 57. | 2/7/2005 | 1.00\% | 0.19\% | 0.04768\% | 0.009556 | 0.001410 |
| 58. | 2/14/2005 | 2.73\% | -0.31\% | 0.04919\% | 0.026829 | -0.003570 |
| 59. | 2/21/2005 | 2.52\% | 0.81\% | 0.05106\% | . 0.024692 | 0.007629 |
| 60. | 2/28/2005 | 2.15\% | 0.89\% | 0.05218\% | 0.020979 | 0.008352 |
| 61. | 3/7/2005 | 1.60\% | -1.80\% | 0.05237\% | 0.015443 | -0.018558 |
| 62. | 3/14/2005 | 1.21\% | -0.87\% | 0.05312\% | 0.011602 | -0.009222 |
| 63. | 3/21/2005 | 1.75\% | -1.53\% | 0.05406\% | 0.016918 | -0.015864 |
| 64. | 3/28/2005 | -2.66\% | 0.13\% | 0.05349\% | -0.027181 | 0.000746 |
| 65. | 4/4/2005 | -2.31\% | 0.71\% | 0.05275\% | -0.023612 | 0.006532 |
| 66. | 4/11/2005 | -9.22\% | -3.27\% | 0.05256\% | -0.092697 | -0.033187 |
| 67. | 4/18/2005 | 3.95\% | 0.83\% | 0.05499\% | 0.038986 | 0.007764 |
| 68. | 4/25/2005 | -1.42\% | 0.41\% | 0.05499\% | -0.014783 | 0.003556 |
| 69. | 5/2/2005 | 3.16\% | 1.25\% | 0.05462\% | 0.031053 | 0.011988 |
| 70. | 5/9/2005 | -5.16\% | -1.48\% | 0.05462\% | -0.052137 | -0.015315 |
| 71. | 5/16/2005 | 6.46\% | 3.05\% | 0.05462\% | 0.064097 | 0.029981 |
| 72. | 5/23/2005 | -0.93\% | 0.80\% | 0.05593\% | -0.009862 | 0.007429 |
| 73. | 5/31/2005 | 0.71\% | -0.23\% | 0.05667\% | 0.006521 | -0.002869 |
| 74. | 6/6/2005 | -2.47\% | 0.17\% | 0.05705\% | -0.025227 | 0.001177 |
| 75. | 6/13/2005 | 4.52\% | 1.57\% | 0.05686\% | 0.044612 | 0.015165 |
| 76. | 6/20/2005 | -6.17\% | -2.09\% | 0.05779\% | -0.062278 | -0.021441 |
| 77. | 6/27/2005 | 2.43\% | 0.24\% | 0.05947\% | 0.023665 | 0.001814 |
| 78. | 7/5/2005 | 1.94\% | 1.46\% | 0.06022\% | 0.018785 | 0.013982 |
| 79. | 7/11/2005 | 0.46\% | 1.33\% | 0.06097\% | 0.003983 | 0.012643 |
| 80. | 7/18/2005 | 5.20\% | 0.47\% | 0.06302\% | 0.051414 | 0.004061 |
| 81. | 7/25/2005 | 3.59\% | 0.04\% | 0.06469\% | 0.035219 | -0.000242 |
| 82. | 8/1/2005 | -0.45\% | -0.63\% | 0.06581\% | -0.005199 | -0.006946 |
| 83. | 8/8/2005 | 0.24\% | 0.32\% | 0.06655\% | 0.001732 | 0.002572 |
| 84. | 8/15/2005 | -0.87\% | -0.87\% | 0.06655\% | -0.009370 | -0.009346 |
| 85. | 8/22/2005 | 0.46\% | -1.20\% | 0.06692\% | 0.003974 | -0.012647 |
| 86. | 8/29/2005 | -1.81\% | 1.07\% | 0.06636\% | -0.018751 | 0.010057 |
| 87. | 9/6/2005 | 1.20\% | 1.93\% | 0.06618\% | 0.011359 | 0.018599 |

Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills - 2008

|  | Week | Weekly Change In Railroad Stock Portfolio $1 /$ | Weekly <br> Change In <br> S\&P 500 Price <br> Return Index 2/ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 3/ | Excess Return <br> In Railroad <br> Stock Portfolio 4/ | Excess Return On <br> S\&P 500 Price <br> Return Index 5/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 88. | 9/12/2005 | 1.35\% | -0.29\% | 0.06562\% | 0.012799 | -0.003532 |
| 89. | 9/19/2005 | 2.95\% | -1.83\% | 0.06636\% | 0.028796 | -0.018936 |
| 90. | 9/26/2005 | 3.52\% | 1.11\% | 0.06636\% | 0.034504 | 0.010461 |
| 91. | 10/3/2005 | -1.47\% | -2.68\% | 0.06822\% | -0.015419 | -0.027464 |
| 92. | 10/10/2005 | -2.40\% | -0.78\% | 0.07064\% | -0.024674 | -0.008508 |
| 93. | 10/17/2005 | -1.14\% | -0.59\% | 0.07286\% | -0.012088 | -0.006611 |
| 94. | 10/24/2005 | 2.97\% | 1.60\% | 0.07379\% | 0.028952 | 0.015217 |
| 95. | 10/31/2005 | 4.95\% | 1.81\% | 0.07471\% | 0.048764 | 0.017385 |
| 96. | 11/7/2005 | 0.67\% | 1.19\% | 0.07490\% | 0.005929 | 0.011200 |
| 97. | 11/14/2005 | 4.23\% | 1.10\% | 0.07564\% | 0.041589 | 0.010218 |
| 98. | 11/21/2005 | 0.19\% | 1.60\% | 0.07471\% | 0.001164 | 0.015259 |
| 99. | 11/28/2005 | 0.85\% | -0.25\% | 0.07490\% | 0.007751 | -0.003248 |
| 100. | 12/5/2005 | -0.81\% | -0.45\% | 0.07545\% | -0.008897 | -0.005268 |
| 101. | 12/12/2005 | 1.13\% | 0.63\% | 0.07379\% | 0.010535 | 0.005575 |
| 102. | 12/19/2005 | 4.28\% | 0.11\% | 0.07490\% | 0.042011 | 0.000308 |
| 103. | 12/27/2005 | -0.11\% | -1.61\% | 0.07564\% | -0.001863 | -0.016813 |
| 104. | 1/3/2006 | -3.36\% | 2.98\% | 0.07897\% | -0.034405 | 0.028979 |
| 105. | 1/9/2006 | 0.42\% | 0.17\% | 0.08081\% | 0.003377 | 0.000872 |
| 106. | 1/17/2006 | 3.97\% | -2.03\% | 0.08210\% | 0.038863 | -0.021107 |
| 107. | 1/23/2006 | 7.64\% | 1.76\% | 0.08321\% | 0.075562 | 0.016790 |
| 108. | 1/30/2006 | -0.25\% | -1.53\% | 0.08432\% | -0.003347 | -0.016181 |
| 109. | 2/6/2006 | 0.68\% | 0.23\% | 0.08468\% | 0.005994 | 0.001495 |
| 110. | 2/13/2006 | 1.72\% | 1.60\% | 0.08560\% | 0.016383 | 0.015127 |
| 111. | 2/21/2006 | -0.12\% | 0.17\% | 0.08616\% | -0.002063 | 0.000840 |
| 112. | 2/27/2006 | 1.91\% | -0.17\% | 0.08689\% | 0.018238 | -0.002575 |
| 113. | 3/6/2006 | -3.20\% | -0.45\% | 0.08652\% | -0.032905 | -0.005379 |
| 114. | 3/13/2006 | 6.19\% | 2.02\% | 0.08689\% | 0.061018 | 0.019288 |
| 115. | 3/20/2006 | -0.26\% | -0.33\% | 0.08781\% | -0.003443 | -0.004167 |
| 116. | 3/27/2006 | 2.13\% | -0.62\% | 0.08708\% | 0.020468 | -0.007072 |
| 117. | 4/3/2006 | 1.16\% | 0.05\% | 0.08800\% | 0.010685 | -0.000393 |
| 118. | 4/10/2006 | 0.09\% | -0.49\% | 0.08836\% | -0.000019 | -0.005808 |
| 119. | 4/17/2006 | 3.67\% | 1.72\% | 0.08892\% | 0.035801 | 0.016301 |
| 120. | 4/24/2006 | -4.82\% | -0.05\% | 0.08983\% | -0.049071 | -0.001409 |
| 121. | 5/1/2006 | 4.54\% | 1.16\% | 0.09057\% | 0.044504 | 0.010654 |
| 122. | 5/8/2006 | -2.69\% | -2.60\% | 0.09130\% | -0.027793 | -0.026951 |
| 123. | 5/15/2006 | -5.60\% | -1.87\% | 0.09075\% | -0.056944 | -0.019657 |
| 124. | 5/22/2006 | 3.12\% | 1.04\% | 0.09075\% | 0.030295 | 0.009455 |
| 125. | 5/30/2006 | 1.49\% | 0.63\% | 0.09094\% | 0.013941 | 0.005387 |
| 126. | 6/5/2006 | -8.59\% | -2.79\% | 0.09130\% | -0.086770 | -0.028796 |
| 127. | 6/12/2006 | 4.83\% | -0.06\% | 0.09185\% | 0.047377 | -0.001525 |
| 128. | 6/19/2006 | 0.19\% | -0.56\% | 0.09259\% | 0.000947 | -0.006551 |
| 129. | 6/26/2006 | 4.48\% | 2.07\% | 0.09424\% | 0.043874 | 0.019708 |
| 130. | 7/3/2006 | -3.75\% | -0.37\% | 0.09442\% | -0.038434 | -0.004660 |
| 131. | 7/10/2006 | -4.07\% | -2.31\% | 0.09497\% | -0.041607 | -0.024087 |

Excess Returns OnS\&\& 500 And Railroad Portfolio Over 3-Month T-Bil]s -- 2008

|  | Week | Weekly Change In Railroad Stock Portfolio 1/ | Weekly <br> Change In S\&P 500 Price Return Index 21 | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 3/ | Excess Return <br> In Railroad <br> Stock Portfolio 4/ | Excess Return On S\&P 500 Price Return Index 5/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 132. | 7/17/2006 | -4.85\% | 0.33\% | 0.09589\% | -0.049457 | 0.002350 |
| 133. | 7/24/2006 | -1.07\% | 3.08\% | 0.09570\% | -0.011686 | 0.029891 |
| 134. | 7/31/2006 | -0.83\% | 0.06\% | 0.09570\% | -0.009217 | -0.000324 |
| 135. | 8/7/2006 | -4.90\% | -0.99\% | 0.09534\% | -0.049930 | -0.010818 |
| 136. | 8/14/2006 | 6.08\% | 2.81\% | 0.09570\% | 0.059838 | 0.027115 |
| 137. | 8/21/2006 | -3.65\% | -0.55\% | 0.09570\% | -0.037409 | -0.006493 |
| 138. | 8/28/2006 | 1.07\% | 1.23\% | 0.09497\% | 0.009795 | 0.011343 |
| 139. | 9/5/2006 | -1.43\% | -0.92\% | 0.09332\% | -0.015230 | -0.010155 |
| 140. | 9/11/2006 | 4.88\% | 1.60\% | 0.09259\% | 0.047881 | 0.015041 |
| 141. | 9/18/2006 | -1.87\% | -0.37\% | 0.09259\% | -0.019643 | -0.004624 |
| 142. | 9/25/2006 | 6.26\% | 1.60\% | 0.09167\% | 0.061653 | 0.015109 |
| 143. | 10/2/2006 | 2.59\% | 1.03\% | 0.09240\% | 0.025001 | 0.009362 |
| 144. | 10/9/2006 | 2.91\% | 1.19\% | 0.09442\% | 0.028140 | 0.010933 |
| 145. | 10/16/2006 | 1.67\% | 0.22\% | 0.09552\% | 0.015736 | 0.001227 |
| 146. | 10/23/2006 | 1.85\% | 0.64\% | 0.09607\% | 0.017562 | 0.005425 |
| 147. | 10/30/2006 | -1.79\% | -0.95\% | 0.09534\% | -0.018879 | -0.010421 |
| 148. | 11/6/2006 | 1.52\% | 1.22\% | 0.09552\% | 0.014288 | 0.011212 |
| 149. | 11/13/2006 | -1.10\% | 1.47\% | 0.09552\% | -0.011971 | 0.013745 |
| 150. | 11/20/2006 | -0.59\% | -0.02\% | 0.09497\% | -0.006890 | -0.001128 |
| 151. | 11/27/2006 | -1.29\% | -0.30\% | 0.09460\% | -0.013879 | -0.003973 |
| 152. | 12/4/2006 | 2.37\% | 0.94\% | 0.09369\% | 0.022729 | 0.008464 |
| 153. | 12/11/2006 | -0.38\% | 1.22\% | 0.09259\% | -0.004753 | 0.011310 |
| 154. | 12/18/2006 | -3.76\% | -1.14\% | 0.09332\% | -0.038578 | -0.012376 |
| 155. | 12/26/2006 | 1.82\% | 0.53\% | 0.09387\% | 0.017218 | 0.004406 |
| 156. | 1/1/2007 | -1.60\% | -0.61\% | 0.09479\% | -0.016980 | -0.007004 |
| 157. | 1/8/2007 | 1.82\% | 1.49\% | -0.09552\% | 0.017219 | 0.013956 |
| 158. | 1/15/2007 | 4.76\% | -0.02\% | 0.09607\% | 0.046622 | -0.001121 |
| 159. | 1/22/2007 | -2.75\% | -0.58\% | 0.09625\% | -0.028420 | -0.006779 |
| 160. | 1/29/2007 | 6.37\% | 1.84\% | 0.09625\% | 0.062710 | 0.017467 |
| 161. | 2/5/2007 | -2.89\% | -0.71\% | 0.09662\% | -0.029859 | -0.008098 |
| 162. | 2/12/2007 | 4.69\% | 1.22\% | 0.09699\% | 0.045975 | 0.011185 |
| 163. | 2/19/2007 | 0.90\% | -0.30\% | 0.09735\% | 0.007988 | -0.003962 |
| 164. | 2/26/2007 | -7.78\% | -4.41\% | 0.09662\% | -0.078770 | -0.045082 |
| 165. | 3/5/2007 | 2.82\% | 1.13\% | 0.09589\% | 0.027193 | 0.010338 |
| 166. | 3/12/2007 | 1.85\% | -1.13\% | 0.09515\% | 0.017562 | -0.012279 |
| 167. | 3/19/2007 | 4.43\% | 3.54\% | 0.09497\% | 0.043332 | 0.034495 |
| 168. | 3/26/2007 | -2.85\% | -1.06\% | 0.09497\% | -0.029425 | -0.011569 |
| 169. | 4/2/2007 | 1.94\% | 1.61\% | 0.09479\% | 0.018466 | 0.015169 |
| 170. | 4/9/2007 | 6.74\% | 0.63\% | 0.09442\% | 0.066410 | 0.005352 |
| 171. | 4/16/2007 | 5.11\% | 2.17\% | 0.09387\% | 0.050168 | 0.020743 |
| 172. | 4/23/2007 | -3.51\% | 0.65\% | 0.09332\% | -0.036028 | 0.005615 |
| 173. | 4/30/2007 | 1.91\% | 0.77\% | 0.09204\% | 0.018221 | 0.006810 |
| 174. | 5/7/2007 | 0.13\% | 0.02\% | 0.09167\% | 0.000412 | -0.000764 |
| 175. | 5/14/2007 | 3.84\% | 1.12\% | 0.09057\% | 0.037451 | 0.010317 |

## Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills -- 2008

|  | Week | Weekly Change In Railroad Stock Portfolio 1/ | Weekly <br> Change In <br> S\&P 500 Price <br> Return Index 2/ | 3-Month <br> T-Bill <br> Average <br> Weekly <br> Rate 3/ | Excess Return <br> In Railroad <br> Stock Portfolio 4l | Excess Return On <br> S\&P 500 Price <br> Return Index 5/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 176. | 5/21/2007 | -2.41\% | -0.46\% | 0.09204\% | -0.025030 | -0.005530 |
| 177. | 5/28/2007 | 3.07\% | 1.36\% | 0.09057\% | 0.029762 | 0.012692 |
| 178. | 6/4/2007 | -4.76\% | -1.87\% | 0.09020\% | -0.048484 | -0.019563 |
| 179. | 6/11/2007 | 1.18\% | 1.67\% | 0.08763\% | 0.010945 | 0.015865 |
| 180. | 6/18/2007 | -2.65\% | -1.98\% | 0.08818\% | -0.027379 | -0.020681 |
| 181. | 6/25/2007 | -0.99\% | 0.05\% | 0.09020\% | -0.010766 | -0.000376 |
| 182. | 7/2/2007 | 2.12\% | 1.80\% | 0.09295\% | 0.020308 | 0.017090 |
| 183. | 7/9/2007 | 3.16\% | 1.44\% | 0.09314\% | 0.030704 | 0.013483 |
| 184. | 7/16/2007 | 3.23\% | -1.19\% | 0.09332\% | 0.031410 | -0.012785 |
| 185. | 7/23/2007 | -7.42\% | -4.90\% | 0.09314\% | -0.075096 | -0.049918 |
| 186. | 7/30/2007 | -2.88\% | -1.77\% | 0.09222\% | -0.029679 | -0.018668 |
| 187. | 8/6/2007 | 1.47\% | 1:44\% | 0.09075\% | 0.013809 | 0.013453 |
| 188. | 8/13/2007 | -5.72\% | -0.53\% | 0.07970\% | -0.058036 | -0.006094 |
| 189. | 8/20/2007 | 2.77\% | 2.31\% | 0.06989\% | 0.026986 | 0.022421 |
| 190. | 8/27/2007 | -0.56\% | -0.36\% | 0.07860\% | -0.006348 | -0.004423 |
| 191. | 9/3/2007 | -1.94\% | -1.39\% | 0.08100\% | -0.020236 | -0.014677 |
| 192. | 9/10/2007 | 1.04\% | 2.11\% | 0.07619\% | 0.009684 | 0.020359 |
| 193. | 9/17/2007 | 1.19\% | 2.80\% | 0.07397\% | 0.011205 | 0.027221 |
| 194. | 9/24/2007 | 1.34\% | 0.07\% | 0.07138\% | 0.012734 | -0.000058 |
| 195. | 10/1/2007 | 4.14\% | 2.02\% | 0.07471\% | 0.040648 | 0.019453 |
| 196. | 10/8/2007 | -0.86\% | 0.27\% | 0.07749\% | -0.009353 | 0.001928 |
| 197. | 10/15/2007 | 0.64\% | -3.92\% | 0.07619\% | 0.005647 | -0.039928 |
| 198. | 10/22/2007 | 2.28\% | 2.31\% | 0.07453\% | 0.022070 | 0.022345 |
| 199. | 10/29/2007 | -0.61\% | -1.67\% | 0.07305\% | -0.006863 | -0.017424 |
| 200. | $11 / 5 / 2007$ | -1.23\% | -3.71\% | 0.06655\% | -0.012964 | -0.037727 |
| 201. | 11/12/2007 | 0.74\% | 0.35\% | 0.06432\% | 0.006747 | 0.002824 |
| 202. | 11/19/2007 | -2.78\% | -1.24\% | 0.06134\% | -0.028373 | -0.012980 |
| 203. | 11/26/2007 | 1.90\% | 2.81\% | 0.05873\% | 0.018449 | 0.027482 |
| 204. | 12/3/2007 | 5.09\% | 1.59\% | 0.05835\% | 0.050337 | 0.015296 |
| 205. | 12/10/2007 | -3.11\% | -2.44\% | 0.05536\% | -0.031605 | -0.024951 |
| 206. | 12/17/2007 | -1.44\% | 1.12\% | 0.05667\% | -0.014969 | 0.010680 |
| 207. | 12/24/2007 | 0.96\% | -0.40\% | 0.06152\% | 0.008990 | -0.004637 |
| 208. | 12/31/2007 | -6.28\% | -4.52\% | 0.06190\% | -0.063434 | -0.045841 |
| 209. | 1/7/2008 | -1.64\% | -0.75\% | 0.06078\% | -0.016986 | -0.008124 |
| 210. | 1/14/2008 | -3.02\% | -5.41\% | 0.05854\% | -0.030823 | -0.054710 |
| 211. | 1/22/2008 | 9.41\% | 0.41\% | 0.04393\% | 0.093699 | 0.003651 |
| 212. | 1/28/2008 | 8.67\% | 4.87\% | 0.04148\% | 0.086330 | 0.048292 |
| 213. | 2/4/2008 | -2.16\% | -4.60\% | 0.04167\% | -0.022009 | -0.046374 |
| 214. | 2/11/2008 | 0.36\% | 1.40\% | 0.04336\% | 0.003165 | 0.013613 |
| 215. | 2/19/2008 | -0.19\% | 0.23\% | 0.04242\% | -0.002364 | 0.001887 |
| 216. | 2/25/2008 | -0.67\% | -1.66\% | 0.03828\% | -0.007066 | -0.016996 |
| 217. | 3/3/2008 | -2.01\% | -2.80\% | 0.02958\% | -0.020442 | -0.028298 |
| 218. | 3/10/2008 | 3.01\% | -0.40\% | 0.02617\% | 0.029833 | -0.004305 |
| 219. | 3/17/2008 | 2.34\% | 3.21\% | 0.01571\% | 0.023260 | 0.031959 |

Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills -- 2008

|  | Week | Weekly Change In Railroad Stock Portfolio 1/ | Weekly Change In S\&P 500 Price Return Index 2/ | 3-Month T-Bill Average Weekly Rate 3/ | Excess Return In Railroad Stock Portfolio 4/ | Excess Return On S\&P 500 Price Return Index 5/ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| 220. | 3/24/2008 | 2.03\% | -1.07\% | 0.02465\% | 0.020025 | -0.010995 |
| 221. | 3/31/2008 | 4.53\% | 4.20\% | 0.02655\% | 0.045065 | 0.041689 |
| 222. | 4/7/2008 | -2.60\% | -2.74\% | 0.02541\% | -0.026259 | -0.027669 |
| 223. | 4/14/2008 | 8.04\% | 4.31\% | 0.02256\% | 0.080181 | 0.042916 |
| 224. | 4/21/2008 | 0.31\% | 0.54\% | 0.02465\% | 0.002816 | 0.005155 |
| 225. | 4/28/2008 | 3.55\% | 1.15\% | 0.02769\% | 0.035196 | 0.011212 |
| 226. | 5/5/2008 | -0.12\% | -1.81\% | 0.03129\% | -0.001490 | -0.018433 |
| 227. | 5/12/2008 | 4.36\% | 2.67\% | 0.03469\% | 0.043241 | 0.026355 |
| 228. | 5/19/2008 | -0.91\% | -3.47\% | 0.03526\% | -0.009424 | -0.035025 |
| 229. | 5/27/2008 | 6.61\% | 1.78\% | 0.03601\% | 0.065776 | 0.017410 |
| 230. | 6/2/2008 | -4.18\% | -2.83\% | 0.03526\% | -0.042167 | -0.028702 |
| 231. | 6/9/2008 | -2.70\% | -0.05\% | 0.03752\% | -0.027374 | -0.000853 |
| 232. | 6/16/2008 | -0.01\% | -3.10\% | 0.03715\% | -0.000468 | -0.031327 |
| 233. | 6/23/2008 | -4.48\% | -3.00\% | 0.03412\% | -0.045149 | -0.030350 |
| 234. | 6/30/2008 | -4.59\% | -1.21\% | 0.03545\% | -0.046297 | -0.012464 |
| 235. | 7/7/2008 | 3.07\% | -1.85\% | 0.03375\% | 0.030370 | -0.018874 |
| 236. | 7/14/2008 | 0.63\% | 1.71\% | 0.02750\% | 0.006003 | 0.016821 |
| 237. | 7/21/2008 | 6.13\% | -0.23\% | 0.03053\% | 0.060956 | -0.002622 |
| 238. | 7/28/2008 | 2.98\% | 0.20\% | 0.03242\% | 0.029433 | 0.001703 |
| 239. | 8/4/2008 | 2.07\% | 2.86\% | 0.03242\% | 0.020369 | 0.028248 |
| 240. | 8/11/2008 | -5.42\% | 0.15\% | 0.03545\% | -0.054505 | 0.001096 |
| 241. | 8/18/2008 | 3.42\% | -0.46\% | 0.03337\% | 0.033846 | -0.004955 |
| 242. | 8/25/2008 | 3.99\% | -0.73\% | 0.03280\% | 0.039575 | -0.007579 |
| 243. | 9/2/2008 | -9.29\% | -3.16\% | 0.03242\% | -0.093220 | -0.031911 |
| 244. | 9/8/2008 | 3.46\% | 0.76\% | 0.03091\% | 0.034310 | 0.007249 |
| 245. | 9/15/2008 | -0.76\% | 0.27\% | 0.01189\% | -0.007702 | 0.002581 |
| 246. | 9/22/2008 | -3.18\% | -3.33\% | 0.01609\% | -0.031970 | -0.033473 |
| 247. | 9/29/2008 | -16.38\% | -9.40\% | 0.01475\% | -0.163950 | -0.094141 |
| 248. | 10/6/2008 | -6.29\% | -18.20\% | 0.01112\% | -0.063012 | -0.182066 |
| 249. | 10/13/2008 | -1.19\% | 4.60\% | 0.00883\% | -0.012003 | 0.045874 |
| 250. | 10/20/2008 | 1.33\% | -6.78\% | 0.02009\% | 0.013132 | -0.068012 |
| 251. | 10/27/2008 | 12.06\% | 10.49\% | 0.01189\% | 0.120443 | 0.104789 |
| 252. | 11/3/2008 | -8.58\% | -3.90\% | 0.00768\% | -0.085873 | -0.039055 |
| 253. | 11/10/2008 | -4.86\% | -6.20\% | 0.00403\% | -0.048601 | -0.062017 |
| 254. | 11/17/2008 | -12.63\% | -8.39\% | 0.00135\% | -0.126332 | -0.083903 |
| 255. | 11/24/2008 | 6.87\% | 12.03\% | 0.00135\% | 0.068667 | 0.120245 |
| 256. | 12/1/2008 | -5.21\% | -2.25\% | 0.00077\% | -0.052126 | -0.022513 |
| 257. | 12/8/2008 | -6.08\% | 0.42\% | 0.00038\% | -0.060853 | 0.004174 |
| 258. | 12/15/2008. | 3.26\% | 0.93\% | 0.00058\% | 0.032576 | 0.009258 |
| 259. | 12/22/2008 | 0.65\% | -1.70\% | 0.00038\% | 0.006497 | -0.016988 |
| 260. | 12/29/2008 | 7.62\% | 6.76\% | 0.00173\% | 0.076166 | 0.067581 |

[^14]
## Excess Returns On S\&P 500 And Railroad Portfolio Over 3-Month T-Bills -- 2008

|  |  |  | 3-Month |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | T-Bill |  |  |
|  | Weekly Change In Railroad | Change In S\&P 500 Price | Average Weekly | Excess Return In Railroad | Excess Return On S\&P 500 Price |
| Week | Stock Portfolio 1/ | Return Index 21 | Rate 3/ | Stock Portfolio 4/ | Return Index 5/ |
| (1) | (2) | (3) | (4) | (5) | (6) |

[^15]
## OLS Regression Output - 2008

(1)
(2)
(3)
(4)
(5)
(6)
(7)

|  | Regression Statistics |  |
| :--- | :--- | ---: |
| 1. | Multiple R | 0.6503 |
| 2. | R Square | 0.4229 |
| 3. | Adjusted R Square | 0.4207 |
| 4. | Standard Error | 0.0277 |
| 5. | Observations | 260 |


|  | $d f$ | SS | MS | $F$ | Significance $F$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 6. Regression | 1 | 0.1447 | 0.1447 | 189.0956 | 0.0000 |
| 7. Residual | 258 | 0.1975 | 0.0008 |  |  |
| 8. Total | 259 | 0.3422 |  | $\cdot$ |  |


|  | Coefficients | Standard Error | t Stat | P-value | Lower 95\% | Upper 95\% |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| 9. Intercept | 0.0039 | 0.0017 | 2.2535 | 0.0251 | 0.0005 | 0.0073 |
| 10. X Variable 1 | 0.9344 | 0.0679 | 13.7512 | 0.0000 | 0.8006 | 1.0682 |

## 2008 Railroad Industry CAPM Cost of Equity

| Item | Cost <br> of |  |
| :--- | :--- | :---: |
| (1) | $\frac{\text { Source }}{(2)}$ | $\frac{(3)}{(3)}$ |

1. 2008 Average Yield on 20-Year T-Bond

Federal Reserve
4.36\%
2. Railroad Risk Premium
a. Equity Risk Premium 1926 to 2007
b. Railroad Industry Portfolio Beta
c. Railroad Industry Risk Premium
$\begin{array}{lr}\text { Morning Star/Ibbotson } & 6.47 \% \\ \text { Calculated } & \underline{0.9344}\end{array}$
3. Railroad Industry Cost of Equity

Line $1+$ Line 2c
$10.41 \%$


$$
\begin{aligned}
& \text { 쳉 }
\end{aligned}
$$

$$
\begin{aligned}
& \text { 敬 } \\
& \\
& \begin{array}{l}
\text { 1. Net Income } \\
\text { 2. Extraordinary Items } \\
\text { a. Cumulative Effect of Accounting Change, Net of Tax } \\
\text { b. Discontinued Operations, Net of Tax } \\
\text { c. Extraordinary gains or losses } \\
\text { 3. Income Before Extraordinary Items } \\
\text { 4. Capital Expenditures } \\
\text { 5. Depreciation } \\
\text { 6. Deferred Taxes } \\
\text { 7. Cashflow } \\
\text { 8. Revenues } \\
\text { 9. Average Cashflow as a Percentage of Revenues } \\
\text { 10. 2008 Average Cashflow } \\
\text { 11. Average Income Before Extraordinary } \\
\text { Items Less Deferred Taxes as Percentage of Sales }
\end{array} \\
& \begin{array}{l}
\text { 12. } 2008 \text { Average Income Before Extraordinary } \\
\text { Items Less Deferred Taxes }
\end{array}
\end{aligned}
$$



| Item <br> (1) | Source (2) | $\frac{2004}{(3)}$ | $\frac{2005}{(4)}$ | $\frac{2006}{(5)}$ | $\frac{2007}{(6)}$ | $\frac{2008}{(7)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Net Income | Annual Report 10-K | \$339 | \$1,145 | \$1,310 | \$1,336 | \$1,365 |
| 2. Extraordinary Items |  |  |  |  |  |  |
| a. Cumulative Effect of Accounting Change, Net of Tax | Annual Report 10-K | \$0 | \$0 | \$0 | \$0 | \$0 |
| b. Discontinued Operations, Net of Tax | Annual Report 10-K | -\$79 | \$425 | \$0 | \$110 | \$0 |
| c. Extraordinary gains or losses | Annual Report 10-K | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3. Income Before Extraordinary Items | L1-(L2a + L2b + L2c) | \$418 | \$720 | \$1,310 | \$1,226 | \$1,365 |
| 4. Capital Expenditures | Annual Report 10-K | \$1,030 | \$1,136 | \$1,639 | \$1,773 | \$1,740 |
| 5. Depreciation | Annual Report 10-K | \$730 | \$833 | \$867 | \$890 | \$918 |
| 6. Deferred Taxes | Annual Report 10-K | \$240 | -\$46 | \$42 | \$272 | \$435 |
| 7. Cashflow | $\mathrm{L} 3-\mathrm{L} 4+\mathrm{L} 5+\mathrm{L} 6$ | \$358 | \$371 | \$580 | \$615 | \$978 |
| 8. Revenues | Annual Report 10-K | \$8,020 | \$8,618 | \$9,566 | \$10,030 | \$11,255 |
| 9. Average Cashflow as a Perceintage of Revenues | Sum L7 $\div$ Sum L8 | 6.11\% |  |  |  |  |
| 10. 2008 Average Cashflow | L8,C7 x L9 | \$688 |  |  |  | - |
| 11. Average Income Before Extraordinary Items as Percentage of Sales | [Sum L3-Sum L6) $\div$ Sum | 8.63\% |  |  |  |  |
| 12. 2008 Average Income Before Extraordinary Items Less Deferred Taxes | L8,C7 x L11 | \$971 |  |  |  |  |

Exhibit No. 4
Page 3 of 6






2008 MS-DCF Railroad Cost of Equity

llus.


[^0]:    ${ }^{\prime}$ See Ex Parte 664 at I1, and 2006 Cost of Capital at 7.
    ${ }^{2}$ See Gray VS at 29.
    ${ }^{3}$ See Gray VS at Appendix H, Page 4 of 5.
    ${ }^{4}$ See Gray VS workpapers.

[^1]:    ${ }^{5}$ See UP SEC Form 10-Q/A issued July 31, 2008.

[^2]:    ${ }^{6}$ See $M S$-DCF Cost of Equity at 15 .
    ${ }^{7}$ See MS-DCF Cost of Equity at 5 to 6 for a summary of the Morningstar/Ibbotson MS-DCF model.

[^3]:    ${ }^{8}$ See Stangle VS at 6.
    ${ }^{9}$ See Stangle VS workpapers at page 9 of 117 .

[^4]:    ${ }^{10}$ See Stangle VS at 6.
    ${ }^{11}$ See 2008 Yearbook at page 1. We have included a copy of this page in our VS workpapers.

[^5]:    ${ }^{12}$ See, for example, Fama, E.F., "Efficient Capital Markets: A Review of Theory and Empirical Work," The Journal of Finance, Vol. 25, No. 2, May 1970, pages 383-417, and Fama, E.F., "Efficient Capital Markets: II," The Journal of Finance, Vol. 46, No. 5. December 1991, pages 1575-1617. Also see, Brealey, R. A., Myers, S. C., and Allen, F., "Principles of Corporate Finance, Eighth Edition," McGrawHill Irwin, 2006, pages 333-354 ("Brealey, Myers and Allen"). When we refer to the value of the firm, that value refers to the value of the firm relative to other potential opportunities.

[^6]:    ${ }^{13}$ The STB has long recognized that the capital markets in which the railroads operate are efficient. See Docket No. 42051, Wisconsin Power And Light Company v. Union Pacific Railroad Company, 5 STB 955-1040 (984) "We presume efficient capital markets recognize and reflect al! the of the risks faced by railroads..."

[^7]:    ${ }^{14}$ See 2008 Yearbook at page 24.
    ${ }^{15}$ The majority of deferred taxes are attributable to timing differences in the recognition of asset depreciation. The total depreciation recognized for both financial and tax reporting over an asset's life is the asset's acquisition cost. But because tax depreciation usually allows bonus or accelerated depreciation in the early years of an asset's life, actual taxes payable, which has an impact on a firm's cash position, will be less than the tax expense recorded on the railroad's income statement. Therefore, in calculating the statement of cashflows, deferred taxes are added back to reflect the temporary retention of cash within the firm.
    ${ }^{16}$ See 2008 Yearbook at 24, "Earnings is used in place of cash flows in the third term, because over extended periods of time it is assumed that capital expenditures and depreciation will equal."

[^8]:    ${ }^{17}$ See EP 646-Sub 2 at 5.
    ${ }^{18}$ See Reply Comments of the Association of American Railroads, September 2, 2008 at page 6-7. The AAR's Comments include a VS prepared by Michael R. Baranowski explaining in greater detail that deferred taxes only defers the timing of the tax payments and does not eliminate them. Mr. Baranowski's VS also contains a graph showing that the cash tax rate for a company can far exceed the statutory tax rate. See Baranowski VS at Exhibit 6.

[^9]:    ${ }^{19}$ See MS-DCF Cost of Equity at 5 .
    ${ }^{20}$ We have included in our workpapers to this VS a calculation of the MS-DCF cost of capital without adjustments for the impact of deferred taxes. This produces an estimated MS-DCF cost of equity of 15.95\%.

[^10]:    ${ }^{21}$ See Gray VS at 33.
    ${ }^{22}$ See Gray 2008 Cost of Capital VS at Appendix H, Page 5 of 5.

[^11]:    ${ }^{23}$ See Gray 2008 Cost of Capital workpapers Part 5.
    ${ }_{25}^{24}$ See Gray VS at 28.
    ${ }^{25}$ See Gray's 2007 Cost of Capual workpapers Part 5 showing his beta regression using data with an ending date of the week of December 24, 2007. Gray's 2007 Cost of Capital workpapers are available on the STB's filing website. In our 2007 Cost of Capital VS, we also used an end date of our regression analysis of December 24.2007. See Crowley/Fapp 2007 Cost of Capital VS at Exhibit No. 3, Page 9 of 10.
    ${ }^{26}$ See Gray's 2007 Cost of Capital VS at Appendix H, Page 5 of 5.
    ${ }^{27}$ See 2007 Cost of Capial at 7. The STB did not directly comment on the time period used by Gray in its 2007 Cost of Capital decision, but the market value of common equity calculated by the STB at Table 11 of its decision is consistent with share price and shares outstanding for the 52 -week period ending December 24, 2007.

[^12]:    1/ Source: Wcekly closing stock prices adjusted for stock splits and dividends as reported on Yahoo!Finance.
    2/ Source: Railroad SEC Forms $10-\mathrm{Q}$ and $10-\mathrm{K}$.
    3/ [Column (2) through Column (5) $\times$ Column (6) through Column (9), respectively] - 1,000,000.

[^13]:    $1 /$ Source: S\&P 500 Price Index as reported on Yahoo!Finance.

[^14]:    1/ Source: Pages 11 to 16, Column (6).
    2/ Source: Pages 17 to 23, Column (3).

[^15]:    3/ Source: Pages 17 to 23, Column (5).
    4/ Column (2) - Column (4).
    5/ Column (3) - Column (4).

