

WILLIAM I. SLOVER  
C. MICHAEL LOFTUS  
JOHN H. LE SCUR  
KELVIN J. DOWD  
ROBERT D. ROSENBERG  
CHRISTOPHER A. MILLS  
FRANK J. PERGOLIZZI  
ANDREW B. KOLESAR III  
PETER A. PFOHL  
DAVID L. M. JAFFE  
STEPHANIE M. PISANELLI  
JOSHUA M. HOFFMAN

OF COUNSEL  
DONALD G. AVERY

**SLOVER & LOFTUS**  
ATTORNEYS AT LAW  
1224 SEVENTEENTH STREET, N. W.  
WASHINGTON, D. C. 20036-3009

July 25, 2007



FAX  
(800) 347-3619

WRITER'S E-MAIL:

rdr@sloverandloftus.com

**BY HAND**

The Honorable Vernon A. Williams  
Secretary  
Surface Transportation Board  
Case Control Unit  
395 E Street, S.W.  
Washington, D.C. 20423-0001

219849

ENTERED  
Office of Proceedings  
JUL 25 2007  
Part of  
Public Record

Re: Ex Parte No. 558 (Sub-No. 10), Railroad Cost of Capital - 2006

Dear Secretary Williams:

Enclosed for filing in the above-captioned proceeding are an original and ten (10) copies of the reply comments of the Western Coal Traffic League ("WCTL"). As explained in the comments at 3 n.2, WCTL is separately filing copies of the comments in Ex Parte No. 664, *Methodology to be Employed in Determining the Railroad Industry Cost of Capital*. Also enclosed are three CDs containing most of the contents of the filing and electronic workpapers, which will be provided to other parties upon request.

If there are any questions, please contact the undersigned.

Respectfully submitted,

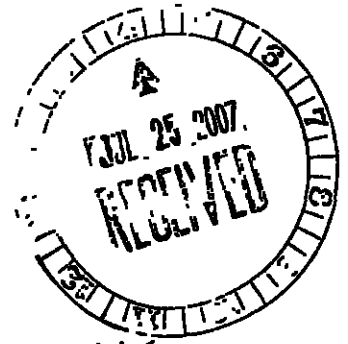
Robert D. Rosenberg  
An Attorney for the Western  
Coal Traffic League

RDR:rlh

Enclosures

cc: Service List in Ex Parte No. 558 (Sub-No. 10)-w/encl.

BEFORE THE  
SURFACE TRANSPORTATION BOARD



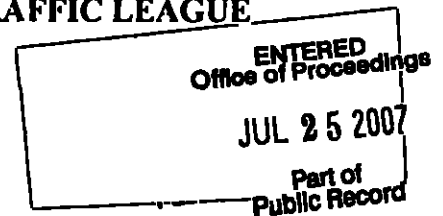
219849

In the Matter of:

RAILROAD COST OF CAPITAL –  
2006

Ex Parte No. 558 (Sub-No. 10)

REPLY COMMENTS OF THE WESTERN COAL TRAFFIC LEAGUE



WESTERN COAL TRAFFIC LEAGUE

Of Counsel:

Slover & Loftus  
1224 Seventeenth Street, N.W.  
Washington, D.C. 20036  
(202) 347-7170

Dated: July 25, 2007

William L. Slover  
C. Michael Loftus  
Robert D. Rosenberg  
Slover & Loftus  
1224 Seventeenth Street, N.W.  
Washington, D.C. 20036  
(202) 347-7170

Its Attorneys

**Ex Parte No. 558 (Sub-No. 10)**

**ENTERED**  
**Office of Proceedings**  
**JUL 25 2007**  
**Part of**  
**Public Record**

## Its Attorneys

BEFORE THE  
SURFACE TRANSPORTATION BOARD



In the Matter of: )

RAILROAD COST OF CAPITAL – )  
2006 )

Ex Parte No. 558 (Sub-No. 10)

**REPLY COMMENTS OF THE WESTERN COAL TRAFFIC LEAGUE**

Pursuant to the notice of the Surface Transportation Board (“STB” or “Board”) served in the above-captioned proceeding on May 16, 2007 (“Notice”), the Western Coal Traffic League (“WCTL” or “League”)<sup>1</sup> submits these reply comments in response to the comments filed by the Association of American Railroads and its member railroads (“AAR” or “Railroads”) on June 25, 2007.

**I. SCOPE OF WCTL’S COMMENTS**

The Board’s Notice references the pending proceeding concerning its cost of capital methodology in Ex Parte No. 664, but states that “[c]omments should focus on the various cost of capital components listed above using the same methodology followed in the 2005 decision” and adds that “[a]t this time we seek the information needed to

---

<sup>1</sup>WCTL is a voluntary association, whose regular membership consists entirely of utility shippers of coal mined west of the Mississippi River that is transported by rail. WCTL members presently ship and receive in excess of 140 million tons of coal by rail each year. WCTL’s members are: Alliant Energy; Ameren Energy Fuels and Services; Arizona Electric Power Cooperative, Inc.; Arizona Public Service; Austin Energy (City of Austin, Texas); CLECO Corporation; CPS Energy; Kansas City Power & Light Company; Lower Colorado River Authority; MidAmerican Energy Company; Minnesota Power; Nebraska Public Power District; Omaha Public Power District; Texas Municipal Power Agency; Western Farmers Electric Cooperative; Western Fuels Association, Inc.; Wisconsin Public Service Corporation; and Xcel Energy.

calculate the 2006 cost of capital under the existing methodology.” Notice at 2.

Additionally, the Notice states that “the current cost of debt and market-value based capital structure mix will be used in this cost of capital determination.” *Id.* at 1 n.1.

WCTL disagrees with these limitations, which appear to amount to premature findings, for the reasons stated in its notice of intent to participate in this proceeding filed May 25, 2007. The STB’s Notice asks WCTL, and the rest of the public, to assume, contrary to fact, that the STB’s discounted cash flow (“DCF”) methodology is sound and correct regardless of the content of the data that is utilized or the reasonableness of the results. *See, e.g., Federal Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591, 602 (1944) (“Under the statutory standard . . . it is the result reached not the method employed which is controlling. . . . It is not theory but the impact of the rate order that counts.”). Indeed, the Notice even indicates that the capital structure issue is not one of the matters implicated in Ex Parte No. 664, when WCTL has directly raised the subject in that proceeding. Additionally, the notion that the agency would seek to limit the scope of information available for its consideration at a time when it is ostensibly reexamining its basic methodology is counter-intuitive, to say the least.

Accordingly, in order to participate meaningfully, and to afford the STB a record that would enable it, if it were so inclined, to engage in reasoned (that is, non-arbitrary and non-capricious) decision-making based on a reasonable record with substantial evidence, WCTL is submitting information regarding the unreasonableness of the inputs submitted by the Association of American Railroads (“AAR”) and the resulting calculations as well as the unreasonableness of utilizing the market-based capital structure

in conjunction with the DCF methodology.<sup>2</sup> WCTL is also submitting its own alternate calculations so as to comply with the STB's prior instructions in *Railroad Cost of Capital—1997*, 3 S.T.B. 176, 177 n.1 (1998).<sup>3</sup> Towards that end, WCTL's comments include as Exhibit A the Verified Statement of Thomas D. Crowley and Daniel L. Fapp, President and Vice President, respectively, of L.E. Peabody & Associates, Inc. ("Crowley/Fapp VS").

WCTL will seek to be concise and minimize repetition of matters previously submitted.

## II. OVERVIEW

The AAR filing calculates a post-tax cost of capital for 2006 of 13.8%; this figure translates into a pre-tax cost of capital in excess of 20%.

Moreover, the 2006 cost represents a sharp increase from 2005, which represented a sharp increase from 2004. The following table depicts the changes in the cost of capital since 2003:

---

<sup>2</sup>Because of the artificiality of the Board's distinction between the methodology and the data utilized, and out of an abundance of caution, WCTL is also submitting these comments in Ex Parte No. 664. WCTL adds that these comments respond in part to assertions made by the AAR for the first time at the hearing and in its post-hearing filing, and its comments include some responsive materials that were not available at the time of the hearing.

<sup>3</sup>Otherwise, the STB's Notice places WCTL in a Catch-22: in order to have its views considered, WCTL must calculate a specific cost of capital, but WCTL cannot calculate an appropriate cost of capital under the methodology and data that the STB has asked the parties to use.

| <p align="center"><b>Table 1</b><br/> <b>Cost of Capital 2003-2006 Under STB/AAR Methodology</b></p>                                                                                                                                                                                                                                                              |                          |                          |                          |                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
|                                                                                                                                                                                                                                                                                                                                                                   | <b>2003<br/>Decision</b> | <b>2004<br/>Decision</b> | <b>2005<br/>Decision</b> | <b>2006 AAR<br/>Filing</b> |
| <b>Divided Yield Times 1 +<br/>½ Growth Rate</b>                                                                                                                                                                                                                                                                                                                  | 1.73%                    | 1.77%                    | 1.52%                    | 1.35%                      |
| <b>Growth Rate</b>                                                                                                                                                                                                                                                                                                                                                | 11.0%                    | 11.39%                   | 13.66%                   | 14.75%                     |
| <b>Total Cost of Equity</b>                                                                                                                                                                                                                                                                                                                                       | 12.7%                    | 13.16%                   | 15.18%                   | 16.10%                     |
| <b>Cost of Debt</b>                                                                                                                                                                                                                                                                                                                                               | 5%                       | 5.25%                    | 5.36%                    | 5.97%                      |
| <b>Percentage of Equity</b>                                                                                                                                                                                                                                                                                                                                       | 57.2%                    | 61.5%                    | 69.59%                   | 77.2%                      |
| <b>Cost of Capital</b>                                                                                                                                                                                                                                                                                                                                            | 9.4%                     | 10.1%                    | 12.2%                    | 13.8%                      |
| <b>Percent Increase in Cost<br/>of Capital from Prior<br/>Year<sup>*</sup></b>                                                                                                                                                                                                                                                                                    | --                       | 7.4%                     | 20.8%                    | 13.1%                      |
| <p>Source: Figures for 2003-2005, taken from STB Ex Parte No. 558 (Sub-Nos. 7, 8, and 9), <i>Cost of Capital – 2003, 2004, and 2005</i> (STB decisions served June 28, 2004, June 30, 2005, and September 20, 2006, respectively); figure for 2006 taken from AAR filing.</p> <p><sup>*</sup> (Current Year Cost of Capital ÷ Prior Year Cost of Capital) - 1</p> |                          |                          |                          |                            |

The cost of capital calculated by the AAR for 2006 thus reflects a percentage increase of 13.1% over one year, 36.6% over two years, and 46.8% over three years. Moreover, while there have been increases in all of the components over the four-year period, the increase in debt, which corresponds to inflation, is very modest, just 97 basis points (two-thirds of which occurs in the last year), as contrasted with the overall cost of capital, which increased by 440 basis points during the same period.

The key driver in the increase of the cost of capital has been the five-year average growth rate, which the STB/AAR DCF model assumes will continue in

perpetuity.<sup>4</sup> The projected growth rate has increased by 375 basis points over the four-year period.

In WCTL's view, the vast bulk of the increase results from the increases in railroad rates, earnings (profits), and stock prices, and not any significant increase in inflation or fundamental risk associated with railroading.<sup>5</sup> WCTL is unaware of anything that has caused the railroads' "cost" of capital to increase so substantially over that period. In particular, there is no evidence that investors are demanding substantially greater returns before they will invest more in the railroad industry. Indeed, the railroads have shown no need for additional equity investment as the railroads have not issued stock in an extended time and are instead engaged in substantial stock buybacks and dividend increases, as well as net debt reductions, as discussed *infra*. The reality is that the railroads are charging and earning more, the increased earnings are reflected in the higher stock price, and the increase in the so-called cost of capital simply reflects projected short-term increases in future earnings. It has precious little to do with what the railroads

---

<sup>4</sup>The dividend portion of the cost of equity calculation has gone down slightly over the four-year period, but not nearly enough to offset the increase in the growth rate. Indeed, if dividends had gone to zero after 2003, the cost of capital would have still increased. (The STB's apparent statement to the contrary in Ex Parte No. 558 (Sub-No. 7), *Cost of Capital -- 2005* (STB served Feb. 9, 2007), at 4-5, is thus unfounded.) Indeed, the railroads have increased their dividends over this period, as discussed *infra*, but not by enough (at least not yet) to track the increase in the stock price. At least part of the explanation is that railroads have devoted substantial funds to stock buybacks instead.

<sup>5</sup>The railroad cost of debt has increased over this period, but that increase is far less than the increase in the overall cost of capital. The CAPM analysis, discussed *infra*, shows that the risk-free rate of return and general equity risk premium have stayed relatively constant. There has been an increase in railroad industry beta, but the figure has remained low.

need to earn to induce reinvestment in railroading; instead, the changes reflect the fact that stockholders are understandably willing to pay more for investments that offer greater returns without accompanying increases in risks.

Significantly, there is ample reason to consider even the 11% growth rate that applied in 2003 was completely unrealistic and unsustainable for the long-term, as WCTL explained in both Ex Parte No. 558 (Sub-No. 9) and Ex Parte No. 664. “It is theoretically impossible for the sustainable growth rate for a company to significantly exceed the growth rate in the economy. Anything over 6-7% perpetual growth should be questioned carefully. These earnings growth estimates typically are for only the next two to five years; they are not perpetual. Therefore, any use of these forecasts in a single-stage DCF model must be tempered with a longer-term forecast.” S.P. Pratt, *Cost of Capital: Estimations and Applications* (2d. ed.2002) at 113. “In addition, resist the temptation to apply the [DCF] formula to firms having high current rates of growth. Such growth can rarely be sustained indefinitely, but the constant-growth DCF formula assumes it can. . . . One wonders whether the large railroads listed there can really sustain the 11 percent forecasted growth rate.” R.A. Brealey, S.C. Myers, and A.J. Marcus, *Principles of Corporate Finance* (8th ed. 2006) at 69 (commenting on 2004 railroad cost of capital).<sup>6</sup>

---

<sup>6</sup>Dr. Myers served as an expert witness on the cost of capital for UP in both Docket No. 42022, *FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company*, and Docket No. 42051, *Wisconsin Power and Light Company v. Union Pacific Railroad Company*.

The railroad industry cost of capital submitted by the AAR thus rests on a key assumption, namely, that the railroad industry earnings will grow at a rate of 14.75% into perpetuity, that is fundamentally untenable. Moreover, the AAR has produced no evidence that the financial investment community, or the railroads themselves, actually assign anywhere near a 13.1% weighted average cost of capital to the railroad industry. WCTL's calculations show a cost of capital of 9.57%, which is very close to what has been reported as the industry consensus of 9.5%. WCTL is submitting further evidence from analysis prepared by Standard & Poor's that calculates a cost of capital closer to 9%.

These matters are addressed below.

### **III. CAPM ANALYSIS SHOWS NO SIGNIFICANT INCREASE IN RAILROAD RISK**

An increase in railroad cost of equity and cost of capital might well be justified if there were substantial evidence of a significant increase in financial risk in the railroad industry and/or general inflation. However, there is no evidence of such an increase.

To confirm the lack of fundamental change, WCTL asked Messrs. Crowley and Fapp, who prepared the analysis of the cost of capital using the Capital Asset Price Model ("CAPM") for the 2005 cost of capital that WCTL submitted in Ex Parte No. 558 (Sub-No. 9), to prepare an equivalent analysis for the cost of capital in 2003, 2004, and 2006. As before, they obtained data from Ibbotson Associates, now part of Morningstar. Their analysis is described in Crowley/Fapp VS at 4-15, and the results are summarized as follows:

| Table 2<br>Cost of Capital 2003-2006 Under Consistent Crowley CAPM Methodology                                     |       |       |        |        |
|--------------------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|
|                                                                                                                    | 2003  | 2004  | 2005   | 2006   |
| Risk-Free Return                                                                                                   | 4.96% | 5.05% | 4.65%  | 4.99%  |
| Equity Risk Premium                                                                                                | 7.20% | 7.20% | 7.10%  | 7.10%  |
| Railroad Levered Beta                                                                                              | 0.65  | 0.66  | 0.81   | 0.82   |
| Size Adjustment                                                                                                    | 0.18% | 0.27% | 0.04%  | -0.20% |
| Cost of Equity                                                                                                     | 9.83% | 10.04 | 10.41  | 10.64% |
| Cost of Debt                                                                                                       | 5%    | 5.25% | 5.36%  | 5.97%  |
| Percentage of Equity                                                                                               | 57.2% | 61.5% | 69.59% | 77.2%  |
| Cost of Capital                                                                                                    | 7.76% | 8.20% | 8.87%  | 9.57%  |
| Percent Increase in Cost of Capital from Prior Year <sup>x</sup>                                                   | --    | 5.7%  | 8.1%   | 18.1%  |
| Source: Crowley/Fapp VS Ex. No. 6.<br><sup>x</sup> (Current Year Cost of Capital – Prior Year Cost of Capital) - 1 |       |       |        |        |

The above analysis shows only modest increases, *e.g.*, the cost of equity increased by only 81 basis points and the overall cost of capital increased by only 181 basis points, as contrasted with increases under the STB/AAR DCF methodology of 340 basis points and 440 points, respectively. The analysis shown above confirms that there has been no major change in the cost of equity based on a consistent application of independently prepared data that seeks to measure fundamental risk in the railroad industry and general rate of returns.<sup>7</sup>

---

<sup>7</sup>The analysis still shows a modest increase due to increases in levered betas and the cost of debt.

The results depicted above stand in stark contrast to those reached under the Board's methodology and with the AAR's proposed data for 2006. The inescapable conclusion is that what has changed in the cost of capital over the 2003-2006 period is not the risk inherent in the four sample railroads or general inflation, but instead the levels of railroad rates, earnings, and stock prices. As stated above, such changes reflect the profitability of the railroad industry, but not its inherent risk, general inflation, or the industry's cost of capital.

WCTL emphasizes that for immediate purposes, it is not necessary to agree that Messrs. Crowley and Fapp have calculated the precise cost of capital in any of the years since a precise cost of capital cannot be determined under any model. Indeed, various adjustments could be made that would have the effect of modestly increasing or decreasing the cost of capital in various years. In particular, Dr. James E. Hodder calculated a modestly lower cost of capital for 2005 that WCTL submitted in Ex Parte No. 664. That said, it bears noting that the cost of capital calculated by Messrs. Crowley and Fapp for 2006 (9.57%) is very close to the 9.5% figure identified as the "consensus among CFOs and investors" in the report from UBS Investment Research, *When Pigs Fly III: Silk Purses from Sow's Ears*, dated April 18, 2006, submitted as Exhibit F to WCTL's filing in Ex Parte No. 664. WCTL is resubmitting a copy of that report as Exhibit B.

Another telling point for present purposes is that the cost of equity under the CAPM approach shows modest change over the four-year period, casting doubt on the integrity of the STB's approach as applied to the truncated average of the analyst

projection of earnings growth over five years. The strong implication is that the earnings projections have been driven by the increases in railroad earnings. Moreover, the increases cast doubt on AAR's claim that the forecasted earnings approach is superior because it is prospective, as contrasted with historical beta calculations. The reality is that both approaches generally assume a continuation of established trends.

#### IV. EXCESSIVE EQUITY IN THE RAILROADS' CAPITAL STRUCTURE

Another factor contributing substantially to the increase in the railroads' cost of capital over the past four years as calculated by the AAR and the STB has been the increase in equity's percentage of the capital structure.

As shown in Table 1, *supra*, the percentage of equity has gone from 57.2% in 2003 to 77.2% in 2006, a percentage increase of 35%. The increase is not attributable to the railroads' having issued any additional stock to the public. To the contrary, the railroads have not issued any new stock in many years and have been engaged in substantial stock buybacks, discussed further *infra*.

Instead, the increase in the equity percentage is attributable to increases in stock prices, which, as noted *supra*, is also attributable to the increase in the railroads' revenues and profits, and perhaps the buybacks as well. The increase in stock price has occurred not because investors are "demanding" a greater return, but because they (including the railroads, through their buybacks) are willing to pay more for the increased earnings, *i.e.*, if returns (profits) increase while risk and inflation remain relatively constant, then the increased returns translate into a higher stock price. Another contributing factor has been railroad net debt reductions, discussed *infra*.

The following table depicts the cost of capital under the STB's approach and the AAR's submission if the railroads' equity/capitalization ratio were set at 60% and 50% for all four years, assuming that the cost of equity and the cost of debt remained the same:<sup>8</sup>

| <b>Table 3</b><br><b>Cost of Capital 2003-2006 Under STB/AAR Methodology</b><br><b>Assuming a Capital Structure of 60% Equity and 50% Equity</b> |                          |                          |                          |                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|
|                                                                                                                                                  | <b>2003<br/>Decision</b> | <b>2004<br/>Decision</b> | <b>2005<br/>Decision</b> | <b>2006 AAR<br/>Filing</b> |
| <b>Cost of Equity</b>                                                                                                                            | 12.7%                    | 13.16%                   | 15.18%                   | 16.10%                     |
| <b>Cost of Debt</b>                                                                                                                              | 5%                       | 5.25%                    | 5.36%                    | 5.97%                      |
| <b>Assumed 60% Equity/40% Debt Capital Structure</b>                                                                                             |                          |                          |                          |                            |
| <b>Percentage of Equity</b>                                                                                                                      | 60%                      | 60%                      | 60%                      | 60%                        |
| <b>Cost of Capital</b>                                                                                                                           | 9.62%                    | 10.0%                    | 11.25%                   | 12.05%                     |
| <b>Percentage Increase in<br/>Cost of Capital from Prior<br/>Year<sup>*</sup></b>                                                                | --                       | 4.0%                     | 12.5%                    | 7.1%                       |
| <b>Same as above, but with 50% Equity/50% Debt Capital Structure</b>                                                                             |                          |                          |                          |                            |
| <b>Percentage of Equity</b>                                                                                                                      | 50%                      | 50%                      | 50%                      | 50%                        |
| <b>Cost of Capital</b>                                                                                                                           | 8.85%                    | 9.221%                   | 10.27%                   | 11.04%                     |
| <b>Percentage Increase in<br/>Cost of Capital from Prior<br/>Year<sup>*</sup></b>                                                                | --                       | 4.1%                     | 11.5%                    | 7.5%                       |
| <b>Source: Crowley/Fapp Ex. No. 12.</b><br><b><sup>*</sup> (Current Year Cost of Capital – Prior Year Cost of Capital) - 1</b>                   |                          |                          |                          |                            |

<sup>8</sup>WCTL does note that reducing the portion of equity would tend to increase the cost of the debt as there is more risk due to the reduction in the size of the equity cushion. Crowley/Fapp VS at 18 n.9. WCTL has not attempted to calculate the degree of this increase. However, the UBS leverage analysis, Exhibit E, discussed *infra*, suggests that railroads should still be able to improve their financial efficiency by increasing their debt.

Comparison of Table 3 with Table 1, *supra*, shows that the reduction in the railroads' leverage has contributed substantially to both the absolute size of the cost of capital and to the relative increase over the 2003-2006 period.

WCTL explained in its written comments and at the public hearing in Ex Parte No. 664 that one cause of the increased cost of capital under the Board's existing methodology is the proportion of equity in the railroads' capital structure. Since that time, there has been a considerable release of information from the financial investment community and the railroads themselves that confirms WCTL's earlier views and indicates that an appropriate starting target figure for railroad equity is 45% of total market capitalization.

Attached as Exhibit C is an excerpt from a UBS Investment Research report on Norfolk Southern, *Hungry Like The Wolf*, dated March 26, 2007. The report states that "NS acknowledged the current debt/cap of 41% is too low," projects that it "will fall to about 39% on May 15 when NS makes a debt payment," notes that "the company was uncomfortable at 60% [debt/capital ratio] following the Conrail acquisition and doesn't want to go back there," and states that UBS is "modeling a ramp up from 39% to 45% through 2010."

Similarly, the April 5, 2007 issue of *Rail Stock Watch*, excerpt attached as Exhibit D, notes that:

Since the first of the year, railroads have been getting more aggressive with the buyback programs, and some of them (notably BNI and CNI) have talked publicly about increasing their debt-to-cap ratios. The new conventional wisdom seems

to be that a 45% debt-to-cap ratio is workable for a railroad, up from a more traditional 40% target.

The report also references a March 15 report from UBS that took a poll among readers that indicates that “the vast majority (80%) think the rails are underleveraged, while 20% say ‘optimally leveraged.’ Not a single respondent thinks the sector has too much debt.”

Attached as Exhibit E is an UBS Q-Series® report entitled *Time to Lever Up the Rails?*, dated May 3, 2007. It explains that a propriety UBS model estimated “optimal sector leverage at 64% net debt/capital ... compared to current ratio[] of 44%” as “[t]his additional debt adds 5.4% to the sector’s equity value from the debt tax shield and 11% from EPS accretion” that “wouldn’t require sacrificing investment grade ratings.”

*Id.* at 1. The report further explains:

We’ve known the rail CFOs for a few years now and it’s our view that most of them still think in terms of debt-to-capital ratios, with 40% (lease adjusted)<sup>9</sup> being the consensus “target”. Forty percent is (very) comfortably investment grade and affords them the flexibility to weather a recession and the firepower to take on mergers and acquisition opportunities. However, this is the “historic” target and reflects a comfort level consistent with a different set of industry fundamentals. *Things have changed*. Pricing is more secular than cyclical, which means railroad revenues and earnings are less cyclical than they used to be, with Q1/07 being the perfect example. . . .

What we’ve detected over the last few months is that the CFOs are beginning to realize that – just as they’ve returned to their historic leverage goal – fundamentals have permanently changed and they’ve gone too far. They’ve overshot. After years of retiring debt we now expect them to be a net issuer of debt to achieve two ends:

---

<sup>9</sup>“Lease adjusted” refers to capitalizing operating leases, as WCTL explained in its Ex Parte No. 664 comments.

- (1) Prevent the balance sheets from becoming further underlevered; and
- (2) Re-lever to attune the capital structure to the changed fundamentals.

*Id.* at 3 (original emphasis). The UBS Report then references a “fundamental disconnect” between the views of the Class I railroads and their stockholders:

Early on we stated that the mentality of the CFOs is beginning to shift from 40% target debt/cap to about 45%. Meanwhile, stockholders are beginning to think 60%+. Hence the intense LBO speculation with the rationale being that if the rails won't lever up themselves, someone else will do it for them.

*Id.* at 5. UBS then states its conclusions, which are that there will be a nearer term increase in debt/cap of 5-10% above the current level (the 40%) and that the longer-term (3-5 years) will be closer to the 65%:

■ **Near-term.** We think the rails will lever up to their new “comfort zone”, which is about 5% to 10% debt/cap above where it is now. However, the timing and magnitude will not be satisfactory to many investors. Given the history of the industry and mentality of the senior executives, we think the rails will lever up slowing and methodically over the next three years by raising dividends faster than earnings growth and buying back more stock than free cash flow growth would exclusively allow. Debt issuances will make up the difference.

■ **Longer term.** We think things have irreversibly changed and the goal posts have shifted. In 3-5 years we think the new norm will be leverage ratios beginning to shift closer to where our model suggests than where they are today.

*Id.* at 6. UBS report issued another report on May 8, 2007, just five days later, regarding CSX, entitled *Levering Up? It's a Start...*, attached as Exhibit F. The report noted that CSX had announced a 10% increase in its stock buyback program (to 15% of its market

cap), a 25% increase in its dividend, and increases in its capital expenditures, which UBS found consistent with increasing the debt/market cap ratio from 40% to 45%, as discussed in the earlier UBS report.

The above information, reflecting views of the financial investment community and the railroads themselves, justifies a determination that the appropriate capital structure for determining the railroad cost of capital should consist of no more than 60% equity (or at least 40% debt) and that a more appropriate starting figure at the present time would be 50% or even 45% equity. WCTL adds that the UBS figures appear to be “lease adjusted,” meaning that operating leases are capitalized rather than treated as an expense, consistent with the *pro forma* financial presentations of some of the railroads themselves, as explained in WCTL comments in Ex Parte No. 664.

At the public hearing in Ex Parte No. 664, the AAR contended that the lease adjustment was precluded because it does not conform to generally accepted accounting principles (“GAAP”), 49 U.S.C. § 11161 requires the Board to conform its cost accounting rules to GAAP “to the maximum extent practicable,” and 49 U.S.C. § 11164 requires the Board’s rules governing revenue and expense accounting by carriers to “be consistent with generally accepted accounting principles uniformly applied to such carriers.”

WCTL respectfully submits that the AAR’s contentions are entirely misplaced. GAAP simply does not address such subjects as the cost of equity, cost of debt, or cost of capital, beyond book values and the amount of interest actually paid.

Since GAAP does not address these matters, there is no basis for the AAR's claim that WCTL's requested adjustment violates the statutory language.<sup>10</sup>

Indeed, the AAR's analysis would prevent the STB from ever determining that the railroads had failed to rationalize their capital structures and would confer an incentive for the railroads to maintain inefficient capital structures and "game" the cost of capital by pursuing operating leases. However, Congress has instructed the STB to calculate revenue adequacy in a manner that reflects "honest, economical, and efficient management . . . [including] repayment of a reasonable level of debt." 49 U.S.C. § 10704(2) & (2)(A). Accordingly, STB use of the AAR's capital structure when it does not correspond to that recommended by the railroad themselves as well as industry analysts constitutes arbitrary and capricious decision-making, is unsupported by substantial evidence, and is in derogation of the STB's statutory responsibilities. That the STB would seek to preclude submission of evidence to that effect, especially in advance, constitutes a denial of due process.

Another issue associated with the STB/AAR approach is that the DCF calculation of the cost of equity ostensibly reflects growth in the earnings per share. Accordingly, to the extent that the reduction in equity percentage is achieved by a reduction in the number of shares (buybacks), the result is likely to be an increase in the growth in earnings per share as the same earnings would be allocated over fewer shares.

---

<sup>10</sup>If one really wanted to determine the debt-equity ratio by adhering to GAAP "to the maximum extent practicable," it would be appropriate to rely on book values, which is the approach that Witness Charles W. King addressed in Ex Parte No. 664. Significantly, his book value approach yielded a 50%/50% equity-debt capital structure, very similar to what the financial community is presently recommending for the railroad industry.

Accordingly, the increase in earnings per share could well overstate the increase in earnings, and the overstatement could be compounded by a decrease in debt-equity ratio to the extent that buybacks contribute to higher stock prices.<sup>11</sup> One of the drawbacks of the STB/AAR approach of relying on analyst forecasts is that such calculations are not made explicit or transparent.

In contrast, one of the virtues of the CAPM approach is that it is relatively insensitive to changes in the debt-equity ratio, as explained Crowley/Fapp VS at 18-25. The reason is that CAPM uses a levered beta that automatically adjusts the cost of equity to reflect the capital structure. As noted *supra*, changing the relative weight of equity would also tend to change the cost of debt because the “equity cushion” would vary, and calculating that change in the cost of equity is normally a challenging exercise. However, it is possible to avoid that issue by utilizing for comparison purposes a 100% equity/0% debt structure. While such a capital structure is not realistic or desirable in the real world, it is quite useful for demonstrating the robustness of the CAPM approach, as shown in the following table:

---

<sup>11</sup>One of the typical rationales for stock buybacks is that the company believes that the shares are underpriced in the market.

| Table 4<br>Calculation of Cost of Capital Using CAPM Under Different Debt-Equity Ratios |       |       |       |       |
|-----------------------------------------------------------------------------------------|-------|-------|-------|-------|
| Cost of Capital Calculated Using                                                        | 2003  | 2004  | 2005  | 2006  |
| Actual STB/AAR Weights                                                                  | 7.76% | 8.20% | 8.87% | 9.57% |
| Fixed 60% Equity/40% Debt                                                               | 7.77% | 8.20% | 8.94% | 9.78% |
| Fixed 50% Equity/50% Debt                                                               | 7.75% | 8.19% | 9.01% | 9.89% |
| Fixed 100% Equity/0% Debt <sup>12</sup>                                                 | 7.82% | 8.23% | 8.63% | 9.31% |
| Source: Crowley/Fapp Ex. Nos. 6, 9, 10, and 11.                                         |       |       |       |       |

The differences within each year are quite modest, with the largest spread (0.58%) occurring only in the last year. The general lack of variability is also consistent with the Modigliani-Miller theorem that the value of a firm is unaffected by how the firm is financed (putting aside issues of taxes, bankruptcy costs, asymmetric information, and other inefficiencies). This lack of variability is an additional reason to consider CAPM or some other measure at least as a check on the DCF calculations.

#### V. THE AAR DATA IS SUSPECT IN OTHER RESPECTS

The AAR filing seeks to give the impression that it depicts a consensus of analysts that cover the railroads. In fact, the data submitted rests on a relatively thin sample.

---

<sup>12</sup>The use of the 100% equity/0% debt structure is addressed in Crowley/Fapp VS at 21-22. WCTL does not suggest that the structure is realistic or desirable in the real world, but it is useful in that elimination of the debt component eliminates the need to posit a cost of debt that reflects a different equity cushion. The analysis thus demonstrates that the CAPM analysis is relatively insensitive to the debt-equity structure, and the analysis also establishes a useful benchmark for the overall cost of capital.

In particular, the Rockey VS states at page 11 that “[t]he number of forecasts upon which the IBES sample average was based varied between a monthly high of six to a monthly low of three.” In fact, the low of three appears to be a misprint because the lowest number of analysts shown in AAR Appendix C is 4. Be that as it may, when the high and low estimates are thrown out in the truncation process, one is left with a consensus of only two to four forecasts. Four is not a particularly robust number of forecasts, and two is a very small figure indeed.

Use of a small number of forecasts might perhaps inspire some confidence if there were a small spread between the forecasts. However, Appendix C of the Rockey VS in the AAR’s filing reveals sharp disparities between the high and the low. In particular, the spread between the high and low forecasts is at least 80% in all months for BNSF and CSX. For UP, the “high” is at least quadruple the low in ten of the twelve months. To say that there is a meaningful “consensus” under such circumstances is a considerable reach in both fact and logic.

To determine the reasonableness of the use of the limited number of analysts’ forecasts, WCTL asked Messrs. Crowley and Fapp to obtain investment information for the four sample railroads from Standard & Poor’s (“S&P”), a McGraw-Hill company, that is a recognized provider of financial data, as discussed in Crowley/Fapp VS at 15-17. Copies of the S&P reports are included as Crowley/Fapp Ex. No. 8. The reports are dated for the end of 2006, although the analysis in each report is depicted as having been prepared in October or early November. Several features of the analysis are of considerable interest.

First, the beta values (0.84 for BNSF, 0.98 for CSX, 0.73 for NS, and 0.69 for UP, yielding a simple average of 0.81) appear quite consistent with the 0.82 levered beta derived for 2006 by Crowley/Fapp in Ex. No. 6.

Second, page 6 of each of the S&P reports shows the number of analysts that follow each railroad stock. Significantly, S&P shows that in each month there are at least eleven analysts shown for each railroad. The implication is that barely half, or less, of the analysts are making five-year projections. WCTL does not know why the universe of analysts making five-year earning per share projections is so limited, but logical possibilities are that: (a) a number of the analysts are not comfortable making such projections, and/or (b) such projections are afforded relatively little weight in the valuation process.<sup>13</sup> In any event, the fact that a substantial portion of the analysts do not make such suggestions indicates that relying almost entirely on such projections (plus dividend yields) is a poor way to measure investor expectations, which is the supposed rationale for relying on the projections in the first place.

Third, in the last bullet of the first page of each report, S&P references a DCF model for each railroad that includes a weighted average cost of capital, a growth rate (in most instances), and a terminal value, as follows:

---

<sup>13</sup>Another possibility is that the projections are for overall earnings rather than earnings per share. This form of the analysis might avoid the complications associated with stock buybacks.

| <p style="text-align: center;"><b>Table 5</b><br/> <b>S&amp;P Weighted Average Costs of Capital, Growth Rates,<br/> and Terminal Growth Rates for BNSF, CSX, NS, and UP</b></p> |                                             |                                                  |                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------|---------------------------------|
|                                                                                                                                                                                 | <b>Weighted Average<br/>Cost of Capital</b> | <b>Growth Rate</b>                               | <b>Terminal Growth<br/>Rate</b> |
| <b>BNSF</b>                                                                                                                                                                     | 8.6%                                        | 9% growth in free cash<br>over next 10 years     | 4.0%                            |
| <b>CSX</b>                                                                                                                                                                      | 9.0%                                        | not explicitly stated                            | 3.5%                            |
| <b>NS</b>                                                                                                                                                                       | 9.1%                                        | 7% net income growth over<br>the next five years | 3.0%                            |
| <b>UP</b>                                                                                                                                                                       | 8.0%                                        | not explicitly stated                            | 3.0%                            |
| <b>Source: Crowley/Fapp Ex. No. 8</b>                                                                                                                                           |                                             |                                                  |                                 |

These values are far lower than those claimed by the AAR.

A document, *Standard & Poor's Stock Appreciation Ranking System (STARS): Methodology, Analysis, & Performance Attribution* (June 2005), posted on S&P's website, [http://www2.standardandpoors.com/spf/pdf/products/STARS\\_v6.pdf?vregion=us&vlang=en](http://www2.standardandpoors.com/spf/pdf/products/STARS_v6.pdf?vregion=us&vlang=en), excerpt included as Exhibit G, explains at pages 12-13 that the value of the firm is based on free cash flow that is projected using a DCF model and then discounted by the weighted average cost of capital, typically calculated using a CAPM (beta) approach. The S&P analysis thus combines elements of the DCF and CAPM approaches. In that regard, it is very significant not only that (a) the weighted average cost of capital utilized is lower than that derived by Messrs. Crowley and Fapp, but also (b) the stated interim growth rates are below those presented by the AAR (and in the case of BNSF covers a ten-year period), (c) that the S&P analysis employs terminal values, such as would be used in the multi-stage DCF, and (d) those terminal values (simple average of 3.375%) are about a quarter of the 14.75% growth rate claimed by the

AAR. The STB/AAR approach thus assumes that the railroads will achieve a perpetual growth rate over four times the terminal growth value calculated by the S&P. The S&P terminal growth values confirm the fundamental unsoundness of utilizing the STB/AAR single-stage DCF model under the current circumstances. *See* Crowley/Fapp VS at 16 n.7.

Fourth, it is significant that S&P also presents an “Investability Quotient.” The penultimate page of each of the S&P reports provides the following definition for the Investability Quotient (“IQ”):

The IQ is a measure of investment desirability. It serves as an indicator of potential medium-to-long term return and as a caution against downside risk. The measure takes into account variables such as technical indicators, earnings estimates, liquidity, financial ratios and selected S&P proprietary measures.

In short, the “Investability Quotient” appears to be a very reasonable approximation of what the STB should want to take into account in determining revenue adequacy, especially on a long-term basis. It is not a short-term measure, but it takes into account medium-to-longer term return and the possibility of downside risk as well as earning estimates. Significantly, all four of the sample railroads rank very high on this criterion. BNSF ranks higher than 86% of all companies for which an S&P report is available, CSX ranks higher than 79% as does Norfolk Southern, and Union Pacific ranks higher than 82%. It is very difficult to imagine how a finding that any of the railroads are not revenue adequate can be reconciled with their high Investability Quotients.

In short, the S&P analysis provides no basis for viewing the railroads as suspect investments for raising their cost of capital, or finding them to be revenue adequate.

## **VI. CAPACITY EXPANSION AND RAILROAD STOCK BUYBACKS**

If past is prologue, the railroads can be expected to argue that the WCTL criticisms and alternate calculations are unsound because they will deprive the railroads of the capital they need to serve capacity in order to be able to meet burgeoning customer demand. In contrast, some shippers have claimed that the railroads have been using their recent surge in earnings not to make needed investments in expanding capacity, but instead to finance stock buybacks and increased dividends.

To tests these claims, WCTL asks Messrs. Crowley and Fapp to compare the changes in cash used for railroad stock dividends and stock buybacks with the changes in cash used for capital expenditures over the 2003-2006 period. Their analysis, presented in Crowley/Fapp VS at 26-28, shows the following:

| <b>Table 6</b><br><b>Comparison of Increases in Railroad Stock Dividends and Buybacks</b><br><b>and Capital Expenditures 2003-2006 (figures in \$ million)</b> |                  |                     |                     |                     |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|---------------------|---------------------|------------------------|
|                                                                                                                                                                | Level in<br>2003 | Increase in<br>2004 | Increase in<br>2005 | Increase in<br>2006 | Cumulative<br>Increase |
| Dividends                                                                                                                                                      | \$628            | \$141               | \$99                | \$187               | \$427                  |
| Stock<br>Repurchases                                                                                                                                           | \$217            | \$159               | \$1,023             | \$760               | \$1,942                |
| Total                                                                                                                                                          | \$1,210          | \$300               | \$1,122             | \$947               | \$2,369                |
| Net Capital<br>Expenditures                                                                                                                                    | \$5,029          | \$225               | \$531               | \$1,036             | \$1,792                |
| Difference                                                                                                                                                     |                  | \$75                | \$591               | (\$89)              | \$577                  |
| Source: Crowley/Fapp Ex. No. 13.                                                                                                                               |                  |                     |                     |                     |                        |

The above analysis shows that \$577 million more of the increase in railroad earnings and cash flow since 2003 has been used to provide dividends and stock buybacks (\$2,369 million) to equity holders than has been used to increase capital expenditures (\$1,792 million). Indeed, since 2003, more money has been devoted to stock buybacks alone (\$1.942 million) than has been spent on increasing capital expenditures (\$1.792 million).

It might be of some significance if the railroads had been financing either their distributions to stockholders or their capital expenditures through increased debt, *e.g.*, if the railroads had decided to increase their leverage, in which event the distributions to stockholders might not have come directly from customers. WCTL asked Messrs. Crowley and Fapp to examine this matter as well, and they found that over this four-year period the railroads have actually used cash flow to reduce net long-term debt by nearly \$5 billion:

| <p style="text-align: center;"><b>Table 7</b><br/> <b>Railroad Net Long-Term Debt Repayments</b><br/> <b>2003-2006 (in million \$)</b></p> |         |         |         |         |          |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|----------|
|                                                                                                                                            | 2003    | 2004    | 2005    | 2006    | Total    |
| Payments on Long-Term Debt                                                                                                                 | \$3,384 | \$1,777 | \$3,335 | \$2,009 | \$10,505 |
| Proceeds from Issuance of Long-Term Debt                                                                                                   | \$2,174 | \$1,574 | \$1,038 | \$771   | \$5,557  |
| Net reduction in Long-Term Debt                                                                                                            | \$1,210 | \$203   | \$2,297 | \$1,238 | \$4,948  |
| Source: Crowley/Fapp Ex. No. 14.                                                                                                           |         |         |         |         |          |

The railroads' surge in distributions to stockholders has thus not been financed through an increase in long term debt. To the contrary, substantial cash generated from operations has been devoted to reducing long term debt. The reduction in long term debt has certainly contributed to decreasing the debt/equity ratio, which, as demonstrated *supra*, contributes substantially to the increase in the cost of capital under the STB/AAR DCF methodology. Nonetheless, payments to reduce debt also represent payments to capital holders and are fundamentally inconsistent with the notion that the railroads do not have cash to be able to finance their capital expenditures, including capacity expansion (which is only a portion of total capital expenditures).

Whether the railroads feel that capacity expansion is ultimately in their best interests is a separate matter. However, the above analysis demonstrates that they have ample cash available to finance activities, and there are substantial indications that they could take on additional debt efficiently to further expand capacity, if they were so inclined. The additional implication is that if the railroads are allowed to charge more or are given additional assistance, such as through attractive tax arrangements, the benefits

will flow more to the stockholders than to the customers that the railroads supposedly serve.

## VII. CONCLUSION

For the reasons stated, the STB should adopt a cost of capital of 9.57%, and certainly not in excess of 10%, for 2006.

The STB should not rely on its prior methodology for calculating the cost of equity under the present conditions, nor should it rely on the unadjusted market capitalization to determine the capital structure, as both items reflect the recent upsurge in railroad rates, earnings, and stock prices, and result in a fatal circularity, as opposed to any effort to measure the fundamentals of the industry or its inherent cost of capital.

**MOREOVER, THE AAR HAS SUBMITTED ABSOLUTELY NO EVIDENCE THAT THE FINANCIAL COMMUNITY OR THE RAILROADS THEMSELVES CONSIDER THE 16.1% AND 13.8% FIGURES SUBMITTED BY THE AAR TO BE AN ACCURATE REFLECTION OF THE RAILROAD INDUSTRY COST OF EQUITY AND COST OF CAPITAL, RESPECTIVELY.**

To the contrary, the UBS report submitted as Exhibit B identifies 9.5% as a consensus figure for the railroad industry weighted average cost of capital, and the S&P analyses submitted as Crowley/Fapp Ex. No. 8 indicate that a figure of around 9% is far more realistic. Under the circumstances, the STB's adoption of the AAR forecast would be arbitrary and capricious and would not rest on substantial evidence.

Respectfully submitted,

WESTERN COAL TRAFFIC LEAGUE

Of Counsel:

Slover & Loftus  
1224 Seventeenth Street, N.W.  
Washington, D.C. 20036  
(202) 347-7170

Dated: July 25, 2007

William L. Slover

C. Michael Loftus

Robert D. Rosenberg

Slover & Loftus

1224 Seventeenth Street, N.W.

Washington, D.C. 20036

(202) 347-7170

Its Attorneys

A handwritten signature in black ink, appearing to read "Robert D. Rosenberg", is written over the printed name of Robert D. Rosenberg.

# **CERTIFICATE OF SERVICE**

I hereby certify that on this 25th day of July 2007, I have caused true and accurate copies of the foregoing Reply Comments of the Western Coal Traffic League to be served upon all parties on the service list in this proceeding.

  
Robert D. Rosenberg

## List of Exhibits

| <u>Exhibit</u> | <u>Description</u>                                                                                                                       |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------|
| A              | Verified Statement of Thomas D. Crowley and Daniel L. Fapp                                                                               |
| B              | UBS Investment Research, <i>When Pigs Fly III: Silk Purses from Sow's Ears</i> , dated April 18, 2006                                    |
| C              | UBS Investment Research, <i>Hungry Like The Wolf</i> , dated March 26, 2007                                                              |
| D              | <i>Rail Stock Watch</i> , dated April 5, 2007 (excerpt)                                                                                  |
| E              | UBS Q-Series® report, <i>Time to Lever Up the Rails?</i> , dated May 3, 2007                                                             |
| F              | UBS Investment Research, <i>Levering Up? It's a Start...</i> , dated May 8, 2007                                                         |
| G              | <i>Standard &amp; Poor's Stock Appreciation Ranking System (STARS): Methodology, Analysis, &amp; Performance Attribution</i> (June 2005) |

**A**



## **Exhibit A**

**Verified Statement of Thomas D. Crowley and Daniel L. Fapp**

-

## **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, and fuel supply problems. Mr. Crowley has spent most of his consulting career of over thirty-six (36) 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, and shippers of different commodities. A copy of his credentials is included as Exhibit No. 1 to this verified statement.

Mr. Fapp has been with L. E. Peabody & Associates, Inc. since 1997. During this time, he has worked on numerous projects dealing with railroad operational 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, and where he also served as an officer of the three BHP Copper Inc. subsidiary railroads, The San Manuel Arizona Railroad, the BHP Arizona (formerly Magma Arizona) Railroad and the BHP Nevada Railroad. A copy of his credentials is included as Exhibit No. 2 to this verified statement.

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 the Discounted Cash Flow Model.

("DCF"), Capital Asset Pricing Model ("CAPM"), Fama-French Three Factor Model and Arbitrage Pricing 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. 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. District and State courts, the Interstate Commerce Commission, the Surface Transportation Board ("STB") and the Federal Railroad Administration.

We have been asked by Counsel for the Western Coal Traffic League ("WCTL") to calculate the railroad industry cost of equity ("COE") for the years 2003 to 2006 using the widely accepted Capital Asset Pricing Model ("CAPM") approach and to calculate the railroad industry cost of capital ("COC") based upon our COE calculations. In addition, we have been asked to develop the railroad industry COC assuming different railroad industry capital structures than the capital structures determined by the STB in its 2003, 2004 and 2005 Ex Parte No. 558 decisions and estimated by the American Association of Railroads ("AAR") in its Opening Evidence in this proceeding. Finally, WCTL Counsel has asked us to compare the railroads' use of cash distributed to railroad debt and equity holders to the cash used to fund capital expenditures.

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

- II. Railroad Industry Cost Of Equity Using the CAPM
- III. Railroad Industry Cost of Capital
- IV. Impact of Capital Structure on Railroad Industry Cost of Capital
- V. Railroads' Use of Cash

## **II. THE RAILROAD INDUSTRY COST OF EQUITY USING THE CAPM**

We have calculated the railroad industry COC under the CAPM approach in lieu of the single-stage DCF approach previously used by the STB. The CAPM is part of a larger economic theory known as Capital Market Theory, which seeks to model pricing for assets based upon their relative risk. Investors will expect higher returns for higher risk. The Capital Market Theory represents a significant body of work over the past 50 years, and CAPM is a conceptual cornerstone of modern Capital Market Theory.

The CAPM calculates a firm's COE by comparing the company's risk profile to that of the market as a whole. Mathematically, the CAPM can be expressed using the following equation:

$$k = r_f + \beta(rp_m) + rp_s$$

Where:

$k$  = COE,

$r_f$  = Rate of return available on a risk-free security;

$\beta$  = The measure of systematic risk of a stock, relative to the market as a whole;

$rp_m$  = The general equity risk premium for the market, and

$rp_s$  = The market risk premium related to company size.

The CAPM assumes that investors will be compensated for three factors: 1) for investing their money, which is approximated by the risk free return, 2) for systematic risk of default, which cannot be eliminated through a diversified portfolio and is approximated by the market risk premium; and

3) for unsystematic risk, which depends upon the company's fortunes, as approximated by a company's Beta ( $\beta$ ). Each factor is described in more detail below

The risk-free rate ( $r_f$ ) refers to a rate of return that is available in the market on an investment that is free of default risk. Normally, since the true risk-free rate is unknown, the yield to maturity on a long-term government security is used as a proxy. This represents a riskless asset because the government can raise taxes to cover the debt it incurs, thereby negating its risk of default.

The systematic risk, the additional return investors expect to receive to compensate for the additional risk associated with investing in equities as opposed to the risk free assets, is represented by the equity risk premium. The equity risk premium can be calculated at any time by comparing the rates of return on the market as whole to the rates of returns offered by long-term government securities. However, over a short-time period, the equity risk premium can greatly fluctuate due to "noise" intrinsic to the market as a whole. To avoid this problem of noisy data, long-term averages of the historic equity risk premium are used

Ibbotson Associates ("Ibbotson"), a leading financial consulting firm, publishes a widely used estimate of the market risk premium<sup>1/</sup> Ibbotson calculates its historic average by comparing the arithmetic average total return of the S&P 500 Index to the arithmetic average return of Treasury

---

<sup>1/</sup> Morningstar, Inc., a leading provider of independent investment research in the United States and in major international markets, acquired Ibbotson in March, 2006. Since a majority of the data we use in our analyses was produced under the Ibbotson moniker, we continue to refer to more recent data as Ibbotson data.

securities. The Ibbotson calculation of the equity risk premium is widely considered the best estimate of the equity risk premium available.<sup>27</sup>

Unsystematic risk is represented by the Beta ( $\beta$ ). Mathematically, Beta is equal to the covariance between a company's stock and the market as a whole divided by the variance of the market as whole ( $\beta = \sigma_{(\text{stock market})} / \sigma_{(\text{market})}$ ). The degree of risk represented by the size of the Beta represents three decisions the firm makes. The first decision relates to the type of business of the company. For example, the more discretionary a company's products or services are, the higher the Beta and hence risk. Second is the cost structure of the firm as measured by the company's operating leverage, and third the financial leverage that the firm takes on. The higher the financial leverage, the higher the Beta. With access to historical company stock data, Beta can be calculated through the use of standard ordinary least square regression models. However, Beta information is readily available from reputable third-party sources, including Ibbotson. Ibbotson prepares two primary types of Beta estimates for large, publicly traded companies, levered and unlevered Betas. Exhibit No. 3 to this verified statement contains copies of the Ibbotson's Beta Reports for each of the study railroads for 2003 to 2006. An unlevered Beta assumes that a firm's capital structure consists entirely of equity, and that the firm

---

<sup>27</sup> See *Cost of Capital: Estimations and Applications*, S. P. Pratt, Second Edition, 2002, p. 113.

holds no debt. A levered Beta takes into consideration the incremental risk associated with a company's debt.<sup>2/</sup>

Finally, in addition to calculating the basic CAPM, financial theorists have determined there to be a "size effect" inherent in the CAPM. Simply stated, smaller companies have greater risks and require higher rates of return, while larger companies are less risky, and require lower rates of return. Ibbotson Associates has for many years separated companies with publicly traded equity into deciles based on size and calculated the size premium inherent in each decile's cost of equity. Exhibit No. 3 to this verified statement contains excerpts of Ibbotson's Risk Premia Over Time Reports for 2004 to 2007, which contain updates on company size premiums for each year 2003 through 2006. For example, as shown in the Ibbotson 2007 report, those companies in the highest decile with market

---

<sup>2/</sup> An expanded explanation of the difference between levered and unlevered Betas is summarized as follows. Assuming all other factors that impact a firm's risk are held constant, higher amounts of debt, or financial leverage, increase a firm's risk profile. Thus, higher financial leverage increases the Beta of the equity of the firm. The reason for this, all other things being equal, is higher leverage increases the variability of the firm's income. It can also be thought of as claims on the firm. Debt holders have first claim on the firm's assets versus equity holders. As the amount of debt increases, the risk that the equity holders will face of not receiving their claim is greater.

An unlevered Beta reflects the risk of the firm's equity assuming that the company is financed with 100% equity. Since greater levels of debt or leverage brings greater variability to the firm's income, the risk to the shareholder increases as the amount of debt increases.

To reflect these higher risks, Beta is adjusted for the relative portions of debt and equity within the firm. This leverage adjusted Beta, or "levered Beta," is defined mathematically as follows:

$$\text{Levered Beta} = \text{Unlevered Beta} \times [1 + (1 - \text{Corporate Tax Rate}) \times (\text{Debt Capital/Equity Capital})]$$

Since the STB does not account for and does not consider the tax-shielding effects of a company's tax rate in its Cost of Capital determination, the impact of tax rates was excluded from our levered Beta calculation, and the equation simplifies to:

$$\text{Levered Beta} = \text{Unlevered Beta} \times [1 + (\text{Debt Capital/Equity Capital})]$$

If the firm has no debt financing, then the debt to equity ratio is 0, and the levered and unlevered beta are equal. This also reflects the least risky position for the shareholders since they have 100 percent of the claims on the firm. As the amount of debt in the firm increases and the equity becomes more risky, the levered beta also increases.

capitalizations of greater than approximately \$16.9 billion have a negative size premium of approximately 0.36 percent. In other words, the largest publicly traded companies have, on average, had equity returns 0.36 percent less than that estimated by a straight application of the CAPM. Similarly, those companies with the smallest market capitalizations (less than \$173 million) have shown size premiums of upwards of 9.68 percent. Any calculation of the COE using the CAPM should take into consideration the relative size of the firms.

Using publicly available U.S. government security information and Ibbotson Beta and risk premium information, we have calculated the 2003 to 2006 composite COE for the railroad industry using the CAPM. The determination of the data to include in the CAPM and its application are discussed below.

The first required component in the CAPM is an estimate of the risk-free rate of return for each year. As mentioned previously, consensus amongst financial analysts today is to use long term government securities as a proxy for the risk-free rate of return.<sup>4/</sup> We used the average 20-year U.S. Treasury yield to maturity for each study year as the risk-free rate when developing the COE under the CAPM. To be consistent with the STB's COC calculations, we developed the average on a monthly basis. Table 1 below displays the average risk-free rate for 2003 to 2006.

---

<sup>4/</sup> The estimated risk-free rate using long-term U.S. government securities actually has one element of risk: maturity or interest risk. This is the risk that the value of the bond will fluctuate with changes in general level of interest rates. It is generally agreed though that, even with this risk, long-term government securities remain the best proxy.

| Table 1                               |                       |
|---------------------------------------|-----------------------|
| Average Risk Free                     |                       |
| <u>Rates of Return – 2003 to 2006</u> |                       |
| <u>Year</u>                           | <u>Average</u>        |
| (1)                                   | <u>Risk Free Rate</u> |
|                                       | (2)                   |
| 1. 2003                               | 4.96%                 |
| 2. 2004                               | 5.05%                 |
| 3. 2005                               | 4.65%                 |
| 4. 2006                               | 4.99%                 |
| Source: Exhibit No. 4                 |                       |

As shown in Table 1 above, the average risk free rate ranged from 4.65 percent to 5.05 percent during the four year study period.

To measure unsystematic risk, we obtained from Ibbotson its estimates for the unlevered Beta for the four U.S. based Class I railroads included in the AAR's COC analysis, UP, BNSF, CSXT and NS ("Class I railroads" or "Study Group") for each of the study years. A railroad industry weighted average unlevered Beta was calculated using the average market value of common equity of each of the four railroads included in the Study Group as the weighting factor. Table 2 below shows the railroad industry composite unlevered Beta for each of the study years.

| <b>Table 2</b>                                   |                                |
|--------------------------------------------------|--------------------------------|
| <b>Unlevered Railroad Industry</b>               |                                |
| <b><u>Common Equity Betas – 2003 to 2006</u></b> |                                |
| <b><u>Year</u></b>                               | <b><u>Unlevered Common</u></b> |
| <b>(1)</b>                                       | <b><u>Equity Betas</u></b>     |
|                                                  | <b>(2)</b>                     |
| 1. 2003                                          | 0.37                           |
| 2. 2004                                          | 0.40                           |
| 3. 2005                                          | 0.56                           |
| 4. 2006                                          | 0.64                           |
| <hr/>                                            |                                |
| Source Exhibit No. 5, Line 5, 10, 15 and 20      |                                |

As shown in Table 2 above, the railroad industry composite unlevered Beta ranged from 0.37 in 2003 to 0.64 in 2006.

We next adjusted the composite unlevered Beta by the weighted average railroad debt to equity ratio for each year to yield a levered Beta, which takes into consideration the risk implicit in the railroad industry COE from the railroad industry's debt load. Table 3 below summarizes our calculations of the railroad industry composite average levered Betas for 2003 to 2006.

| <p style="text-align: center;">Table 3<br/><b><u>Railroad Industry Levered Beta</u></b></p>                                                        |                    |                    |                    |                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Item<br>(1)                                                                                                                                        | <u>2003</u><br>(2) | <u>2004</u><br>(3) | <u>2005</u><br>(4) | <u>2006</u><br>(5) |
| 1 Railroad Industry Debt to Equity Ratio                                                                                                           |                    |                    |                    |                    |
| a Debt Portion of Capital Structure                                                                                                                | 42.8%              | 38.5%              | 30.4%              | 22.8%              |
| b Equity Portion of Capital Structure                                                                                                              | <u>57.2%</u>       | <u>61.5%</u>       | <u>69.6%</u>       | <u>77.2%</u>       |
| c Debt/Equity Ratio - <sup>1</sup>                                                                                                                 | 0.75               | 0.63               | 0.44               | 0.30               |
| 2 Railroad Industry Unlevered Beta <sup>2</sup>                                                                                                    | <u>0.37</u>        | <u>0.40</u>        | <u>0.56</u>        | <u>0.64</u>        |
| 3 Railroad Industry Levered Beta <sup>3</sup>                                                                                                      | 0.65               | 0.66               | 0.81               | 0.82               |
| <p><sup>1/</sup> Line 1a - Line 1b<br/> <sup>2/</sup> Table 2 above<br/> <sup>3/</sup> (1 - Line 1c) x Line 2<br/> Source Exhibit No. 6 Line 3</p> |                    |                    |                    |                    |

As shown in Table 3 above, the railroad industry composite average levered Beta ranged from 0.65 in 2003 to 0.82 in 2006.

Next, we obtained risk premium information from Ibbotson that reflected the market risk premium at the end of each study year. Ibbotson's estimates of the long-term equity risk premium equaled 7.2 percent in 2003 and 2004 and 7.1 percent for 2005 and 2006. In addition, the size premium of the railroad industry was also considered for each year. As mentioned previously, financial analysts believe that company size impacts the relative risks of equities. The four carriers in the Study Group have relatively large market capitalizations and therefore can be expected to have relatively low risk relative to smaller companies, all other factors being equal. Ibbotson has

calculated separate size premiums for each year for each decile of companies' market capitalization. By weighting the size premiums by the four railroads' market capitalizations, we determined a composite railroad industry size premium for each study year. Table 4 below summarizes our determination of each year's weighted average industry size premium

| <b>Table 4</b>                              |                    |                            |
|---------------------------------------------|--------------------|----------------------------|
| <b>Railroad Industry Average</b>            |                    |                            |
| <b><u>Size Premiums – 2003 to 2006</u></b>  |                    |                            |
|                                             | <b><u>Year</u></b> | <b><u>Size Premium</u></b> |
|                                             | <b>(1)</b>         | <b>(2)</b>                 |
| 1                                           | 2003               | 0.18%                      |
| 2                                           | 2004               | 0.27%                      |
| 3                                           | 2005               | 0.04%                      |
| 4                                           | 2006               | (0.20%)                    |
| <hr/>                                       |                    |                            |
| Source: Exhibit No. 7, Line 5 for each year |                    |                            |

Having developed a proxy of the risk-free rate, calculated the railroad industry composite levered Beta and composite size premium and obtained current estimates of the equity risk premium, we combined the data to develop the COE using the CAPM for each year, which is shown in Table 5 below.

| Table 5                                                                                                                                 |             |             |             |             |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| <u>Railroad Industry Cost of Equity - 2003 to 2006</u>                                                                                  |             |             |             |             |
| <u>Item</u>                                                                                                                             | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> |
| (1)                                                                                                                                     | (2)         | (3)         | (4)         | (5)         |
| 1 Average Risk Free Rate                                                                                                                | 4.96%       | 5.05%       | 4.65%       | 4.99%       |
| 2 Railroad Risk Premium                                                                                                                 |             |             |             |             |
| a Equity Risk Premium                                                                                                                   | 7.20%       | 7.20%       | 7.10%       | 7.10%       |
| b Railroad Industry Levered Beta                                                                                                        | <u>0.65</u> | <u>0.66</u> | <u>0.81</u> | <u>0.82</u> |
| c Railroad Industry Risk Premium <sup>1/</sup>                                                                                          | 4.70%       | 4.72%       | 5.72%       | 5.84%       |
| 3 Railroad Industry Size Premium                                                                                                        | 0.18%       | 0.27%       | 0.04%       | (0.20%)     |
| 4 Railroad Industry Cost of Equity <sup>2/</sup>                                                                                        | 9.83%       | 10.04%      | 10.41%      | 10.64%      |
| <sup>1/</sup> Line 2a x Line 2b<br><sup>2/</sup> Line 1 + Line 2c + Line 3 Totals may not foot due to rounding<br>Source: Exhibit No. 6 |             |             |             |             |

As shown in Table 5 above and when the data is combined, the composite railroad industry COE ranges from 9.83 percent in 2003 to 10.64 percent in 2006, or an increase of 81 basis points over four years.<sup>3/</sup>

<sup>3/</sup> One (1) basis point equals 0.01 percent

### **III. RAILROAD INDUSTRY COST OF CAPITAL**

To develop an initial determination of the railroad industry COC for each year in the study period, we utilized the same approach as used by the STB for its determination of the 2003, 2004 and 2005 COC and by the AAR for its estimate of the 2006 COC, with the exception of the COE calculation. For COE, we substituted the CAPM COE for each year instead of using the COE developed by the STB in 2003, 2004 and 2005 and proposed by the AAR for 2006. The other components of the COC remained the same, including a composite railroad industry capital structure and the railroad industry cost of debt.

Table 6 below summarizes the 2003 to 2006 COC using a CAPM COE

| Table 6                                                                                     |              |              |              |              |
|---------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| <u>Railroad Industry Weighted Cost of Capital – 2003 to 2006</u>                            |              |              |              |              |
| <u>Item</u>                                                                                 | <u>2003</u>  | <u>2004</u>  | <u>2005</u>  | <u>2006</u>  |
| (1)                                                                                         | (2)          | (3)          | (4)          | (5)          |
| 1 Weighted Cost of Equity                                                                   |              |              |              |              |
| a Railroad Industry Cost of Equity                                                          | 9.83%        | 10.04%       | 10.41%       | 10.64%       |
| b Equity Portion of Capital Structure                                                       | <u>57.2%</u> | <u>61.5%</u> | <u>69.6%</u> | <u>77.2%</u> |
| c Weighted Cost of Railroad Industry Equity <sup>1/</sup>                                   | 5.62%        | 6.18%        | 7.24%        | 8.21%        |
| 2 Weighted Cost of Debt                                                                     |              |              |              |              |
| a Railroad Industry Cost of Debt                                                            | 5.00%        | 5.25%        | 5.36%        | 5.97%        |
| b Debt Portion of Capital Structure                                                         | <u>42.8%</u> | <u>38.5%</u> | <u>30.4%</u> | <u>22.8%</u> |
| c Weighted Cost of Railroad Industry Debt                                                   | 2.14%        | 2.02%        | 1.63%        | 1.36%        |
| 3 Railroad Industry Weighted Cost of Capital <sup>2/</sup>                                  | 7.76%        | 8.20%        | 8.87%        | 9.57%        |
| <sup>1/</sup> Line 1a x Line 1b<br><sup>2/</sup> Line 1c + Line 2c<br>Source: Exhibit No. 6 |              |              |              |              |

As shown in Table 6 above, based on STB's capital structure and COD for each year and the CAPM determined COE, the railroad industry weighted average COC increased from 7.76 percent in 2003 to 9.57 percent in 2006.

To verify our COC estimations, we searched for independent calculations of the individual railroads or the railroad industry COC.<sup>6/</sup> Our search found a readily available public source that meet this criterion.

<sup>6/</sup> We define "independent" in this situation as COC estimates not prepared specifically for the instant proceeding.

Standard & Poor's ("S&P"), through its stock reports for the Study Group, develops each railroad's weighted average COC. S&P uses its COC estimate along with short-term and terminal growth estimates of free cash flow in a discounted cash flow ("DCF") model to estimate each firm's enterprise value, which is then used to estimate a target stock price.<sup>27</sup> Table 7 below displays S&P's estimates of the four railroads' weighted average costs of capital at the end of 2006.

| Table 7                                  |                                         |                         |
|------------------------------------------|-----------------------------------------|-------------------------|
| S&P's Estimates of Railroad's 2006       |                                         |                         |
| <u>Weighted Average Costs of Capital</u> |                                         |                         |
|                                          | <u>Railroad</u>                         | <u>Weighted Average</u> |
|                                          | (1)                                     | <u>Cost of Capital</u>  |
|                                          |                                         | (2)                     |
| 1                                        | Union Pacific Corporation               | 8.0%                    |
| 2                                        | Burling Northern & Santa Fe Corporation | 8.6%                    |
| 3                                        | CSX Corporation                         | 9.0%                    |
| 4                                        | Norfolk Southern Corporation            | 9.1%                    |
| Source: Exhibit No. 8                    |                                         |                         |

<sup>27</sup> We also note the relevance of the multiple growth estimates that S&P uses in its DCF valuation of the individual railroads. The STB's DCF model for estimating the railroad industry COE is essentially the same model as S&P's DCF model used to develop S&P's railroad enterprise values, and relies upon the same basic economic principles. S&P is using required rates of return and cashflow estimates to develop a stock price. The STB is using cashflow estimates and stock prices to develop a required rate of return. However, unlike the STB's DCF model, which uses a single growth rate and assumes that railroad earnings and dividends will grow at the same rate for perpetuity, S&P's DCF model assumes that the railroads have at least two growth rates – a short-term growth rate lasting 10 years, and a long term, or "terminal," growth rate which will last into perpetuity. S&P could have developed its DCF model assuming a single growth rate, but recognized that the railroads cannot maintain their current high growth rate forever. Instead, S&P utilized multiple growth rates in its DCF valuation model recognizing that not to do so would overstate the railroads' values.

As shown in Table 7 above, S&P has estimated the COC for the four railroads in the Study Group to range from 8.0 percent to 9.1 percent. While lower than our estimate of the 2006 railroad industry weighted average COC, S&P's estimates are much closer to our estimates than the 13.8 percent COC proposed by the AAR utilizing the procedure applied by the STB in prior years.<sup>8/</sup>

---

<sup>8/</sup> The reasons S&P's estimates are lower are unknown from the data contained in the S&P stock reports, but are most likely due to one of two reasons. First, most Wall Street and valuation analysts adjust the company's cost of debt for the tax advantage of corporate borrowing by multiplying the company's COD by one minus marginal corporate tax rate. This lowers the COD and the overall COC. Second, S&P may have adjusted the capital mix to a target long-term target capital structure, thereby placing less weight on equity capital and more weight on lower cost debt capital.

#### **IV. IMPACT OF CAPITAL STRUCTURE ON RAILROAD INDUSTRY COST OF CAPITAL**

We determine the COC for 2003 to 2006 assuming different railroad industry capital structures than those developed by the STB for its 2003 to 2005 COC determinations and the railroad industry capital structure proposed by the AAR for 2006. Specifically, we calculated the COC for each year between 2003 and 2006 assuming a 60 percent common equity and 40 percent debt capital structure, a 50 percent common equity and 50 percent debt capital mix and a 100 percent common equity basis. In addition, we calculated the 2003 to 2006 COC using STB and AAR COE and COD, but using different capital mixes. We discuss the results of our calculations below.

The railroad industry capital structure is a key component of the COC estimate given it impacts not only the weighting of the various required returns, but also has impacts on the required returns. Adjusting the railroad industry average capital structure has two impacts on our COC calculation. First, changing the capital mix impacts the calculation of the railroad industry's average levered Beta, which subsequently changes the railroad industry COE under the CAPM methodology.<sup>97</sup> Second, adjusting the capital structure changes the relative weights of the COE and COD, further changing the COC. As the amount of debt in the capital structure increases, greater weight is placed on the lower COD leading to a lower COC, holding all else constant. Whether the impact of the

---

<sup>97</sup> The reason for this is the levered Beta used in the CAPM accounts for changes in risk to stockholders as the amount of debt in the firm changes, holding all else constant. Theoretically, as the amount of debt increases, the more risky the firm becomes, and the greater the return required to owners of the company's capital. Therefore, as the amount of debt in the firm increases, the Beta of the common equity increases and the cost of equity also increases. The converse is also true. As the amount of debt in the firm decreases, the less risky the firm becomes, and the lower the required return. For simplicity sake, we also assume that the COD will not change with changes in the capital mix, however, changes in the capital structure of the firm will also impact the COD.

change in the capital mix is a net increase or decrease in the COC will depend upon the mix of variables.

Table 8 below displays the results of using a target 60 percent common equity and 40 percent debt capital structure in lieu of the capital structure used by the STB and proposed by the AAR.

| <p align="center"><b>Table 8</b><br/> <b>Railroad Industry Weighted Cost of Capital Under CAPM With</b><br/> <b><u>60 Percent Common Equity and 40 Percent Debt Capital Structure</u></b></p> |              |              |              |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| <u>Item</u>                                                                                                                                                                                   | <u>2003</u>  | <u>2004</u>  | <u>2005</u>  | <u>2006</u>  |
| (1)                                                                                                                                                                                           | (2)          | (3)          | (4)          | (5)          |
| <b>1 Weighted Cost of Equity</b>                                                                                                                                                              |              |              |              |              |
| a Railroad Industry Cost of Equity                                                                                                                                                            | 9.61%        | 10.16%       | 11.32%       | 12.31%       |
| b Equity Portion of Capital Structure                                                                                                                                                         | <u>60.0%</u> | <u>60.0%</u> | <u>60.0%</u> | <u>60.0%</u> |
| c Weighted Cost of Railroad Industry Equity <sup>1/</sup>                                                                                                                                     | 5.77%        | 6.10%        | 6.79%        | 7.39%        |
| <b>2 Weighted Cost of Debt</b>                                                                                                                                                                |              |              |              |              |
| a Railroad Industry Cost of Debt                                                                                                                                                              | 5.00%        | 5.25%        | 5.36%        | 5.97%        |
| b Debt Portion of Capital Structure                                                                                                                                                           | <u>40.0%</u> | <u>40.0%</u> | <u>40.0%</u> | <u>40.0%</u> |
| c Weighted Cost of Railroad Industry Debt                                                                                                                                                     | 2.00%        | 2.10%        | 2.14%        | 2.39%        |
| <b>3 Railroad Industry Weighted Cost of Capital <sup>2/</sup></b>                                                                                                                             | <b>7.77%</b> | <b>8.20%</b> | <b>8.94%</b> | <b>9.78%</b> |
| <p><sup>1/</sup> Line 1a x Line 1b</p> <p><sup>2/</sup> Line 1c + Line 2c Figures may not foot due to rounding</p> <p>Source: Exhibit No. 9</p>                                               |              |              |              |              |

As shown in Table 8 above, adjusting the capital structure to reflect a 60 percent/40 percent common equity to debt mix increases the COC by one (1), seven (7) and 21 basis points, respectively, in 2003, 2005 and 2006 versus our CAPM calculations using the STB's and AAR's railroad industry capital structures, while remaining basically unchanged in 2004.<sup>10/</sup>

Adjusting the railroad industry capital structure to a 50 percent common equity/50 debt mix has similar changes in the COC as shown in Table 9 below.

---

<sup>10/</sup> As shown in Exhibit 6, the STB determined the railroad industry's 2004 capital mix included 61.5 percent common equity and 38.5 percent debt, which is nearly equal to the hypothetical capital structure in the example

| <p align="center"><b>Table 9</b><br/> <b>Railroad Industry Weighted Cost of Capital Under CAPM With</b><br/> <b><u>50 Percent Common Equity and 50 Percent Debt Capital Structure</u></b></p> |              |              |              |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| <u>Item</u>                                                                                                                                                                                   | <u>2003</u>  | <u>2004</u>  | <u>2005</u>  | <u>2006</u>  |
| (1)                                                                                                                                                                                           | (2)          | (3)          | (4)          | (5)          |
| 1 Weighted Cost of Equity                                                                                                                                                                     |              |              |              |              |
| a Railroad Industry Cost of Equity                                                                                                                                                            | 10.51%       | 11.13%       | 12.65%       | 13.82%       |
| b Equity Portion of Capital Structure                                                                                                                                                         | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> |
| c Weighted Cost of Railroad Industry Equity <sup>1</sup>                                                                                                                                      | 5.25%        | 5.57%        | 6.33%        | 6.91%        |
| 2 Weighted Cost of Debt                                                                                                                                                                       |              |              |              |              |
| a Railroad Industry Cost of Debt                                                                                                                                                              | 5.00%        | 5.25%        | 5.36%        | 5.97%        |
| b Debt Portion of Capital Structure                                                                                                                                                           | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> |
| c Weighted Cost of Railroad Industry Debt                                                                                                                                                     | 2.50%        | 2.63%        | 2.68%        | 2.99%        |
| 3 Railroad Industry Weighted Cost of Capital <sup>2</sup>                                                                                                                                     | 7.75%        | 8.19%        | 9.01%        | 9.89%        |
| <p><sup>1/</sup> Line 1a x Line 1b</p> <p><sup>2/</sup> Line 1c + Line 2c Figures may not foot due to rounding</p> <p>Source: Exhibit No. 10</p>                                              |              |              |              |              |

As shown in Table 9 above, switching to a 50 percent common equity/ 50 percent debt capital mix lowers the COC by one (1) basis point in 2003 and 2004. In 2005 and 2006, the higher percentage of debt caused the COC to increase by 14 and 32 basis points over our calculations using the STB's and AAR's railroad industry capital structures.

Finally, we calculated the COE and COC assuming 100 percent common equity financing as shown in Table 10 below.

| <p align="center"><b>Table 10</b><br/> <b>Railroad Industry Cost of Capital Under CAPM</b><br/> <b><u>With 100 Percent Common Equity Capital Structure</u></b></p> |                                                                |                    |                    |                    |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
|                                                                                                                                                                    | <u>Item</u><br>(1)                                             | <u>2003</u><br>(2) | <u>2004</u><br>(3) | <u>2005</u><br>(4) | <u>2006</u><br>(5) |
| <b>1</b>                                                                                                                                                           | <b>Weighted Cost of Equity</b>                                 |                    |                    |                    |                    |
| a                                                                                                                                                                  | Railroad Industry Cost of Equity                               | 7.82%              | 8.23%              | 8.67%              | 9.31%              |
| b                                                                                                                                                                  | Equity Portion of Capital Structure                            | <u>100.0%</u>      | <u>100.0%</u>      | <u>100.0%</u>      | <u>100.0%</u>      |
| c                                                                                                                                                                  | Weighted Cost of Railroad Industry Equity <sup>1/</sup>        | 7.82%              | 8.23%              | 8.67%              | 9.31%              |
| <b>2</b>                                                                                                                                                           | <b>Weighted Cost of Debt</b>                                   |                    |                    |                    |                    |
| a                                                                                                                                                                  | Railroad Industry Cost of Debt                                 | 5.00%              | 5.25%              | 5.36%              | 5.97%              |
| 2                                                                                                                                                                  | Debt Portion of Capital Structure                              | <u>0.0%</u>        | <u>0.0%</u>        | <u>0.0%</u>        | <u>0.0%</u>        |
| 3                                                                                                                                                                  | Weighted Cost of Railroad Industry Debt                        | 0.00%              | 0.00%              | 0.00%              | 0.00%              |
| <b>3</b>                                                                                                                                                           | <b>Railroad Industry Weighted Cost of Capital<sup>2/</sup></b> | 7.82%              | 8.23%              | 8.67%              | 9.31%              |
| <p><sup>1/</sup> Line 1a x Line 1b</p> <p><sup>2/</sup> Line 1c + Line 2c</p> <p>Source: Exhibit No. 11</p>                                                        |                                                                |                    |                    |                    |                    |

As shown in Table 10 above, assuming a 100 percent common equity capital structure increases the COC slightly in 2003 and 2004 as compared to the railroad industry weighted cost of capital based on the STB's and AAR's weighting factors and summarized in Table 6 above. The opposite is true for 2005 and 2006, that is the COC decreases.

Finally, we calculate the railroad industry COC for each of the study years using the target capital structures from above and the COE and COD decided by the STB in its 2003, 2004 and 2005 Ex Parte No. 558 decisions and proposed by the AAR in this proceeding. Table 11 below shows the

results of using the STB's and AAR's required rates of return and a 60 percent common equity/40 percent debt capital mix

| <p align="center"><b>Table 11</b><br/> <b>Railroad Industry Weighted Cost of Capital With STB/AAR COE and</b><br/> <b>And COD With 60 Percent Common Equity and 40 Percent Debt Capital Structure</b></p> |                    |                    |                    |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|
| <u>Item</u><br>(1)                                                                                                                                                                                        | <u>2003</u><br>(2) | <u>2004</u><br>(3) | <u>2005</u><br>(4) | <u>2006</u><br>(5) |
| <b>1 Weighted Cost of Equity</b>                                                                                                                                                                          |                    |                    |                    |                    |
| a Railroad Industry Cost of Equity                                                                                                                                                                        | 12.70%             | 13.16%             | 15.18%             | 16.10%             |
| b Equity Portion of Capital Structure                                                                                                                                                                     | <u>60.0%</u>       | <u>60.0%</u>       | <u>60.0%</u>       | <u>60.0%</u>       |
| c Weighted Cost of Railroad Industry Equity <sup>1/</sup>                                                                                                                                                 | 7.62%              | 7.90%              | 9.11%              | 9.66%              |
| <b>2 Weighted Cost of Debt</b>                                                                                                                                                                            |                    |                    |                    |                    |
| a Railroad Industry Cost of Debt                                                                                                                                                                          | 5.00%              | 5.25%              | 5.36%              | 5.97%              |
| b Debt Portion of Capital Structure                                                                                                                                                                       | <u>40.0%</u>       | <u>40.0%</u>       | <u>40.0%</u>       | <u>40.0%</u>       |
| c Weighted Cost of Railroad Industry Debt                                                                                                                                                                 | 2.00%              | 2.10%              | 2.14%              | 2.29%              |
| <b>3 Railroad Industry Weighted Cost of Capital<sup>2/</sup></b>                                                                                                                                          | <b>9.62%</b>       | <b>10.00%</b>      | <b>11.25%</b>      | <b>12.05%</b>      |
| <p><sup>1/</sup> Line 1a x Line 1b</p> <p><sup>2/</sup> Line 1c + Line 2c. Figures may not foot due to rounding.</p> <p>Source: Exhibit No. 12</p>                                                        |                    |                    |                    |                    |

As shown in Table 11 above, substituting a 60 percent common equity/40 percent debt capital mix leads to COC's ranging from 9.62 percent to 12.05 percent. These estimates are, on average, 65 basis points lower than the COC estimated by the STB and AAR.<sup>11/</sup>

<sup>11/</sup> The STB estimated the railroad industry COC were 9.4 percent, 10.1 percent and 13.8 percent in 2003, 2004 and 2005, respectively, while the AAR proposes a 13.8 percent COC for 2006. Therefore, [(9.4 percent - 9.62 percent) + (10.1 percent - 10.0 percent) + (12.2 percent - 11.25 percent) + (13.8 percent - 12.05 percent)] ÷ 4 = 0.65 percent or 65 basis points.

Additionally, using a 50 percent common equity/50 percent debt target capital structure produces results as shown in Table 12 below

| Item<br>(1)                                                          | 2003<br>(2)  | 2004<br>(3)  | 2005<br>(4)  | 2006<br>(5)  |
|----------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| 1 Weighted Cost of Equity                                            |              |              |              |              |
| a Railroad Industry Cost of Equity                                   | 12.70%       | 13.16%       | 15.18%       | 16.10%       |
| b Equity Portion of Capital Structure                                | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> |
| c Weighted Cost of Railroad Industry Equity <sup>1/</sup>            | 6.35%        | 6.58%        | 7.59%        | 8.05%        |
| 2 Weighted Cost of Debt                                              |              |              |              |              |
| a Railroad Industry Cost of Debt                                     | 5.00%        | 5.25%        | 5.36%        | 5.97%        |
| b Debt Portion of Capital Structure                                  | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> | <u>50.0%</u> |
| c Weighted Cost of Railroad Industry Debt                            | 2.50%        | 2.63%        | 2.68%        | 2.99%        |
| 3 Railroad Industry Weighted Cost of Capital <sup>2/</sup>           | 8.85%        | 9.21%        | 10.27%       | 11.04%       |
| <hr/>                                                                |              |              |              |              |
| <sup>1/</sup> Line 1a x Line 1b                                      |              |              |              |              |
| <sup>2/</sup> Line 1c + Line 2c Figures may not foot due to rounding |              |              |              |              |
| Source Exhibit No. 12                                                |              |              |              |              |

As shown in Table 12 above, using a 50 percent common equity and 50 percent debt target capital structure has an even greater impact on the COC than a 60 percent common equity/40 percent debt mix, with COC now ranging from 8.85 percent to 11.04 percent. Using a 50 percent common equity/50 percent debt mix leads to COC estimates which are, on average, 153 basis points lower

than calculated by the STB and AAR using their calculations of the railroad industry capital structures <sup>12/</sup>

---

<sup>12/</sup>  $[(9.4 \text{ percent} - 8.85 \text{ percent}) + (10.1 \text{ percent} - 9.21 \text{ percent}) + (12.2 \text{ percent} - 10.07 \text{ percent}) + (13.8 \text{ percent} - 11.04 \text{ percent})] \div 4 = 1.53 \text{ percent or 153 basis points}$

## **V. RAILROAD'S USE OF CASH**

We next compared the cash the Class I railroads have used on capital expenditures in the last four years to the cash used to repay debt and to distribute to shareholders. We discuss the results of our comparisons below.

Everyday, firms make decisions about what they will do with cash generated and used by their operating, investment and financing activities.<sup>13/</sup> Businesses must maintain a balance between retaining cash to fund continuing operations and investments and distributing cash to debt and equity holders. Within the railroad industry, railroads have historically retained cash within their companies to fund operations and capital programs. This historical trend, however, has shifted in the last few years as the railroads have distributed more cash to shareholders through stock repurchases and dividends, and to debt holders through the retirement of debt.

Table 13 below compares the net cash distributed to shareholders to cash the railroads have used for net capital expenditures as reported in Class I railroads' SEC Form 10-K Consolidated Statements of Cashflow.

---

<sup>13/</sup> Operating activities include income from business operations and changes in working capital accounts such as receivables and payables. Investing activities include the acquisition and disposition of non-current assets such as property, plant and equipment and short-term investments in other companies or assets. Financing activities include the issuing of debt and equity instruments, the repayment of debt, and the distribution of cash to shareholders.

Table 13  
**Comparison Of Cash Distributed To  
Common Equity Holders And Net Capital Expenditures**  
(Millions of dollars)

| Item<br>(1)                                           | Base<br>2003<br>(2) | Increase<br>in 2004<br>(3) | Increase<br>in 2005<br>(4) | Increase<br>in 2006<br>(5) | Cumulative<br>Increase<br>(6) |
|-------------------------------------------------------|---------------------|----------------------------|----------------------------|----------------------------|-------------------------------|
| 1 Cash Distributed to Common Equity Holders           |                     |                            |                            |                            |                               |
| a Dividends Paid                                      | \$628               | \$141                      | \$99                       | \$187                      | \$427                         |
| b Stock Repurchases                                   | <u>\$217</u>        | <u>\$149</u>               | <u>\$1,023</u>             | <u>\$760</u>               | <u>\$1,942</u>                |
| c Net Payments to Common Equity Holders <sup>1/</sup> | \$845               | \$300                      | \$1,122                    | \$947                      | \$2,369                       |
| 2 Net Capital Expenditures                            | \$5,029             | \$225                      | \$531                      | \$1,036                    | \$1,792                       |
| 3 Net Difference <sup>2/</sup>                        | ---                 | \$75                       | \$591                      | (\$89)                     | \$577                         |

<sup>1/</sup> Sum of lines 1a to 1b

<sup>2/</sup> Line 2 - Line 1d

Source Exhibit No. 13

As shown in Table 13 above, the Class I railroads increased their cash disbursements to common equity holders in the form of cash dividends and stock repurchases by approximately \$2.4 billion over the four year period. During the same time period, the Class I railroads increased net cash expended on net capital projects by approximately \$1.8 billion.<sup>14</sup>

The disbursements of cash to common equity holders was not the only use of cash to repay holders of capital within the Class I railroads. As shown in Table 14 below, the Class I railroads also used their increases in cashflow to repay long-term debt.

<sup>14/</sup> We define net capital projects as the difference between cash expended on capital projects less cash received from the sale of assets as reported on the Class I railroads Statement of Cash Flows.

| <p align="center"><b>Table 14</b><br/> <b><u>Net Cash Received and Distributed to Long-Term Debt Holders, Excluding Interest</u></b><br/> (Millions of dollars)</p> |                    |                    |                    |                    |                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|--------------------|-------------------------------------------------|
| <u>Item</u><br>(1)                                                                                                                                                  | <u>2003</u><br>(2) | <u>2004</u><br>(3) | <u>2005</u><br>(4) | <u>2006</u><br>(5) | <u>Cumulative</u><br><u>2003 to 2006</u><br>(6) |
| 1. Payments of Principal on Long-Term Debt                                                                                                                          | \$3,384            | \$1,777            | \$3,335            | \$2,099            | \$10,505                                        |
| 2. Proceeds From Issuance of Long-Term Debt                                                                                                                         | <u>\$5,029</u>     | <u>\$5,254</u>     | <u>\$5,785</u>     | <u>\$6,821</u>     | <u>\$5,557</u>                                  |
| 3. Net Cash Distributed <sup>1</sup>                                                                                                                                | \$1,210            | \$203              | \$2,297            | \$1,238            | \$4,948                                         |
| <p><sup>1/</sup> Line 1 - Line 2<br/> Source: Exhibit No. 14</p>                                                                                                    |                    |                    |                    |                    |                                                 |

As shown in Table 14 above, the Class I railroads disbursed a net of \$4.95 billion in cash to their long-term debt holders over the four year period, excluding the interest paid to debt holders over the same period.

## 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.

  
Thomas D. Crowley

Sworn to and subscribed  
before me this day of July 19, 2007

Anthony V. Evanshaw III  
Anthony V. Evanshaw III  
Notary Public for the State of Virginia

My Commission expires September 30, 2007 .

## 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.**

  
Daniel L. Fapp

**Sworn to and subscribed  
before me this day of July 19, 2007.**

Anthony V. Evanshaw  
Anthony V. Evanshaw III  
Notary Public for the State of Virginia

**My Commission expires: September 30, 2007**

## **LIST OF EXHIBITS**

| <b><u>Exhibit No.</u></b> | <b><u>Description</u></b>                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>(1)</b>                | <b>(2)</b>                                                                                                                           |
| 1                         | Thomas D. Crowley Statement of Qualifications                                                                                        |
| 2                         | Daniel L. Fapp Statement of Qualifications                                                                                           |
| 3                         | Ibbotson's Risk Premia Over Time Reports for 2004 To 2007 and Ibbotson Individual Railroad Company Beta Analyses for 2003 to 2006    |
| 4                         | Market Yield on U.S. Treasury Securities at 20-Year Constant Maturity. Quoted on Investment Basis                                    |
| 5                         | Railroad Industry Unlevered Beta - 2003 To 2006                                                                                      |
| 6                         | Railroad Industry Weighted Average Cost Of Capital Under The CAPM Approach - 2003 To 2006                                            |
| 7                         | 2003 - 2006 Railroad Industry Size Premium                                                                                           |
| 8                         | S&P's Estimates of Four Railroads' Weighted Average Cost Of Capital for Year End 2006                                                |
| 9                         | Railroad Industry Weighted Average Cost Of Capital Assuming a 60/40 Equity To Debt Mix - 2003 To 2006                                |
| 10                        | Railroad Industry Weighted Average Cost Of Capital Assuming a 50/50 Equity To Debt Mix - 2003 To 2006                                |
| 11                        | Railroad Industry Weighted Average Cost Of Capital Assuming a 100 Percent Common Equity Capital Structure - 2003 To 2006             |
| 12                        | Railroad Industry Weighted Average Cost Of Capital With STB/AAR COE And COD And Alternative Target Capital Structures - 2003 To 2006 |
| 13                        | Comparison Of Cash Distributed To Common Equity Holders And Railroad Net Capital Expenditures                                        |
| 14                        | Net Cash Received and Distributed To Long-Term Debt Holders                                                                          |

1

1

1

## **STATEMENT OF QUALIFICATIONS**

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, 5901 N. Cicero Avenue, Suite 504, Chicago, Illinois 60646 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 solving economic, marketing and transportation problems. 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

### **STATEMENT OF QUALIFICATIONS**

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 midwestern and western portions of the United States and from the Eastern coal fields to various destinations in the Mid-Atlantic, northeastern and southeastern 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.

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.

### **STATEMENT OF QUALIFICATIONS**

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, with particular emphasis on the basis and use of Rail Form A and its replacement costing formula the Uniform Railroad Costing System ("URCS"). I have utilized Rail Form A/URCS 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 testimony in a number of court and arbitration proceedings concerning the level of rates, rate adjustment procedures, 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 involved in negotiating transportation contracts on behalf of coal shippers. Specifically, I have advised utilities concerning

### **STATEMENT OF QUALIFICATIONS**

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 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 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 government agencies, major industries and major railroad companies in solving various economic 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

### **STATEMENT OF QUALIFICATIONS**

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 midwestern 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 midwestern 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.

As a result of my extensive economic consulting practice since 1971 and my participating in maximum-rate, rail merger, and rule-making proceedings before various government and private governing bodies, I have become thoroughly familiar with the operations, practices and costs of the rail carriers that move coal over the major coal routes in the United States.



**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, 5901 N Cicero Avenue, Suite 504, Chicago, IL 60646 and 10445 N Oracle Road, Suite 151, Tucson, AZ 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 School 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 Manuel Arizona Railroad, the BHP Arizona (formerly Magma Arizona) Railroad and the BHP Nevada Railroad. I have also held operations management positions with Arizona Lithographers in Tucson, AZ 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

**STATEMENT OF QUALIFICATIONS**

Commercial and Transportation Management Team and the company's Railroad Acquisition Team where I was responsible for evaluating the acquisition of new railroads, 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 I. F. 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.

**STATEMENT OF QUALIFICATIONS**

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 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"), Fama-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*, and have also presented evidence before the STB in Ex Parte No. 661, *Rail Fuel Surcharges*. In addition, my reports have been used as evidence before the Nevada State Tax Commission.



# Exhibit No. 3

The information presented in this publication has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed. Ibbotson Associates and providers of data to Ibbotson Associates make no warranties, express or implied, as to the results to be obtained by subscriber or others from the use of the data provided hereunder, and there are no express or implied warranties of merchantability or fitness for a particular purpose or use. The accuracy and completeness of the data are not guaranteed, and Ibbotson Associates and its data providers shall have no liability for errors or omissions with respect to the data or its delivery regardless of the cause of such error or omission. In no event shall Ibbotson Associates or its data providers have any liability for any indirect, special, or consequential damages, including but not limited to lost profits. Data contained hereunder is proprietary to Ibbotson Associates and its data providers and is for customer's internal use only; redistribution of the data is expressly forbidden.

Copyright © 2004 Ibbotson Associates, Inc. All rights reserved. No part of this publication may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without written permission from the publisher. To obtain permission, please write to: 225 North Michigan Avenue, Suite 700, Chicago, Illinois 60601-7676, Attention: Source Ibbotson Dept. Specify the data or other information you wish to use, the manner in which it will be used, and attach a copy of any charts, tables, or figures derived from the information. There is a \$150 charge per request. There may be additional fees depending on usage.

## **Risk Premia over Time Report 2004**

|                          |                                                                  |            |
|--------------------------|------------------------------------------------------------------|------------|
| <b>Table of Contents</b> | <b>Introduction</b>                                              | <b>3</b>   |
|                          | <b>Graph 1</b>                                                   |            |
|                          | <b>Wealth Indices of Investments in the U.S. Capital Markets</b> | <b>4</b>   |
|                          | <b>Table 1</b>                                                   |            |
|                          | <b>Summary Statistics of Annual Total Returns</b>                | <b>5</b>   |
|                          | <b>Table 2</b>                                                   |            |
|                          | <b>Key Variables in Estimating the Cost of Capital</b>           | <b>6</b>   |
|                          | <b>Table A-1</b>                                                 |            |
|                          | <b>Long-Horizon Equity Risk Premia</b>                           | <b>A-1</b> |
|                          | <b>Table A-2</b>                                                 |            |
|                          | <b>Intermediate-Horizon Equity Risk Premia</b>                   | <b>A-2</b> |
|                          | <b>Table A-3</b>                                                 |            |
|                          | <b>Short-Horizon Equity Risk Premia</b>                          | <b>A-3</b> |
|                          | <b>Table A-4</b>                                                 |            |
|                          | <b>Mid-Cap Size Premia</b>                                       | <b>A-4</b> |
|                          | <b>Table A-5</b>                                                 |            |
|                          | <b>Low-Cap Size Premia</b>                                       | <b>A-5</b> |
|                          | <b>Table A-6</b>                                                 |            |
|                          | <b>Micro-Cap Size Premia</b>                                     | <b>A-6</b> |

## **Introduction**

This report contains data that summarizes the results of the capital markets for 2003 and current variables used to estimate the cost of capital. In addition, Tables A-1 through A-6 allow you to estimate any of these variables for any time period, 1926-2003. Each table consists of six pages and cover:

- Long-horizon equity risk premia
- Intermediate-horizon equity risk premia
- Short-horizon equity risk premia
- Mid cap size premia
- Low-cap size premia
- Micro-cap size premia

### ***Reading the Tables***

The top row of each table indicates the starting year and the left column indicates the ending year. To find any statistic for a given time period, find the intersection of start and end dates. Please note that we have constrained the beta and size premia tables to contain data only for five-year periods or longer. Again, each table consists of eight pages of data.

### ***Description of Data***

***Long-horizon equity risk premia:*** large company stock total returns minus long-term government bond income returns<sup>1</sup>

***Intermediate-horizon equity risk premia:*** large company stock total returns minus intermediate-term government bond income returns<sup>1</sup>

***Short-horizon equity risk premia:*** large company stock total returns minus U.S. Treasury bill total returns<sup>1,2</sup>

***Mid-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 3-5 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$1,167 and \$4,794 million

***Low-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 6-8 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$331 and \$1,167 million

***Micro-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 9-10 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization below \$331 million

For additional information regarding Ibbotson's cost of capital related products, please visit our web site at <http://www.ibbotson.com>

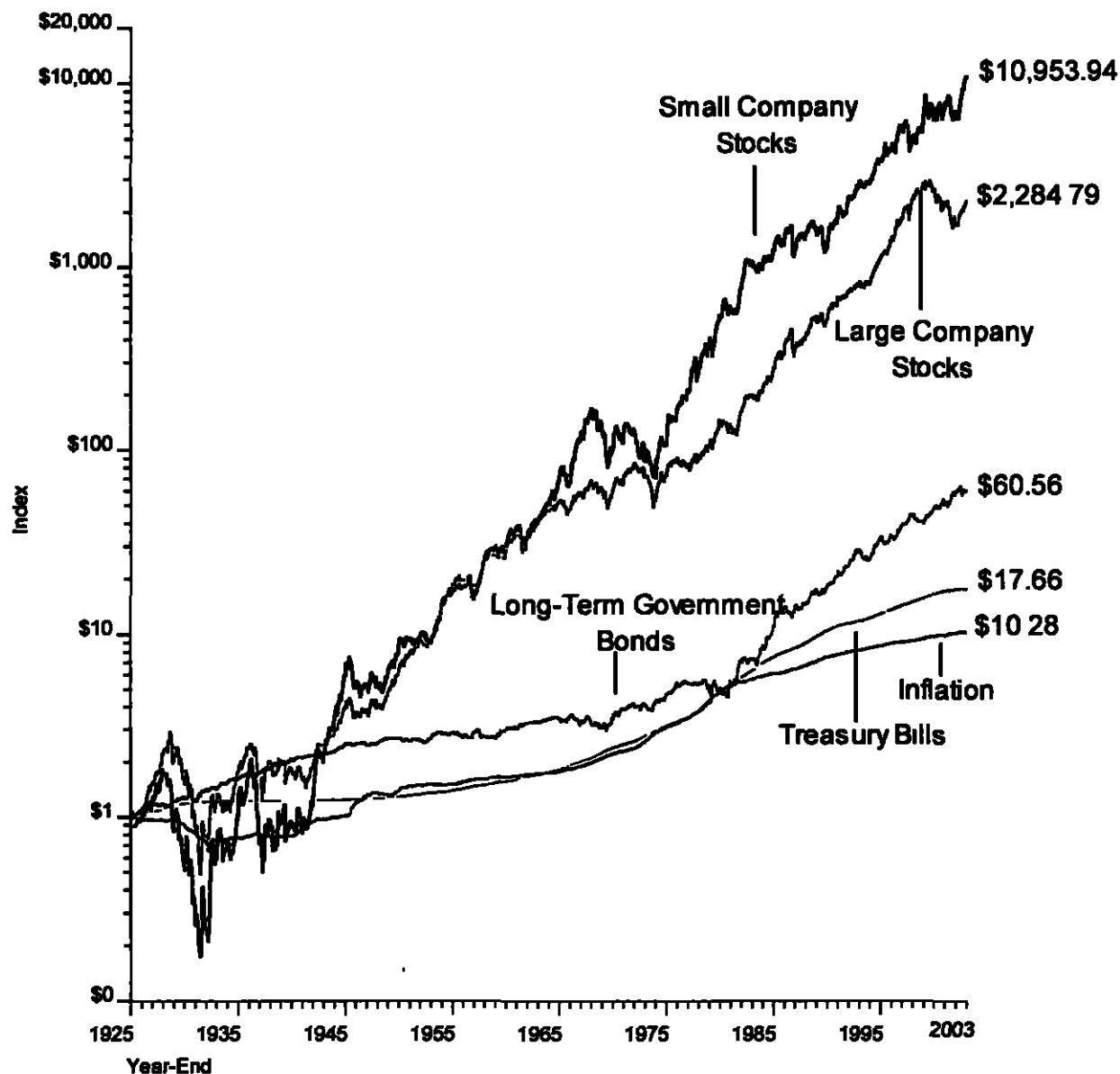
---

<sup>1</sup> Expected risk premia are based on the differences of historical annual arithmetic mean return over the period selected.

<sup>2</sup> For U.S. Treasury bills, the income return and total return are the same

**Graph 1**      **Wealth Indices of Investments**  
**In the U.S. Capital Markets**  
(Year-end 1925 = \$1.00)

December 31, 1925 to  
December 31, 2003



**Table 1**      **Total Returns, Income Returns  
and Capital Appreciation**

**Summary Statistics of  
Annual Returns**

**From 1926 to 2003**

| <b>Series</b>                             | <b>Geometric<br/>Mean</b> | <b>Arithmetic<br/>Mean</b> | <b>Standard<br/>Deviation</b> |
|-------------------------------------------|---------------------------|----------------------------|-------------------------------|
| <b>Large Company Stocks</b>               |                           |                            |                               |
| Total Returns                             | 10.4                      | 12.4                       | 20.4                          |
| Income                                    | 4.3                       | 4.3                        | 1.5                           |
| Capital Appreciation                      | 5.9                       | 7.8                        | 19.7                          |
| <b>Ibbotson Small Company Stocks</b>      |                           |                            |                               |
| Total Returns                             | 12.7                      | 17.5                       | 33.3                          |
| <b>Mid-Cap Stocks*</b>                    |                           |                            |                               |
| Total Returns                             | 11.3                      | 14.2                       | 25.1                          |
| Income                                    | 4.1                       | 4.1                        | 1.7                           |
| Capital Appreciation                      | 7.0                       | 9.8                        | 24.4                          |
| <b>Low-Cap Stocks*</b>                    |                           |                            |                               |
| Total Returns                             | 11.7                      | 15.7                       | 29.9                          |
| Income                                    | 3.8                       | 3.8                        | 1.9                           |
| Capital Appreciation                      | 7.7                       | 11.7                       | 29.2                          |
| <b>Micro-Cap Stocks*</b>                  |                           |                            |                               |
| Total Returns                             | 12.7                      | 19.0                       | 39.7                          |
| Income                                    | 2.6                       | 2.7                        | 1.8                           |
| Capital Appreciation                      | 10.1                      | 16.2                       | 39.1                          |
| <b>Long-Term Corporate Bonds</b>          |                           |                            |                               |
| Total Returns                             | 5.9                       | 6.2                        | 8.6                           |
| <b>Long-Term Government Bonds</b>         |                           |                            |                               |
| Total Returns                             | 5.4                       | 5.8                        | 9.4                           |
| Income                                    | 5.2                       | 5.2                        | 2.8                           |
| Capital Appreciation                      | 0.0                       | 0.3                        | 8.2                           |
| <b>Intermediate-Term Government Bonds</b> |                           |                            |                               |
| Total Returns                             | 5.4                       | 5.5                        | 5.7                           |
| Income                                    | 4.7                       | 4.8                        | 3.0                           |
| Capital Appreciation                      | 0.5                       | 0.6                        | 4.5                           |
| <b>Treasury Bills</b>                     |                           |                            |                               |
| Total Returns                             | 3.7                       | 3.8                        | 3.1                           |
| <b>Inflation</b>                          | 3.0                       | 3.1                        | 4.3                           |

Total return is equal to the sum of income return, capital appreciation return, and reinvestment return.

\*Source: Center for Research in Security Prices, University of Chicago.

**Table 2 Key Variables in Estimating  
the Cost of Capital**

(As of Year-end 2003)

|                                                                                                                                             |                                                               |   |                                                              | Value                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---|--------------------------------------------------------------|-----------------------------------------------|
| <b>Yields (Riskless Rates)</b>                                                                                                              |                                                               |   |                                                              |                                               |
| Long-Term (20-year) U S Treasury Coupon Bond Yield                                                                                          |                                                               |   |                                                              | 5.1%                                          |
| Intermediate-term (5-year) U S Treasury Coupon Note Yield                                                                                   |                                                               |   |                                                              | 3.0%                                          |
| Short-term (30-day) U S Treasury Bill Yield                                                                                                 |                                                               |   |                                                              | 0.9%                                          |
| <b>Equity Risk Premium<sup>3</sup></b>                                                                                                      |                                                               |   |                                                              |                                               |
| Long-horizon expected equity risk premium: large company stock total returns minus long-term government bond income returns                 |                                                               |   |                                                              | 7.2%                                          |
| Intermediate-horizon expected equity risk premium: large company stock total returns minus intermediate-term government bond income returns |                                                               |   |                                                              | 7.6%                                          |
| Short-horizon expected equity risk premium: large company stock total returns minus U S Treasury bill total returns                         |                                                               |   |                                                              | 8.6%                                          |
| <b>Size Premium<sup>4</sup></b>                                                                                                             |                                                               |   |                                                              |                                               |
| Decile                                                                                                                                      | Market Capitalization<br>of Smallest Company<br>(in millions) |   | Market Capitalization<br>of Largest Company<br>(in millions) | Size Premium<br>(Return in<br>Excess of CAPM) |
| Mid-Cap, 3-5                                                                                                                                | \$1,167,040                                                   | - | \$4,794,027                                                  | 0.91%                                         |
| Low-Cap, 6-8                                                                                                                                | \$330,797                                                     | - | \$1,166,799                                                  | 1.70%                                         |
| Micro-Cap, 9-10                                                                                                                             | \$0,332                                                       | - | \$330,608                                                    | 4.01%                                         |
| <b>Breakdown of Deciles 1-10</b>                                                                                                            |                                                               |   |                                                              |                                               |
| 1-Largest                                                                                                                                   | \$11,444,104                                                  | - | \$286,638,305                                                | -0.34%                                        |
| 2                                                                                                                                           | \$4,809,422                                                   | - | \$11,366,767                                                 | 0.50%                                         |
| 3                                                                                                                                           | \$2,592,978                                                   | - | \$4,794,027                                                  | 0.67%                                         |
| 4                                                                                                                                           | \$1,723,907                                                   | - | \$2,585,984                                                  | 1.11%                                         |
| 5                                                                                                                                           | \$1,167,040                                                   | - | \$1,720,959                                                  | 1.36%                                         |
| 6                                                                                                                                           | \$797,302                                                     | - | \$1,166,799                                                  | 1.59%                                         |
| 7                                                                                                                                           | \$508,210                                                     | - | \$795,983                                                    | 1.57%                                         |
| 8                                                                                                                                           | \$330,797                                                     | - | \$507,820                                                    | 2.25%                                         |
| 9                                                                                                                                           | \$166,445                                                     | - | \$330,608                                                    | 2.90%                                         |
| 10-Smallest                                                                                                                                 | \$0,332                                                       | - | \$166,414                                                    | 6.34%                                         |
| <b>Breakdown of the 10th Decile</b>                                                                                                         |                                                               |   |                                                              |                                               |
| 10a                                                                                                                                         | \$96,961                                                      | - | \$166,414                                                    | 4.50%                                         |
| 10b-Smallest                                                                                                                                | \$0,332                                                       | - | \$96,928                                                     | 9.82%                                         |

<sup>3</sup> Expected risk premia for equities are based on the differences of historical arithmetic mean returns from 1926-2003 using the S&P 500 as the market benchmark.

<sup>4</sup> Expected return in excess of that predicted by the capital asset pricing model, also known as the beta-adjusted size premium. Underlying data provided by CRSP, the Center for Research in Security Prices. See Chapter 7 of Ibbotson's *S&P Valuation Edition Yearbook* for methodology.

The information presented in this publication has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed. Ibbotson Associates and providers of data to Ibbotson Associates make no warranties, express or implied, as to the results to be obtained by subscriber or others from the use of the data provided hereunder, and there are no express or implied warranties of merchantability or fitness for a particular purpose or use. The accuracy and completeness of the data are not guaranteed, and Ibbotson Associates and its data providers shall have no liability for errors or omissions with respect to the data or its delivery regardless of the cause of such error or omission. In no event shall Ibbotson Associates or its data providers have any liability for any indirect, special, or consequential damages, including but not limited to lost profits. Data contained hereunder is proprietary to Ibbotson Associates and its data providers and is for customer's internal use only; redistribution of the data is expressly forbidden.

Copyright © 2005 Ibbotson Associates, Inc. All rights reserved. No part of this publication may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without written permission from the publisher. To obtain permission, please write to: 225 North Michigan Avenue, Suite 700, Chicago, Illinois 60601-7676, Attention: Source Ibbotson Dept. Specify the data or other information you wish to use, the manner in which it will be used, and attach a copy of any charts, tables, or figures derived from the information. There is a \$150 charge per request. There may be additional fees depending on usage.

## **Risk Premia over Time Report 2005**

|                          |                                                           |          |
|--------------------------|-----------------------------------------------------------|----------|
| <b>Table of Contents</b> | <b>Introduction</b>                                       | <b>3</b> |
|                          | <b>Graph 1</b>                                            |          |
|                          | Wealth Indices of Investments in the U.S. Capital Markets | 4        |
|                          | <b>Table 1</b>                                            |          |
|                          | Summary Statistics of Annual Total Returns                | 5        |
|                          | <b>Table 2</b>                                            |          |
|                          | Key Variables in Estimating the Cost of Capital           | 6        |
|                          | <b>Table A-1</b>                                          |          |
|                          | Long-Horizon Equity Risk Premia                           | A-1      |
|                          | <b>Table A-2</b>                                          |          |
|                          | Intermediate-Horizon Equity Risk Premia                   | A-2      |
|                          | <b>Table A-3</b>                                          |          |
|                          | Short-Horizon Equity Risk Premia                          | A-3      |
|                          | <b>Table A-4</b>                                          |          |
|                          | Mid-Cap Size Premia                                       | A-4      |
|                          | <b>Table A-5</b>                                          |          |
|                          | Low-Cap Size Premia                                       | A-5      |
|                          | <b>Table A-6</b>                                          |          |
|                          | Micro-Cap Size Premia                                     | A-6      |

## **Introduction**

This report contains data that summarizes the results of the capital markets for 2004 and current variables used to estimate the cost of capital. In addition, Tables A-1 through A-6 allow you to estimate any of these variables for any time period, 1926-2004. Each table consists of six pages and cover:

- Long-horizon equity risk premia
- Intermediate-horizon equity risk premia
- Short-horizon equity risk premia
- Mid-cap size premia
- Low-cap size premia
- Micro-cap size premia

### ***Reading the Tables***

The top row of each table indicates the starting year and the left column indicates the ending year. To find any statistic for a given time period, find the intersection of start and end dates. Please note that we have constrained the beta and size premia tables to contain data only for five-year periods or longer. Again, each table consists of six pages of data.

### ***Description of Data***

***Long-horizon equity risk premia:*** large company stock total returns minus long-term government bond income returns<sup>1</sup>

***Intermediate-horizon equity risk premia:*** large company stock total returns minus intermediate-term government bond income returns<sup>1</sup>

***Short-horizon equity risk premia:*** large company stock total returns minus U.S. Treasury bill total returns<sup>1,2</sup>

***Mid-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 3-5 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$1,608 and \$6,242 million

***Low-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 6-8 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$506 and \$1,608 million

***Micro-cap equity size premia:*** returns in excess of those predicted by beta for the portfolio of stocks represented by the 9-10 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization below \$506 million

For additional information regarding Ibbotson's cost of capital related products, please visit our web site at <http://www.ibbotson.com>.

---

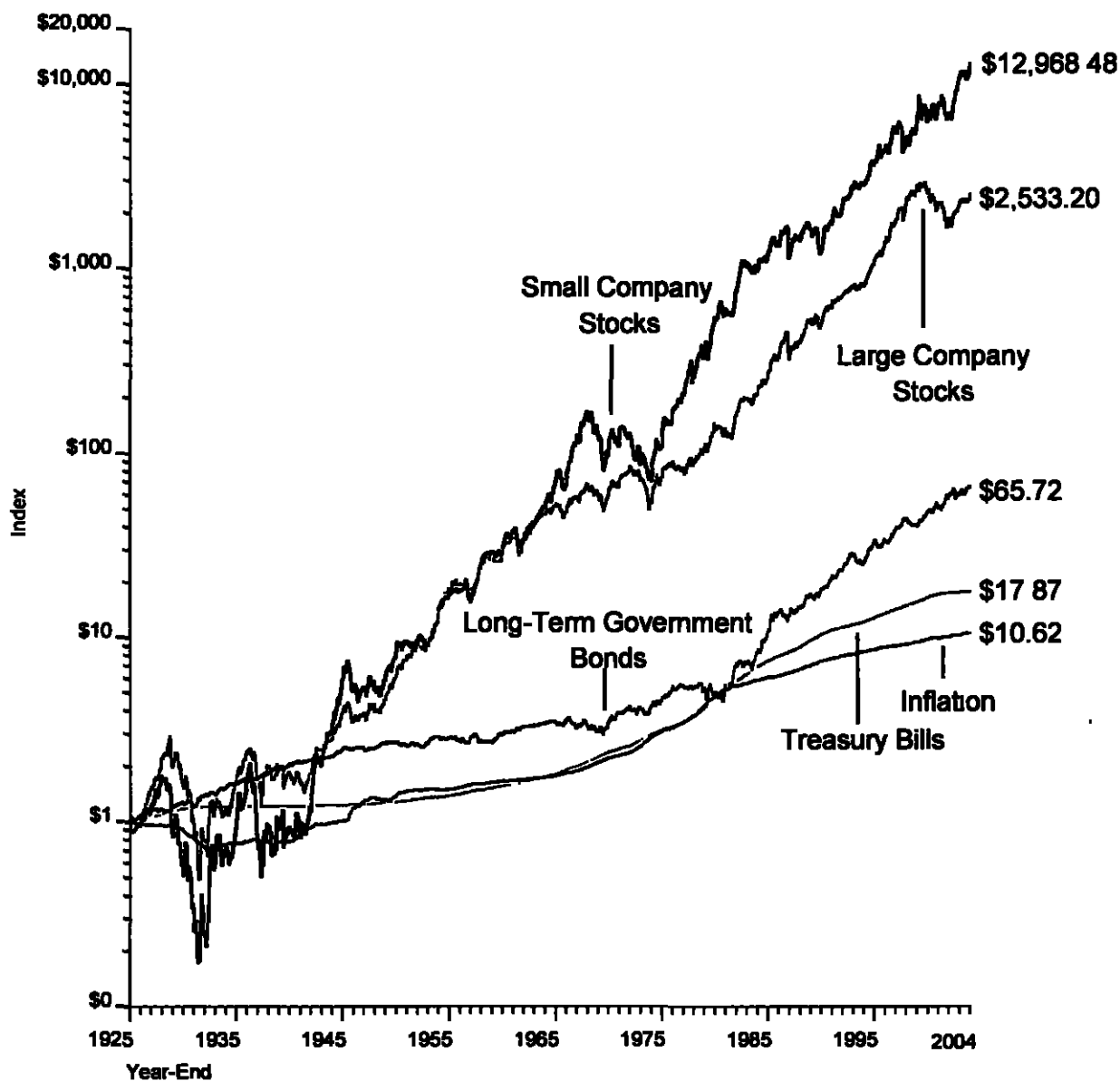
<sup>1</sup> Expected risk premia are based on the differences of historical annual arithmetic mean return over the period selected

<sup>2</sup> For U.S. Treasury bills, the income return and total return are the same

---

**Graph 1**      **Wealth Indices of Investments**  
**in the U.S. Capital Markets**  
(Year-end 1925 = \$1 00)

December 31, 1925 to  
December 31, 2004



**Table 1      Total Returns, Income Returns  
and Capital Appreciation**

**Summary Statistics of  
Annual Returns**

**From 1926 to 2004**

| <b>Series</b>                             | <b>Geometric<br/>Mean</b> | <b>Arithmetic<br/>Mean</b> | <b>Standard<br/>Deviation</b> |
|-------------------------------------------|---------------------------|----------------------------|-------------------------------|
| <b>Large Company Stocks</b>               |                           |                            |                               |
| Total Returns                             | 10.4                      | 12.4                       | 20.3                          |
| Income                                    | 4.3                       | 4.3                        | 1.5                           |
| Capital Appreciation                      | 5.9                       | 7.9                        | 19.6                          |
| <b>Ibbotson Small Company Stocks</b>      |                           |                            |                               |
| Total Returns                             | 12.7                      | 17.5                       | 33.1                          |
| <b>Mid-Cap Stocks*</b>                    |                           |                            |                               |
| Total Returns                             | 11.4                      | 14.2                       | 24.9                          |
| Income                                    | 4.1                       | 4.1                        | 1.7                           |
| Capital Appreciation                      | 7.1                       | 9.8                        | 24.2                          |
| <b>Low-Cap Stocks*</b>                    |                           |                            |                               |
| Total Returns                             | 11.8                      | 15.8                       | 29.7                          |
| Income                                    | 3.7                       | 3.8                        | 1.9                           |
| Capital Appreciation                      | 7.9                       | 11.8                       | 29.0                          |
| <b>Micro-Cap Stocks*</b>                  |                           |                            |                               |
| Total Returns                             | 12.8                      | 19.0                       | 39.4                          |
| Income                                    | 2.6                       | 2.6                        | 1.8                           |
| Capital Appreciation                      | 10.2                      | 16.2                       | 38.8                          |
| <b>Long-Term Corporate Bonds</b>          |                           |                            |                               |
| Total Returns                             | 5.9                       | 6.2                        | 8.6                           |
| <b>Long-Term Government Bonds</b>         |                           |                            |                               |
| Total Returns                             | 5.4                       | 5.8                        | 9.3                           |
| Income                                    | 5.2                       | 5.2                        | 2.7                           |
| Capital Appreciation                      | 0.0                       | 0.4                        | 8.1                           |
| <b>Intermediate-Term Government Bonds</b> |                           |                            |                               |
| Total Returns                             | 5.4                       | 5.5                        | 5.7                           |
| Income                                    | 4.7                       | 4.8                        | 2.9                           |
| Capital Appreciation                      | 0.5                       | 0.6                        | 4.5                           |
| <b>Treasury Bills</b>                     |                           |                            |                               |
| Total Returns                             | 3.7                       | 3.8                        | 3.1                           |
| <b>Inflation</b>                          | 3.0                       | 3.1                        | 4.3                           |

Total return is equal to the sum of income return, capital appreciation return, and reinvestment return.

\*Source: Center for Research in Security Prices, University of Chicago.

**Table 2 Key Variables in Estimating  
the Cost of Capital**

**(As of Year-end 2004)**

|                                                                                                                                                                           |                                                               |   |                                                              | Value                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---|--------------------------------------------------------------|-----------------------------------------------|
| <b>Yields (Riskless Rates)<sup>3</sup></b>                                                                                                                                |                                                               |   |                                                              |                                               |
| <i>Long-Term (20-year) U.S. Treasury Coupon Bond Yield</i>                                                                                                                |                                                               |   |                                                              | 4.8%                                          |
| <b>Equity Risk Premium<sup>4</sup></b>                                                                                                                                    |                                                               |   |                                                              |                                               |
| <i>Long-horizon expected equity risk premium (historical) large company stock total returns minus long-term government bond income returns</i>                            |                                                               |   |                                                              | 7.2%                                          |
| <i>Long-horizon expected equity risk premium (supply side), historical equity risk premium minus price-to-earnings ratio calculated using three-year average earnings</i> |                                                               |   |                                                              | 6.1%                                          |
| <b>Size Premium<sup>5</sup></b>                                                                                                                                           |                                                               |   |                                                              |                                               |
| Decile                                                                                                                                                                    | Market Capitalization<br>of Smallest Company<br>(in millions) |   | Market Capitalization<br>of Largest Company<br>(in millions) | Size Premium<br>(Return in<br>Excess of CAPM) |
| Mid-Cap, 3-5                                                                                                                                                              | \$1,607,931                                                   | - | \$6,241,953                                                  | 0.95%                                         |
| Low-Cap, 6-8                                                                                                                                                              | \$506,410                                                     | - | \$1,607,854                                                  | 1.81%                                         |
| Micro-Cap, 9-10                                                                                                                                                           | \$1,393                                                       | - | \$505,437                                                    | 4.02%                                         |
| <b>Breakdown of Deciles 1-10</b>                                                                                                                                          |                                                               |   |                                                              |                                               |
| 1-Largest                                                                                                                                                                 | \$14,099,878                                                  | - | \$342,087,219                                                | -0.37%                                        |
| 2                                                                                                                                                                         | \$6,258,530                                                   | - | \$14,096,886                                                 | 0.60%                                         |
| 3                                                                                                                                                                         | \$3,473,335                                                   | - | \$6,241,953                                                  | 0.75%                                         |
| 4                                                                                                                                                                         | \$2,234,146                                                   | - | \$3,464,104                                                  | 1.07%                                         |
| 5                                                                                                                                                                         | \$1,607,931                                                   | - | \$2,231,707                                                  | 1.44%                                         |
| 6                                                                                                                                                                         | \$1,098,284                                                   | - | \$1,607,854                                                  | 1.75%                                         |
| 7                                                                                                                                                                         | \$746,249                                                     | - | \$1,097,603                                                  | 1.61%                                         |
| 8                                                                                                                                                                         | \$506,410                                                     | - | \$746,219                                                    | 2.36%                                         |
| 9                                                                                                                                                                         | \$262,974                                                     | - | \$505,437                                                    | 2.86%                                         |
| 10-Smallest                                                                                                                                                               | \$1,393                                                       | - | \$262,725                                                    | 6.41%                                         |
| <b>Breakdown of the 10th Decile</b>                                                                                                                                       |                                                               |   |                                                              |                                               |
| 10a                                                                                                                                                                       | \$144,122                                                     | - | \$262,725                                                    | 4.54%                                         |
| 10b-Smallest                                                                                                                                                              | \$1,393                                                       | - | \$143,916                                                    | 9.90%                                         |

<sup>3</sup> As of December 31, 2004. Maturity is approximate.

<sup>4</sup> See Chapter 5 of Ibbotson's *S&P Valuation Edition Yearbook* for complete methodology.

<sup>5</sup> Expected return in excess of that predicted by the capital asset pricing model, also known as the beta-adjusted size premium. Underlying data provided by CRSP, the Center for Research in Security Prices. See Chapter 7 of Ibbotson's *S&P Valuation Edition Yearbook* for methodology.

The information presented in this publication has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed. Ibbotson Associates and providers of data to Ibbotson Associates make no warranties, express or implied, as to the results to be obtained by subscriber or others from the use of the data provided hereunder, and there are no express or implied warranties of merchantability or fitness for a particular purpose or use. The accuracy and completeness of the data are not guaranteed, and Ibbotson Associates and its data providers shall have no liability for errors or omissions with respect to the data or its delivery regardless of the cause of such error or omission. In no event shall Ibbotson Associates or its data providers have any liability for any indirect, special, or consequential damages, including but not limited to lost profits. Data contained hereunder is proprietary to Ibbotson Associates and its data providers and is for customer's internal use only; redistribution of the data is expressly forbidden.

Copyright © 2006 Ibbotson Associates, Inc. All rights reserved. No part of this publication may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without written permission from the publisher. To obtain permission, please write to 225 North Michigan Avenue, Suite 700, Chicago, Illinois 60601-7676, Attention: Source Ibbotson Dept. Specify the data or other information you wish to use, the manner in which it will be used, and attach a copy of any charts, tables, or figures derived from the information. There is a \$150 charge per request. There may be additional fees depending on usage.

## **Risk Premia over Time Report 2006**

|                          |                                                                  |            |
|--------------------------|------------------------------------------------------------------|------------|
| <b>Table of Contents</b> | <b>Introduction</b>                                              | <b>3</b>   |
|                          | <b>Graph 1</b>                                                   |            |
|                          | <b>Wealth Indices of Investments in the U.S. Capital Markets</b> | <b>4</b>   |
|                          | <b>Table 1</b>                                                   |            |
|                          | <b>Summary Statistics of Annual Total Returns</b>                | <b>5</b>   |
|                          | <b>Table 2</b>                                                   |            |
|                          | <b>Key Variables in Estimating the Cost of Capital</b>           | <b>6</b>   |
|                          | <b>Table A-1</b>                                                 |            |
|                          | <b>Long-Horizon Equity Risk Premia</b>                           | <b>A-1</b> |
|                          | <b>Table A-2</b>                                                 |            |
|                          | <b>Intermediate-Horizon Equity Risk Premia</b>                   | <b>A-2</b> |
|                          | <b>Table A-3</b>                                                 |            |
|                          | <b>Short-Horizon Equity Risk Premia</b>                          | <b>A-3</b> |
|                          | <b>Table A-4</b>                                                 |            |
|                          | <b>Mid-Cap Size Premia</b>                                       | <b>A-4</b> |
|                          | <b>Table A-5</b>                                                 |            |
|                          | <b>Low-Cap Size Premia</b>                                       | <b>A-5</b> |
|                          | <b>Table A-6</b>                                                 |            |
|                          | <b>Micro-Cap Size Premia</b>                                     | <b>A-6</b> |

## **Introduction**

This report contains data that summarizes the results of the capital markets for 2005 and current variables used to estimate the cost of capital. In addition, Tables A-1 through A-6 allow you to estimate any of these variables for any time period, 1926-2005. Each table consists of six pages and cover

- Long-horizon equity risk premia
- Intermediate-horizon equity risk premia
- Short-horizon equity risk premia
- Mid-cap size premia
- Low-cap size premia
- Micro-cap size premia

## **Reading the Tables**

The top row of each table indicates the starting year and the left column indicates the ending year. To find any statistic for a given time period, find the intersection of start and end dates. Please note that we have constrained the beta and size premia tables to contain data only for five-year periods or longer. Again, each table consists of six pages of data.

## **Description of Data**

**Long-horizon equity risk premia:** large company stock total returns minus long-term government bond income returns<sup>1</sup>

**Intermediate-horizon equity risk premia:** large company stock total returns minus intermediate-term government bond income returns<sup>1</sup>

**Short-horizon equity risk premia:** large company stock total returns minus U.S. Treasury bill total returns<sup>1,2</sup>

**Mid-cap equity size premia:** returns in excess of those predicted by beta for the portfolio of stocks represented by the 3-5 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$1,729 and \$7,187 million

**Low-cap equity size premia:** returns in excess of those predicted by beta for the portfolio of stocks represented by the 6-8 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$586 and \$1,729 million

**Micro-cap equity size premia:** returns in excess of those predicted by beta for the portfolio of stocks represented by the 9-10 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization below \$586 million

For additional information regarding Ibbotson's cost of capital related products, please visit our web site at <http://www.ibbotson.com>

---

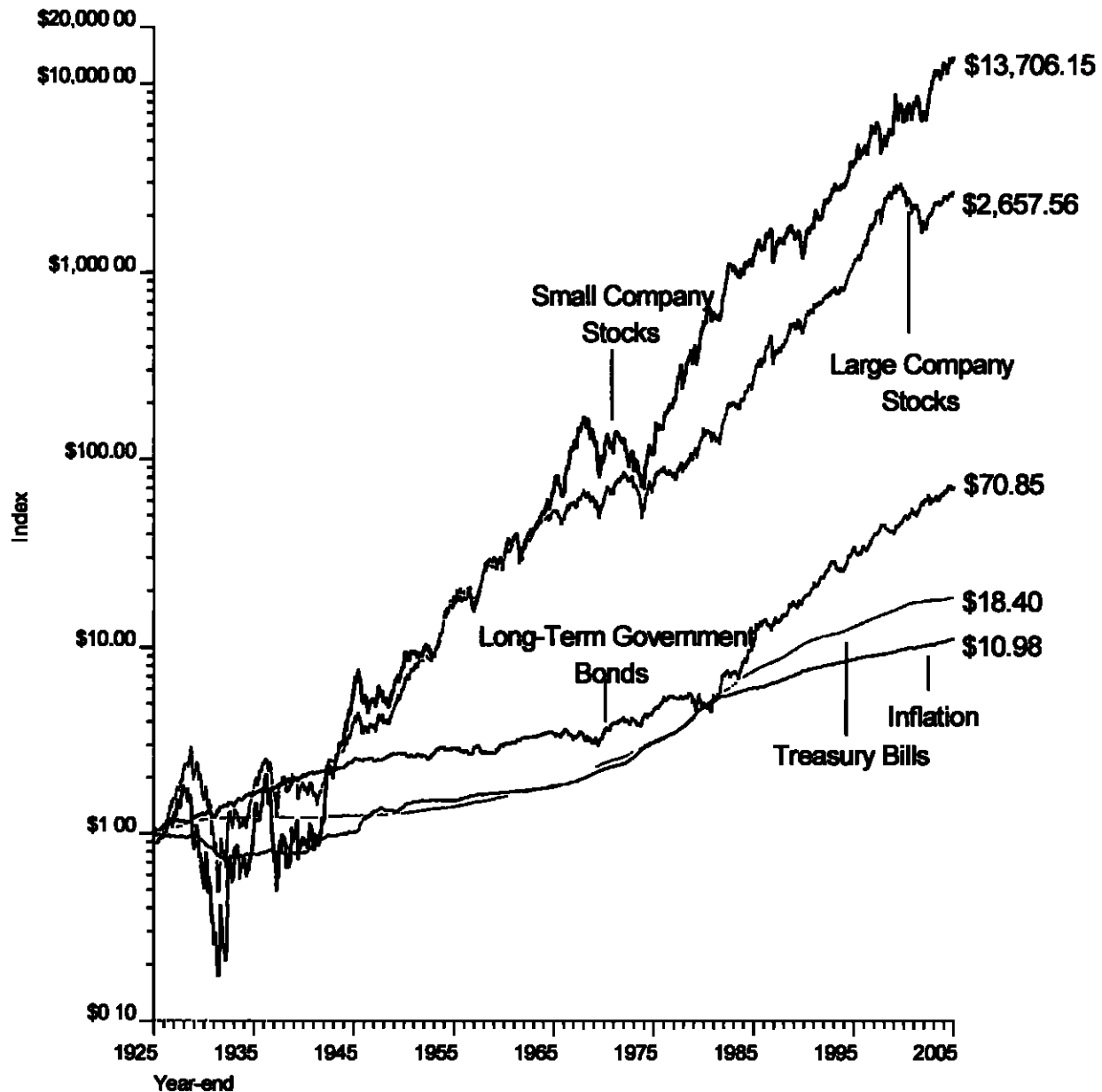
<sup>1</sup> Expected risk premia are based on the differences of historical annual arithmetic mean return over the period selected.

<sup>2</sup> For U.S. Treasury bills, the income return and total return are the same.

---

**Graph 1**      **Wealth Indices of Investments**  
**In the U.S. Capital Markets**  
(Year-end 1925 = \$1.00)

December 31, 1925 to  
December 30, 2005



# Risk Premia Over Time Report: 2007

Estimates for 1926–2006

MORNINGSTAR<sup>®</sup>

---

# Table of Contents

---

|                                                           |          |
|-----------------------------------------------------------|----------|
| <b>Introduction</b>                                       | <b>2</b> |
| <hr/>                                                     |          |
| <b>Graph 1</b>                                            |          |
| Wealth Indices of Investments in the U.S. Capital Markets | 3        |
| <hr/>                                                     |          |
| <b>Table 1</b>                                            |          |
| Summary Statistics of Annual Total Returns                | 4        |
| <hr/>                                                     |          |
| <b>Table 2</b>                                            |          |
| Key Variables in Estimating the Cost of Capital           | 5        |
| <hr/>                                                     |          |
| <b>Table A-1</b>                                          |          |
| Long-Horizon Equity Risk Premia                           | 6        |
| <hr/>                                                     |          |
| <b>Table A-2</b>                                          |          |
| Intermediate-Horizon Equity Risk Premia                   | 12       |
| <hr/>                                                     |          |
| <b>Table A-3</b>                                          |          |
| Short-Horizon Equity Risk Premia                          | 18       |
| <hr/>                                                     |          |
| <b>Table A-4</b>                                          |          |
| Mid-Cap Size Premia                                       | 24       |
| <hr/>                                                     |          |
| <b>Table A-5</b>                                          |          |
| Low-Cap Size Premia                                       | 30       |
| <hr/>                                                     |          |
| <b>Table A-6</b>                                          |          |
| Micro-Cap Size Premia                                     | 36       |

---

# Introduction

This report contains data that summarizes the results of the capital markets for 2006 and current variables used to estimate the cost of capital. In addition, Tables A-1 through A-6 allow you to estimate any of these variables for any time period, 1926-2006. Each table consists of six pages and cover:

- ▶ Long-horizon equity risk premium
- ▶ Intermediate-horizon equity risk premium
- ▶ Short-horizon equity risk premium
- ▶ Mid-cap size premium
- ▶ Low-cap size premium
- ▶ Micro-cap size premium

## Reading the Tables

The top row of each table indicates the starting year and the left column indicates the ending year. To find any statistic for a given time period, find the intersection of start and end dates. Please note that we have constrained the beta and size premium tables to contain data only for five-year periods or longer. Again, each table consists of six pages of data.

## Description of Data

**Long-horizon equity risk premium** Large company stock total returns minus long-term government bond income returns

**Intermediate-horizon equity risk premium** Large company stock total returns minus intermediate-term government bond income returns<sup>1</sup>

**Short-horizon equity risk premium** Large company stock total returns minus U.S. Treasury bill total returns<sup>2</sup>

**Mid-cap equity size premium** Returns in excess of those predicted by beta for the portfolio of stocks represented by the 3-5 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$1,947 and \$7,777 million

**Low-cap equity size premium** Returns in excess of those predicted by beta for the portfolio of stocks represented by the 6-8 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization between \$627 and \$1,947 million

**Micro-cap equity size premium** Returns in excess of those predicted by beta for the portfolio of stocks represented by the 9-10 deciles of the New York Stock Exchange, American Stock Exchange, and Nasdaq National Market, current capitalization below \$627 million

For additional information regarding Morningstar's cost of capital related products, please visit our web site at [global.morningstar.com/US/Advisors](http://global.morningstar.com/US/Advisors)

<sup>1</sup> Expected risk premium are based on the differences of historical annual arithmetic mean return over the period selected.

<sup>2</sup> For U.S. Treasury bills, the income return and total return are the same.

The information presented in this publication has been obtained with the greatest of care from sources believed to be reliable, but is not guaranteed to be complete, accurate, or timely. Morningstar and its affiliated companies expressly disclaim any liability, including incidental or consequential damages, arising from the use of this publication or any errors or omissions that may be contained in it.

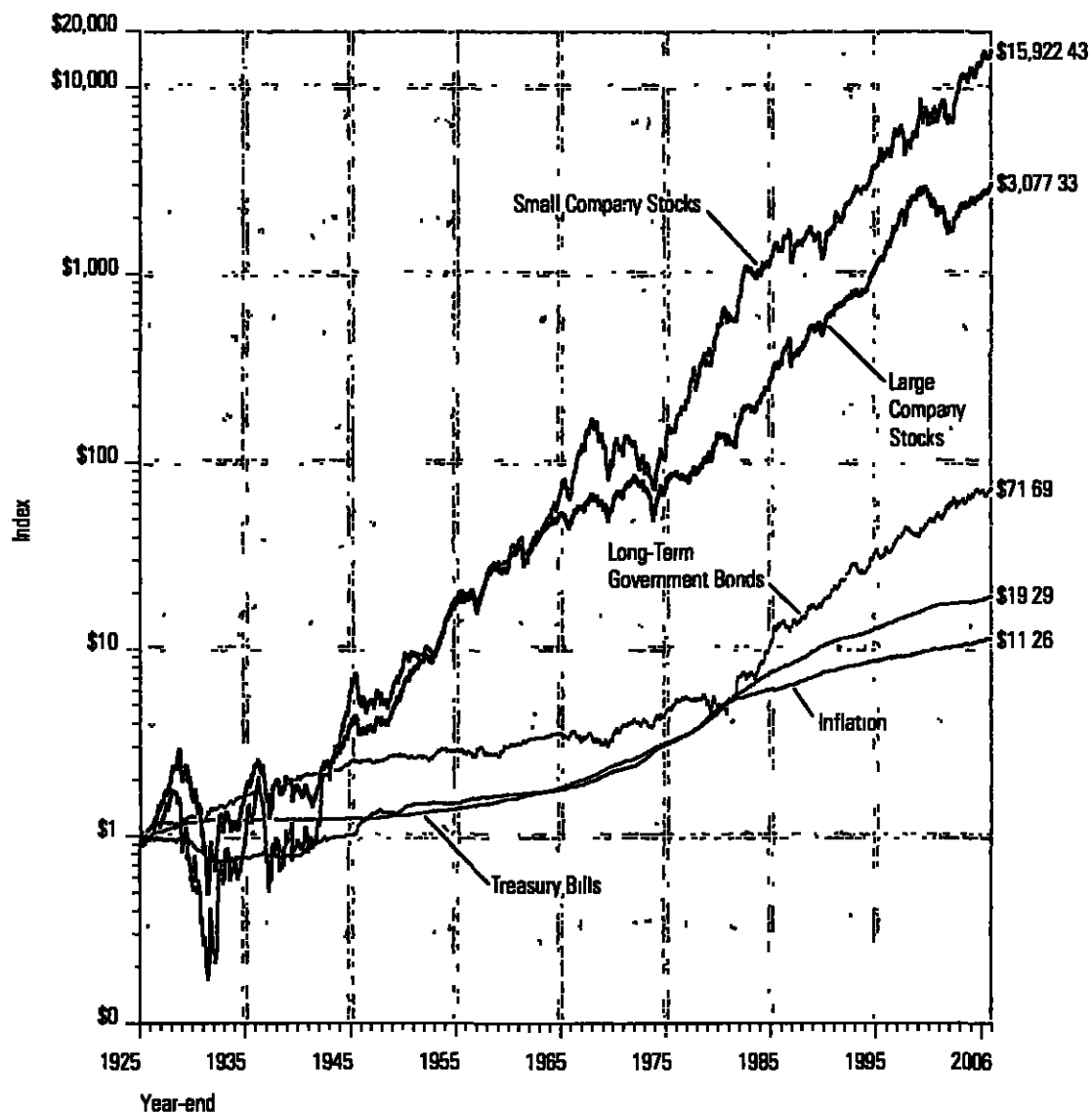
© 2007 Morningstar. All rights reserved. No part of this publication may be reproduced or used in any other form or by any other means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without Morningstar's prior, written permission. To obtain permission, please call Product Sales or write to the address below. Your request should specify the data or other information you wish to use and the manner in which you wish to use it. In addition, you will need to include copies of any charts, tables, and/or figures that you have created based on that information. There is a \$1500 processing fee per request. There may be additional fees depending on your proposed usage.

Morningstar Inc.  
225 West Wacker Dr.  
Chicago, Illinois 60606

Main (312) 696-6000  
Product Sales (888) 298-3847  
Fax (312) 696-8010  
[global.morningstar.com/S881YrBls](http://global.morningstar.com/S881YrBls)

Graph 2-1  
**Wealth Indices of Investments in the U.S. Capital Markets**  
 Year-end 1925 = \$1.00

December 31, 1925 to December 30, 2006



**Table 1**  
**Summary Statistics of Annual Total Returns**

from 1926 to 2006

| Series                                    | Geometric Mean | Arithmetic Mean | Standard Deviation |
|-------------------------------------------|----------------|-----------------|--------------------|
| <b>Large Company Stocks</b>               |                |                 |                    |
| Total Returns                             | 10.4           | 12.3            | 20.1               |
| Income                                    | 4.2            | 4.2             | 1.6                |
| Capital Appreciation                      | 6.0            | 7.9             | 19.4               |
| <b>Small Company Stocks</b>               |                |                 |                    |
| Total Returns                             | 12.7           | 17.4            | 32.7               |
| <b>Mid-Cap Stocks*</b>                    |                |                 |                    |
| Total Returns                             | 11.4           | 14.2            | 24.6               |
| Income                                    | 4.0            | 4.0             | 1.7                |
| Capital Appreciation                      | 7.2            | 9.9             | 23.9               |
| <b>Low-Cap Stocks*</b>                    |                |                 |                    |
| Total Returns                             | 11.8           | 15.7            | 29.3               |
| Income                                    | 3.7            | 3.7             | 2.0                |
| Capital Appreciation                      | 7.9            | 11.8            | 28.7               |
| <b>Micro-Cap Stocks*</b>                  |                |                 |                    |
| Total Returns                             | 12.8           | 18.8            | 38.9               |
| Income                                    | 2.6            | 2.6             | 1.8                |
| Capital Appreciation                      | 10.2           | 16.1            | 38.4               |
| <b>Long-Term Corporate Bonds</b>          |                |                 |                    |
| Total Returns                             | 5.9            | 6.2             | 8.5                |
| <b>Long-Term Government Bonds</b>         |                |                 |                    |
| Total Returns                             | 5.4            | 5.8             | 9.2                |
| Income                                    | 5.2            | 5.2             | 2.7                |
| Capital Appreciation                      | 0.0            | 0.3             | 8.0                |
| <b>Intermediate-Term Government Bonds</b> |                |                 |                    |
| Total Returns                             | 5.3            | 5.4             | 5.7                |
| Income                                    | 4.7            | 4.7             | 2.9                |
| Capital Appreciation                      | 0.4            | 0.5             | 4.4                |
| <b>Treasury Bills</b>                     |                |                 |                    |
| Total Returns                             | 3.7            | 3.8             | 3.1                |
| Inflation                                 | 3.0            | 3.1             | 4.3                |

Total return is equal to the sum of income return, capital appreciation return, and reinvestment return.

\*Source: Center for Research in Security Prices, University of Chicago.

Table C-1

## Key Variables in Estimating the Cost of Capital

|                                                                                                                                                                   | Value                                                   |                                                        |                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|-----------------------------------------|
| <b>Yields (Riskless Rates)<sup>1</sup></b>                                                                                                                        |                                                         |                                                        |                                         |
| Long-term (20-year) U.S. Treasury Coupon Bond Yield                                                                                                               |                                                         |                                                        | 4.9%                                    |
| <b>Equity Risk Premium<sup>2</sup></b>                                                                                                                            |                                                         |                                                        |                                         |
| Long-horizon expected equity risk premium (historical) large company stock total returns minus long-term government bond income returns                           |                                                         |                                                        | 7                                       |
| Long-horizon expected equity risk premium (supply side) historical equity risk premium minus price-to-earnings ratio calculated using three-year average earnings |                                                         |                                                        | 6.3                                     |
| <b>Size Premium<sup>3</sup></b>                                                                                                                                   |                                                         |                                                        |                                         |
| Decile                                                                                                                                                            | Market Capitalization of Smallest Company (in millions) | Market Capitalization of Largest Company (in millions) | Size Premium (Return in Excess of CAPM) |
| Mid-Cap, 3-5                                                                                                                                                      | \$1,947,240                                             | \$7,777,183                                            | 0.97%                                   |
| Low-Cap, 6-8                                                                                                                                                      | \$627,017                                               | \$1,946,588                                            | 1.76%                                   |
| Micro-Cap, 9-10                                                                                                                                                   | \$2,247                                                 | \$626,955                                              | 3.88%                                   |
| <b>Breakdown of Deciles 1-10</b>                                                                                                                                  |                                                         |                                                        |                                         |
| 1 Largest                                                                                                                                                         | \$18,848,063                                            | \$371,187,368                                          | -0.36%                                  |
| 2                                                                                                                                                                 | \$7,847,424                                             | \$16,820,566                                           | 0.65%                                   |
| 3                                                                                                                                                                 | \$4,098,254                                             | \$7,777,183                                            | 0.81%                                   |
| 4                                                                                                                                                                 | \$2,861,655                                             | \$4,085,184                                            | 0.03%                                   |
| 5                                                                                                                                                                 | \$1,947,240                                             | \$2,848,771                                            | 1.45%                                   |
| 6                                                                                                                                                                 | \$1,379,267                                             | \$1,946,588                                            | 1.67%                                   |
| 7                                                                                                                                                                 | \$977,912                                               | \$1,378,476                                            | 1.62%                                   |
| 8                                                                                                                                                                 | \$627,017                                               | \$976,624                                              | 2.28%                                   |
| 9                                                                                                                                                                 | \$3,4912                                                | \$626,955                                              | 2.70%                                   |
| 10-Smallest                                                                                                                                                       | \$2,247                                                 | \$314,433                                              | 6.27%                                   |
| <b>Breakdown of the 10th Decile</b>                                                                                                                               |                                                         |                                                        |                                         |
| 10a                                                                                                                                                               | \$173,684                                               | \$314,433                                              | 4.35%                                   |
| 10b                                                                                                                                                               | \$2,247                                                 | \$173,439                                              | 9.68%                                   |

<sup>1</sup> As of December 31, 2006. Maturity is approximate.

<sup>2</sup> See Chapter 5 of the 2007 *S&P 500 Valuation Edition Yearbook* for complete methodology.

<sup>3</sup> Expected return in excess of that predicted by the capital asset pricing model, also known as the beta-adjusted size premium. Underlying data provided by CRSP, the Center for Research in Security Prices. See Chapter 7 of the 2007 *S&P 500 Valuation Edition Yearbook* for methodology.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2003

Ticker      Company Name  
BNI          BURLINGTON NORTHERN SANTA FE

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.54                         | 2.74   | 0.11  | 0.53        | 0.54          | 0.40     | 0.35          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.59                           | 3.55      | -1.30    | -6.55      | 2.14     | 14.17      | 0.39     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta                      OLS estimate of levered beta  
t-Stat                          t-statistic for the OLS estimator of levered beta  
R-Sqr                          R-squared statistic for the OLS regression  
Pr Grp Beta                  Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta                Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta                      OLS estimate of unlevered beta  
Ibbotson Beta                Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta                        Coefficient on excess market return  
FF t-Stat                      t-statistic for the market coefficient  
SMB Prem                    "Small minus big" premium for the size factor  
SMB t-Stat                    t-statistic for the SMB coefficient  
HML Prem                    "High minus low" premium for the book/market factor  
HML t-Stat                    t-statistic for the HML coefficient  
FF R-Sqr                      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM                          Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size                Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French                Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2004

Ticker      Company Name  
BNI      BURLINGTON NORTHERN SANTA FE

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.59                         | 3.38   | 0.16  | 0.57        | 0.59          | 0.46     | 0.43          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.59                           | 3.84      | -1.05    | -5.55      | 1.99     | 13.01      | 0.39     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Data Updated Through December 2005

Ticker      Company Name  
BNI      BURLINGTON NORTHERN SANTA FE

#### CAPM: Ordinary Least Squares

| Levered  |        |       |             |               | Unlevered |               |
|----------|--------|-------|-------------|---------------|-----------|---------------|
| Raw Beta | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta  | Ibbotson Beta |
| 0.64     | 4.08   | 0.22  | 0.72        | 0.64          | 0.53      | 0.51          |

#### Fama-French Three-Factor Model

| FF Beta | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
|---------|-----------|----------|------------|----------|------------|----------|
| 0.63    | 3.82      | -0.58    | -2.61      | 1.43     | 5.88       | 0.25     |

#### CAPM: Ordinary Least Squares

##### Levered

|               |                                                            |
|---------------|------------------------------------------------------------|
| Raw Beta      | OLS estimate of levered beta                               |
| t-Stat        | t-statistic for the OLS estimator of levered beta          |
| R-Sqr         | R-squared statistic for the OLS regression                 |
| Pr Grp Beta   | Peer group beta (sales-weighted average of industry betas) |
| Ibbotson Beta | Weighted average of regression beta and peer group beta    |

##### Unlevered

|               |                                                                             |
|---------------|-----------------------------------------------------------------------------|
| Raw Beta      | OLS estimate of unlevered beta                                              |
| Ibbotson Beta | Weighted average of unlevered regression beta and unlevered peer group beta |

#### Fama-French Three-Factor Model

|            |                                                     |
|------------|-----------------------------------------------------|
| FF Beta    | Coefficient on excess market return                 |
| FF t-Stat  | t-statistic for the market coefficient              |
| SMB Prem   | "Small minus big" premium for the size factor       |
| SMB t-Stat | t-statistic for the SMB coefficient                 |
| HML Prem   | "High minus low" premium for the book/market factor |
| HML t-Stat | t-statistic for the HML coefficient                 |
| FF R-Sqr   | R-squared for the three-factor multiple regression  |

#### Cost of Equity Examples

|             |                                                                        |
|-------------|------------------------------------------------------------------------|
| CAPM        | Risk-Free Rate + (Beta x Equity Risk Premium)                          |
| CAPM + Size | Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium           |
| Fama-French | Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem |

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Resources

<http://global.morningstar.com/US/CofCResources>

### Company Beta Analysis

Data Updated Through December 2006

Ticker      Company Name  
BNI      BURLINGTON NORTHERN SANTA FE

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.82                         | 4.15   | 0.23  | 0.80        | 0.82          | 0.68     | 0.65          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.90                           | 4.06      | 0.33     | 1.18       | -1.74    | -4.90      | 0.25     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson Associates' SBB<sup>1</sup> Valuation Edition Yearbook. The entire database of approximately 5,000 company betas can be purchased in print form in Ibbotson's Beta Book. Please call 888-298-3647 or visit <http://global.morningstar.com/US/Advisors> for details.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2003

Ticker      Company Name  
CSX          CSX CORP

#### CAPM: Ordinary Least Squares

| Levered  |        |       |             |               | Unlevered |               |
|----------|--------|-------|-------------|---------------|-----------|---------------|
| Raw Beta | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta  | Ibbotson Beta |
| 0.59     | 2.57   | 0.10  | 0.57        | 0.59          | 0.40      | 0.31          |

#### Fama-French Three-Factor Model

| FF Beta | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
|---------|-----------|----------|------------|----------|------------|----------|
| 0.64    | 3.18      | 0.10     | 0.44       | 3.30     | 18.21      | 0.35     |

#### CAPM: Ordinary Least Squares

##### Levered

|               |                                                            |
|---------------|------------------------------------------------------------|
| Raw Beta      | OLS estimate of levered beta                               |
| t-Stat        | t-statistic for the OLS estimator of levered beta          |
| R-Sqr         | R-squared statistic for the OLS regression                 |
| Pr Grp Beta   | Peer group beta (sales-weighted average of industry betas) |
| Ibbotson Beta | Weighted average of regression beta and peer group beta    |

##### Unlevered

|               |                                                                             |
|---------------|-----------------------------------------------------------------------------|
| Raw Beta      | OLS estimate of unlevered beta                                              |
| Ibbotson Beta | Weighted average of unlevered regression beta and unlevered peer group beta |

#### Fama-French Three-Factor Model

|            |                                                     |
|------------|-----------------------------------------------------|
| FF Beta    | Coefficient on excess market return                 |
| FF t-Stat  | t-statistic for the market coefficient              |
| SMB Prem   | "Small minus big" premium for the size factor       |
| SMB t-Stat | t-statistic for the SMB coefficient                 |
| HML Prem   | "High minus low" premium for the book/market factor |
| HML t-Stat | t-statistic for the HML coefficient                 |
| FF R-Sqr   | R-squared for the three-factor multiple regression  |

#### Cost of Equity Examples

|             |                                                                        |
|-------------|------------------------------------------------------------------------|
| CAPM        | Risk-Free Rate + (Beta x Equity Risk Premium)                          |
| CAPM + Size | Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium           |
| Fama-French | Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem |

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2004

Ticker      Company Name  
CSX          CSX CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.73                         | 3.47   | 0.17  | 0.58        | 0.73          | 0.50     | 0.40          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.71                           | 3.55      | -0.25    | -1.02      | 2.38     | 11.93      | 0.30     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta                      OLS estimate of levered beta  
t-Stat                            t-statistic for the OLS estimator of levered beta  
R-Sqr                            R-squared statistic for the OLS regression  
Pr Grp Beta                    Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta                 Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta                      OLS estimate of unlevered beta  
Ibbotson Beta                 Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta                        Coefficient on excess market return  
FF t-Stat                       t-statistic for the market coefficient  
SMB Prem                     "Small minus big" premium for the size factor  
SMB t-Stat                     t-statistic for the SMB coefficient  
HML Prem                     "High minus low" premium for the book/market factor  
HML t-Stat                     t-statistic for the HML coefficient  
FF R-Sqr                       R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM                          Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size                 Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French                 Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Data Updated Through December 2005

Ticker      Company Name  
CSX          CSX CORP

| CAPM: Ordinary Least Squares |        |       |             |               |           |               |  |
|------------------------------|--------|-------|-------------|---------------|-----------|---------------|--|
| Levered                      |        |       |             |               | Unlevered |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta  | Ibbotson Beta |  |
| 0.83                         | 4.59   | 0.27  | 0.72        | 0.83          | 0.59      | 0.50          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.77                           | 4.04      | 0.03     | 0.13       | 1.94     | 6.92       | 0.30     |  |

#### CAPM Ordinary Least Squares

##### Levered

Raw Beta                      OLS estimate of levered beta  
t-Stat                          t-statistic for the OLS estimator of levered beta  
R-Sqr                          R-squared statistic for the OLS regression  
Pr Grp Beta                  Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta                Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta                      OLS estimate of unlevered beta  
Ibbotson Beta                Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta                        Coefficient on excess market return  
FF t-Stat                      t-statistic for the market coefficient  
SMB Prem                    "Small minus big" premium for the size factor  
SMB t-Stat                    t-statistic for the SMB coefficient  
HML Prem                    "High minus low" premium for the book/market factor  
HML t-Stat                    t-statistic for the HML coefficient  
FF R-Sqr                      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM                          Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size                Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French                Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Resources

<http://global.morningstar.com/US/CofCResources>

### Company Beta Analysis

Data Updated Through December 2006

Ticker      Company Name  
CSX          CSX CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.97                         | 4.68   | 0.27  | 0.75        | 0.97          | 0.76     | 0.69          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 1.11                           | 4.83      | 0.32     | 1.08       | -2.76    | -7.51      | 0.31     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta                      OLS estimate of levered beta  
t-Stat                          t-statistic for the OLS estimator of levered beta  
R-Sqr                          R-squared statistic for the OLS regression  
Pr Grp Beta                  Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta                Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta                      OLS estimate of unlevered beta  
Ibbotson Beta                Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta                        Coefficient on excess market return  
FF t-Stat                      t-statistic for the market coefficient  
SMB Prem                    "Small minus big" premium for the size factor  
SMB t-Stat                    t-statistic for the SMB coefficient  
HML Prem                    "High minus low" premium for the book/market factor  
HML t-Stat                    t-statistic for the HML coefficient  
FF R-Sqr                      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM                          Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size                Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French                Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium and size premium can be found in Ibbotson Associates' S&P Valuation Edition Yearbook. The entire database of approximately 5,000 company betas can be purchased in print form in Ibbotson's Beta Book. Please call 888-298-3647 or visit <http://global.morningstar.com/US/Advisors> for details.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2003

Ticker      Company Name  
NSC      NORFOLK SOUTHERN CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.49                         | 1.73   | 0.05  | 0.53        | 0.49          | 0.34     | 0.27          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.54                           | 2.35      | 0.74     | 2.71       | 4.79     | 23.03      | 0.39     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2004

Ticker      Company Name  
NSC      NORFOLK SOUTHERN CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|
| Levered                      |        |       |             | Unlevered     |          |               |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |
| 0.61                         | 2.26   | 0.08  | 0.57        | 0.61          | 0.45     | 0.40          |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.54                           | 2.26      | 0.60     | 2.06       | 4.52     | 19.03      | 0.34     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Data Updated Through December 2005

Ticker      Company Name  
NSC      NORFOLK SOUTHERN CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.89                         | 3.76   | 0.20  | 0.72        | 0.89          | 0.70     | 0.64          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.77                           | 3.08      | 1.07     | 3.18       | 1.93     | 5.26       | 0.23     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Resources

<http://global.morningstar.com/US/CofCResources>

### Company Beta Analysis

Data Updated Through December 2006

Ticker      Company Name  
NSC      NORFOLK SOUTHERN CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.74                         | 2.67   | 0.11  | 0.80        | 0.74          | 0.59     | 0.55          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.74                           | 2.42      | 2.16     | 5.58       | -1.92    | -3.92      | 0.16     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium and size premium can be found in Ibbotson Associates' SBBI Valuation Edition Yearbook. The entire database of approximately 5,000 company betas can be purchased in print form in Ibbotson's Beta Book. Please call 888-298-3647 or visit <http://global.morningstar.com/US/Advisors> for details.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2003

Ticker      Company Name  
UNP      UNION PACIFIC CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.48                         | 2.50   | 0.10  | 0.53        | 0.48          | 0.36     | 0.32          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.52                           | 2.90      | -0.66    | -3.10      | 1.77     | 10.97      | 0.25     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Date Updated Through December 2004

Ticker      Company Name  
UNP      UNION PACIFIC CORP

| CAPM: Ordinary Least Squares |        |       |             |               |           |               |  |
|------------------------------|--------|-------|-------------|---------------|-----------|---------------|--|
| Levered                      |        |       |             |               | Unlevered |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta  | Ibbotson Beta |  |
| 0.37                         | 2.22   | 0.08  | 0.57        | 0.37          | 0.28      | 0.26          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.34                           | 2.17      | 0.06     | 0.33       | 2.03     | 12.91      | 0.23     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Center

www.ibbotson.com

### Company Beta Analysis

Data Updated Through December 2005

**Ticker**      **Company Name**  
UNP      UNION PACIFIC CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.59                         | 3.91   | 0.21  | 0.72        | 0.59          | 0.46     | 0.43          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |  |
|--------------------------------|-----------|----------|------------|----------|------------|----------|--|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |  |
| 0.54                           | 3.39      | 0.77     | 3.59       | -0.08    | -0.35      | 0.22     |  |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium, and size premium can be found in Ibbotson's *Stocks, Bonds, Bills, and Inflation Valuation Edition Yearbook*. The entire database of company betas can be purchased in print form in Ibbotson's *Beta Book*.

## The Cost of Capital Resources

<http://global.morningstar.com/US/CofCResources>

### Company Beta Analysis

Data Updated Through December 2006

Ticker      Company Name  
UNP      UNION PACIFIC CORP

| CAPM: Ordinary Least Squares |        |       |             |               |          |               |  |
|------------------------------|--------|-------|-------------|---------------|----------|---------------|--|
| Levered                      |        |       |             | Unlevered     |          |               |  |
| Raw Beta                     | t-Stat | R-sqr | Pr Grp Beta | Ibbotson Beta | Raw Beta | Ibbotson Beta |  |
| 0.67                         | 3.68   | 0.19  | 0.80        | 0.68          | 0.55     | 0.52          |  |

| Fama-French Three-Factor Model |           |          |            |          |            |          |
|--------------------------------|-----------|----------|------------|----------|------------|----------|
| FF Beta                        | FF t-Stat | SMB Prem | SMB t-Stat | HML Prem | HML t-Stat | FF R-Sqr |
| 0.76                           | 3.80      | 0.76     | 2.98       | -2.34    | -7.28      | 0.24     |

#### CAPM: Ordinary Least Squares

##### Levered

Raw Beta      OLS estimate of levered beta  
t-Stat      t-statistic for the OLS estimator of levered beta  
R-Sqr      R-squared statistic for the OLS regression  
Pr Grp Beta      Peer group beta (sales-weighted average of industry betas)  
Ibbotson Beta      Weighted average of regression beta and peer group beta

##### Unlevered

Raw Beta      OLS estimate of unlevered beta  
Ibbotson Beta      Weighted average of unlevered regression beta and unlevered peer group beta

#### Fama-French Three-Factor Model

FF Beta      Coefficient on excess market return  
FF t-Stat      t-statistic for the market coefficient  
SMB Prem      "Small minus big" premium for the size factor  
SMB t-Stat      t-statistic for the SMB coefficient  
HML Prem      "High minus low" premium for the book/market factor  
HML t-Stat      t-statistic for the HML coefficient  
FF R-Sqr      R-squared for the three-factor multiple regression

#### Cost of Equity Examples

CAPM      Risk-Free Rate + (Beta x Equity Risk Premium)  
CAPM + Size      Risk-Free Rate + (Beta x Equity Risk Premium) + Size Premium  
Fama-French      Risk-Free Rate + (FF Beta x Equity Risk Premium) + SMB Prem + HML Prem

Estimates for the risk-free rate, equity risk premium and size premium can be found in Ibbotson Associates' S&P Valuation Edition Yearbook. The entire database of approximately 5,000 company betas can be purchased in print form in Ibbotson's Beta Book. Please call 888-298-3647 or visit <http://global.morningstar.com/US/Advisors> for details.



Market Yield on U.S. Treasury Securities at 20-Year Constant Maturity, Quoted on Investment Basis

|    | 2003           |              | 2004           |              | 2005           |              | 2006           |              |
|----|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
|    | Month<br>(1)   | Yield<br>(2) | Month<br>(3)   | Yield<br>(4) | Month<br>(5)   | Yield<br>(6) | Month<br>(7)   | Yield<br>(8) |
| 1  | January 2003   | 5.02%        | January 2004   | 5.01%        | January 2005   | 4.77%        | January 2006   | 4.65%        |
| 2  | February 2003  | 4.87         | February 2004  | 4.94         | February 2005  | 4.61         | February 2006  | 4.73         |
| 3  | March 2003     | 4.82         | March 2004     | 4.72         | March 2005     | 4.89         | March 2006     | 4.91         |
| 4  | April 2003     | 4.91         | April 2004     | 5.16         | April 2005     | 4.75         | April 2006     | 5.22         |
| 5  | May 2003       | 4.52         | May 2004       | 5.46         | May 2005       | 4.56         | May 2006       | 5.35         |
| 6  | June 2003      | 4.34         | June 2004      | 5.45         | June 2005      | 4.35         | June 2006      | 5.29         |
| 7  | July 2003      | 4.92         | July 2004      | 5.24         | July 2005      | 4.48         | July 2006      | 5.25         |
| 8  | August 2003    | 5.39         | August 2004    | 5.07         | August 2005    | 4.53         | August 2006    | 5.08         |
| 9  | September 2003 | 5.21         | September 2004 | 4.89         | September 2005 | 4.51         | September 2006 | 4.93         |
| 10 | October 2003   | 5.21         | October 2004   | 4.85         | October 2005   | 4.74         | October 2006   | 4.94         |
| 11 | November 2003  | 5.17         | November 2004  | 4.89         | November 2005  | 4.83         | November 2006  | 4.78         |
| 12 | December 2003  | 5.11         | December 2004  | 4.88         | December 2005  | 4.73         | December 2006  | 4.78         |
| 13 | Simple Average | 4.96%        | Simple Average | 5.05%        | Simple Average | 4.65%        | Simple Average | 4.99%        |

Source: United States Treasury



**Railroad Industry Unlevered Beta – 2003 to 2006**

| <b><u>Company</u></b><br><b>(1)</b>           | <b><u>Unlevered<br/>Beta 1/</u></b><br><b>(2)</b> | <b><u>Railroad<br/>Weights 2/</u></b><br><b>(3)</b> | <b><u>Weighted<br/>Average 3/</u></b><br><b>(4)</b> |
|-----------------------------------------------|---------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| <b><u>2003</u></b>                            |                                                   |                                                     |                                                     |
| 1 Burlington Northern Santa Fe Corporation    | 0.40                                              | 26.02%                                              | 0.104                                               |
| 2 CSX Corporation                             | 0.40                                              | 16.42%                                              | 0.066                                               |
| 3 Norfolk Southern Corporation                | 0.34                                              | 19.48%                                              | 0.066                                               |
| 4 Union Pacific Corporation                   | 0.36                                              | 38.08%                                              | <u>0.137</u>                                        |
| 5 Railroad Industry Unlevered Beta <u>4/</u>  | ---                                               | ---                                                 | 0.37                                                |
| <b><u>2004</u></b>                            |                                                   |                                                     |                                                     |
| 6 Burlington Northern Santa Fe Corporation    | 0.46                                              | 28.70%                                              | 0.132                                               |
| 7 CSX Corporation                             | 0.50                                              | 15.18%                                              | 0.076                                               |
| 8 Norfolk Southern Corporation                | 0.45                                              | 22.56%                                              | 0.102                                               |
| 9 Union Pacific Corporation                   | 0.28                                              | 33.56%                                              | <u>0.094</u>                                        |
| 10 Railroad Industry Unlevered Beta <u>4/</u> | ---                                               | ---                                                 | 0.40                                                |
| <b><u>2005</u></b>                            |                                                   |                                                     |                                                     |
| 11 Burlington Northern Santa Fe Corporation   | 0.53                                              | 32.20%                                              | 0.171                                               |
| 12 CSX Corporation                            | 0.59                                              | 14.95%                                              | 0.088                                               |
| 13 Norfolk Southern Corporation               | 0.70                                              | 24.56%                                              | 0.172                                               |
| 14 Union Pacific Corporation                  | 0.46                                              | 28.29%                                              | <u>0.130</u>                                        |
| 15 Railroad Industry Unlevered Beta <u>4/</u> | ---                                               | ---                                                 | 0.56                                                |
| <b><u>2006</u></b>                            |                                                   |                                                     |                                                     |
| 16 Burlington Northern Santa Fe Corporation   | 0.68                                              | 32.21%                                              | 0.219                                               |
| 17 CSX Corporation                            | 0.76                                              | 16.13%                                              | 0.123                                               |
| 18 Norfolk Southern Corporation               | 0.59                                              | 24.25%                                              | 0.143                                               |
| 19 Union Pacific Corporation                  | 0.55                                              | 27.41%                                              | <u>0.151</u>                                        |
| 20 Railroad Industry Unlevered Beta <u>4/</u> | ---                                               | ---                                                 | 0.64                                                |

1/ Ibbotson Associates

2/ STB Ex Parte No. 558 decisions and Rocky VS

3/ Column (2) x Column (3)

4/ Sum of Column (4) for each year



**Railroad Industry Weighted Average Cost Of Capital Under The CAPM Approach – 2003 To 2006**

| Item<br>(1)                                  | Source<br>(2)             | Railroad Industry COC |             |             |             |
|----------------------------------------------|---------------------------|-----------------------|-------------|-------------|-------------|
|                                              |                           | 2003<br>(3)           | 2004<br>(4) | 2005<br>(5) | 2006<br>(6) |
| <b><u>Calculation of Levered Beta</u></b>    |                           |                       |             |             |             |
| 1 Railroad Industry Debt to Equity Ratio     |                           |                       |             |             |             |
| a Debt Portion of Capital Structure          | STB/AAR 1/                | 42.8%                 | 38.5%       | 30.4%       | 22.8%       |
| b Equity Portion of Capital Structure        | STB/AAR 1/                | 57.2%                 | 61.5%       | 69.6%       | 77.2%       |
| c Debt/Equity Ratio                          | Line 1a – Line 1b         | 0.75                  | 0.63        | 0.44        | 0.30        |
| 2 Railroad Industry Unlevered Beta           | Exhibit No 5              | 0.37                  | 0.40        | 0.56        | 0.64        |
| 3 Railroad Industry Levered Beta             | (1+ Line 1c) x Line 2     | 0.65                  | 0.66        | 0.81        | 0.82        |
| <b><u>Calculation of Cost of Equity</u></b>  |                           |                       |             |             |             |
| 4 Average Risk Free Rate                     | Exhibit No 4              | 4.96%                 | 5.05%       | 4.65%       | 4.99%       |
| 5 Railroad Risk Premium                      |                           |                       |             |             |             |
| a Equity Risk Premium                        | Exhibit No 3              | 7.20%                 | 7.20%       | 7.10%       | 7.10%       |
| b Railroad Industry Levered Beta             | Line 3                    | 0.65                  | 0.66        | 0.81        | 0.82        |
| c Railroad Industry Risk Premium             | Line 5a x Line 5b         | 4.70%                 | 4.72%       | 5.72%       | 5.84%       |
| 6 Railroad Industry Size Premium             | Exhibit No 7              | 0.18%                 | 0.27%       | 0.04%       | -0.20%      |
| 7 Railroad Industry Cost of Equity           | Line 4 + Line 5c + Line 6 | 9.83%                 | 10.04%      | 10.41%      | 10.64%      |
| <b><u>Calculation of Cost of Capital</u></b> |                           |                       |             |             |             |
| 8 Weighted Cost of Equity                    |                           |                       |             |             |             |
| a Railroad Industry Cost of Equity           | Line 7                    | 9.83%                 | 10.04%      | 10.41%      | 10.64%      |
| b Equity Portion of Capital Structure        | Line 1b                   | 57.2%                 | 61.5%       | 69.6%       | 77.2%       |
| c Weighted Cost of Railroad Industry Equity  | Line 8a x Line 8b         | 5.62%                 | 6.18%       | 7.24%       | 8.21%       |
| 9 Weighted Cost of Debt                      |                           |                       |             |             |             |
| a Railroad Industry Cost of Debt             | STB/AAR 1/                | 5.00%                 | 5.25%       | 5.36%       | 5.97%       |
| b Debt Portion of Capital Structure          | Line 1a                   | 42.8%                 | 38.5%       | 30.4%       | 22.8%       |
| c Weighted Cost of Railroad Industry Debt    | Line 9a x Line 9b         | 2.14%                 | 2.02%       | 1.63%       | 1.36%       |
| 10 Weighted Average Cost of Capital          | Line 8c + Line 9c         | 7.76%                 | 8.20%       | 8.87%       | 9.57%       |

1/ Sources STB 2003, 2004 and 2005 decisions in Ex Parte No 558, and Rockies VS



**2003 Railroad Industry Size Premium**

|   | <u>Company</u><br>(1)                    | <u>2003 Average Market Capitalization 1/</u><br>(2) | <u>Capitalization Decile Rank 2/</u><br>(3) | <u>Size Premium 2/</u><br>(4) | <u>Railroad Weights 1/</u><br>(5) | <u>Weighted Average 3/</u><br>(6) |
|---|------------------------------------------|-----------------------------------------------------|---------------------------------------------|-------------------------------|-----------------------------------|-----------------------------------|
| 1 | Burlington Northern Santa Fe Corporation | \$10,404,921,932                                    | 2                                           | 0.50%                         | 26.02%                            | 0.0013                            |
| 2 | CSX Corporation                          | 6,568,313,172                                       | 2                                           | 0.50%                         | 16.42%                            | 0.0008                            |
| 3 | Norfolk Southern Corporation             | 7,788,504,282                                       | 2                                           | 0.50%                         | 19.48%                            | 0.0010                            |
| 4 | Union Pacific Corporation                | 15,227,799,231                                      | 1                                           | -0.34%                        | 38.08%                            | -0.0013                           |
| 5 | 2003 Railroad Industry Size Premium 4/   | ---                                                 | ---                                         | ---                           | ---                               | 0.18%                             |

1/ STB Ex Parte No. 558 (Sub-No. 7), Railroad Cost of Capital - 2003, served June 28, 2004

2/ Ibbotson Associates Risk Premium over Time Report 2004 For the year end 2003, companies with market capitalizations greater than \$11.367 billion were in the top decile of publicly traded stocks and companies with market capitalizations between \$4.809 billion and \$11.367 billion were in the second decile

3/ Column (4) x Column (5)

4/ Sum of Lines 1 to 4



**2005 Railroad Industry Size Premium**

|   | <b><u>Company</u></b><br><b>(1)</b>      | <b>2005 Average<br/>Market<br/>Capitalization 1/<br/>(2)</b> | <b>Capitalization<br/>Decile Rank 2/<br/>(3)</b> | <b>Size<br/>Premium 2/<br/>(4)</b> | <b>Railroad<br/>Weights 1/<br/>(5)</b> | <b>Weighted<br/>Average 3/<br/>(6)</b> |
|---|------------------------------------------|--------------------------------------------------------------|--------------------------------------------------|------------------------------------|----------------------------------------|----------------------------------------|
| 1 | Burlington Northern Santa Fe Corporation | \$20,253,925,358                                             | 1                                                | -0.37%                             | 32.20%                                 | -0.0012                                |
| 2 | CSX Corporation                          | 9,402,561,373                                                | 2                                                | 0.67%                              | 14.95%                                 | 0.0010                                 |
| 3 | Norfolk Southern Corporation             | 15,449,669,248                                               | 2                                                | 0.67%                              | 24.56%                                 | 0.0016                                 |
| 4 | Union Pacific Corporation                | 17,792,912,666                                               | 1                                                | -0.37%                             | 28.29%                                 | -0.0010                                |
| 5 | 2005 Railroad Industry Size Premium 4/   | ---                                                          | ---                                              | ---                                | ---                                    | 0.04%                                  |

1/ SIFB Ex Parte No. 558 (Sub-No. 9), Railroad Cost of Capital - 2005, Serv. of September 20, 2006

2/ Ibbotson Associates Risk Premium over Time Report 2006. For the year end 2005, companies with market capitalizations greater than \$16.091 billion were in the top decile of publicly traded stocks, and companies with market capitalizations between \$7.189 billion and \$16.091 billion were in the second decile.

3/ Column (4) x Column (5)

4/ Sum of Lines 1 to 4

2006 Railroad Industry Size Premium

|   | <u>Company</u><br>(1)                    | <u>2006 Average Market Capitalization 1/</u><br>(2) | <u>Capitalization 1/<br/>Decile Rank 2/</u><br>(3) | <u>Size Premium 2/<br/>Premium 3/</u><br>(4) | <u>Railroad Weights 1/<br/>Weights 2/</u><br>(5) | <u>Weighted Average 3/<br/>Average 4/</u><br>(6) |
|---|------------------------------------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| 1 | Burlington Northern Santa Fe Corporation | \$27,994,145                                        | 1                                                  | -0.36%                                       | 32.21%                                           | -0.0012                                          |
| 2 | CSX Corporation                          | 14,014,642                                          | 2                                                  | 0.65%                                        | 16.13%                                           | 0.0010                                           |
| 3 | Norfolk Southern Corporation             | 21,078,649                                          | 1                                                  | -0.36%                                       | 24.25%                                           | -0.0009                                          |
| 4 | Union Pacific Corporation                | 23,816,921                                          | 1                                                  | -0.36%                                       | 27.41%                                           | -0.0010                                          |
| 5 | 2006 Railroad Industry Size Premium 4/   | ---                                                 | ---                                                | ---                                          | ---                                              | -0.20%                                           |

1/ Rocky VS at 7, (000's)

2/ Ibbotson Associates Risk Premia over Time Report 2007 For the year end 2006, companies with market capitalizations greater than \$16.821 billion were in the top decile of publicly traded stocks, and companies with market capitalizations between \$7.847 billion and \$16.821 billion were in the second decile

3/ Column (4) x Column (5)

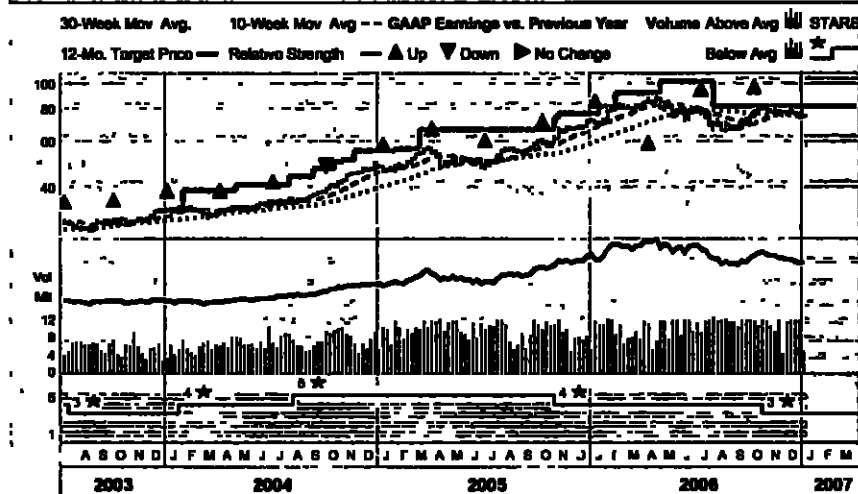
4/ Sum of Lines 1 to 4



# Exhibit No. 8

**Burlington Northern Santa Fe Corp****STANDARD  
& POOR'S****S&P Recommendation** **HOLD** ★★☆☆☆**Price**  
\$73.81 (as of Dec 29, 2008)**12-Mo Target Price**  
\$80.00**Investment Style**  
Large-Cap Growth**GICS Sector** Industrials  
**Sub-Industry** Railroads**Comment** Through BNSF Railway Co. (formerly The Burlington Northern and Santa Fe Railway Co.), BNSF owns one of the largest railroad networks in the U.S.**Key Stock Statistics** (Source: S&P Vickers, company reports)

|                          |               |                    |      |                             |          |                     |        |
|--------------------------|---------------|--------------------|------|-----------------------------|----------|---------------------|--------|
| 52-Wk Range              | \$87.99-63.80 | S&P Oper EPS 2006E | 4.99 | P/E on S&P Oper EPS 2006E   | 14.8     | Dividend Rate/Share | \$1.00 |
| Trailing 12-Month EPS    | \$4.81        | S&P Oper EPS 2007E | 5.80 | Common Shares Outstg (M)    | 359.2    | Yield (%)           | 1.35   |
| Trailing 12-Month P/E    | 15.4          | S&P Core EPS 2006E | 4.93 | Market Capitalization(B)    | \$26.513 | Beta                | 0.84   |
| \$10K Invested 5 Yrs Ago | \$28,908      | S&P Core EPS 2007E | 5.58 | Institutional Ownership (%) | 78       | S&P Credit Rating   | BBB+   |

**Price Performance**

Analysis prepared by Kevin Kirkaby on November 02, 2006, when the stock traded at \$78.33.

**Highlights**

- We expect revenue growth of 16% in 2006, with volumes rising around 7%, while pricing and fuel surcharges increase close to 8%. Strong gains in intermodal and coal are projected to continue through 2007, contributing to another year of 7% volume growth. Intermodal is expected to attract additional volumes from logistics and trucking companies, while coal should benefit from network enhancements allowing greater throughput. We see pricing gains slowing in 2007 to 3% (for an overall revenue increase of 10%) as fewer contracts are up for renewal and fuel surcharges stabilize.
- We project an operating margin of approximately 23% in 2006, as we see the positive impact of higher pricing, more efficient asset utilization, and cost controls outweighing the impact of higher labor costs and depreciation charges. For 2007, margins should be relatively unchanged as we see productivity gains offsetting cost increases, mostly labor.
- We estimate that 2006 EPS will rise 20% to \$4.99 in 2006, including about \$0.05 per share in projected option expense. We see EPS increasing 12% to \$5.80 in 2007.

**Investment Rationale/Risk**

- We believe BNSF will continue to benefit from above-average revenue growth, driven by its outsized exposure to the intermodal transport, coal and grain markets. Yet, following nearly three years of revenue growth exceeding 15%, we expect momentum to slow. For the 2007-2012 period, we forecast compound annual revenue growth of 7%. Given our view of slowing top-line growth combined with fewer opportunities for margin enhancement, we would not add to positions.
- Risks to our opinion and target price include weaker than expected economic and freight growth, declines in railroad system fluidity, unfavorable changes in international trade flows, a reduction in coal mine output, and a higher than expected rise in interest rates.
- Our DCF model, which assumes an 8.6% weighted average cost of capital, 9% annual growth in free cash flow over the next 10 years, and 4% terminal growth, calculates an intrinsic value of \$90. We believe an enterprise value to 12-month forward EBITDA ratio of 6.5X, which is the 10-year average, is appropriate, leading to a value of \$70. Combining these models, our 12-month target price is \$80.

**Qualitative Risk Assessment**

| LOW | MEDIUM | HIGH |
|-----|--------|------|
|-----|--------|------|

Our risk assessment reflects what we believe is BNSF's strong profitability, cash flow generation, and balance sheet, and a diverse customer base, offset somewhat by its exposure to economic cycles, freight demand, and regulations.

**Quantitative Evaluation****S&P Quality Ranking**

|   |   |    |   |    |    |   |    |
|---|---|----|---|----|----|---|----|
| D | C | B- | B | B+ | A- | A | A+ |
|---|---|----|---|----|----|---|----|

**Relative Strength Rank**

|    |      |
|----|------|
| 27 | WEAK |
|----|------|

LOWEST = 1

HIGHEST = 89

**Revenue/Earnings Data****Revenue (Million \$)**

|      | 1Q    | 2Q    | 3Q    | 4Q    | Year   |
|------|-------|-------|-------|-------|--------|
| 2006 | 3,463 | 3,701 | 3,939 | --    | --     |
| 2005 | 2,982 | 3,138 | 3,317 | 3,550 | 12,987 |
| 2004 | 2,490 | 2,685 | 2,793 | 2,978 | 10,946 |
| 2003 | 2,232 | 2,294 | 2,395 | 2,492 | 9,413  |
| 2002 | 2,163 | 2,207 | 2,308 | 2,301 | 8,979  |
| 2001 | 2,283 | 2,271 | 2,343 | 2,301 | 9,208  |

**Earnings Per Share (\$)**

|      | 1Q   | 2Q   | 3Q   | 4Q    | Year  |
|------|------|------|------|-------|-------|
| 2006 | 1.09 | 1.27 | 1.33 | E1.34 | E4.99 |
| 2005 | 0.83 | 0.96 | 1.09 | 1.13  | 4.01  |
| 2004 | 0.52 | 0.67 | 0.61 | 0.91  | 2.10  |
| 2003 | 0.40 | 0.54 | 0.55 | 0.61  | 2.09  |
| 2002 | 0.45 | 0.51 | 0.51 | 0.54  | 2.00  |
| 2001 | 0.36 | 0.50 | 0.58 | 0.48  | 1.89  |

Fiscal year ended Dec. 31. Next earnings report expected Late January. EPS Estimates based on S&P Operating Earnings, historical GAAP earnings are as reported.

**Dividend Data** (Date, amt/M Payment Date, amt/Yr)

| Amount (\$) | Date  | Ex-Div. Date | Stk. of Record | Payment Date |
|-------------|-------|--------------|----------------|--------------|
| 0.200       | 02/14 | 03/09        | 03/13          | 04/03/06     |
| 0.200       | 04/24 | 06/08        | 06/12          | 07/03/06     |
| 0.250       | 07/20 | 09/07        | 09/11          | 10/02/06     |
| 0.250       | 10/19 | 12/08        | 12/12          | 01/02/07     |

Dividends have been paid since 1948. Source: Company reports.

# Burlington Northern Santa Fe Corp

**STANDARD  
& POOR'S**

Business Summary, November 02, 2008

**CORPORATE OVERVIEW** Burlington Northern Santa Fe Corp., through its BNSF Railway Co. subsidiary, operates the second largest U.S. rail system, delivering about 45% of rail traffic in the West, and about 23% of U.S. rail traffic. BNSF operates a rail system of about 32,000 miles (24,000 owned, 8,000 trackage rights) that spans 28 western and midwestern states and two Canadian provinces.

**MARKET PROFILE** We believe BNI's consumer/intermodal business, sensitive to U.S. import and consumption trends, is the industry volume leader, and at the heart of its competitive strategy. Consumer freight provided 41% of freight revenues in 2005 and consisted primarily of intermodal service, international container traffic, services to United Parcel Service, less-than-truckload and truckload carriers, and automotive and perishables traffic. Industrial products, sensitive to U.S. GDP trends, provided 23% of freight revenues in 2005, and was comprised of construction and building products, chemicals, and petroleum. Coal, which we believe is BNI's most profitable segment, accounted for 19% of 2005 freight revenues. A major transporter of low-sulfur coal, 90% of BNI's coal traffic originates in the Powder River Basin of Wyoming and Montana, primarily delivered to power utilities. Agricultural products, sensitive to annual crop volumes, accounted for 17% of 2005 freight revenues, including deliveries of grains, ethanol and fertilizer.

**COMPETITIVE LANDSCAPE** The U.S. rail industry has an oligopoly-like structure, with over 80% of revenues generated by the four largest railroads: BNI and Union Pacific Corp. operating on the West Coast, and CSX Corp. and Norfolk Southern Corp. operating on the East Coast. Railroads simultaneously compete for customers while cooperating by sharing assets, interfacing systems, and cooperatively fulfilling customer transports. Key suppliers include locomotive and rail equipment manufacturers, fuel suppliers, and labor. BNI's employees, about 85% of whom are unionized, enjoy above national average compensation due to their significant bargaining power.

We believe the market power of BNI's customers varies—large freight integrators and automotive, coal, and utility companies may exert significant power in contractual negotiations, while smaller customers are typically price takers, particularly when other transportation options are uncompetitive or unavailable. Railroads compete with other modes of transportation, namely trucking, shipping, and pipelines. Railroads transport about 40% of U.S. intercity freight ton-miles, but receive less than 10% of intercity revenue. Railroad rates are generally lower than trucking rates, as service is slower and less flexible than trucking, which provides most U.S. transportation.

**FINANCIAL TRENDS** We consider railroads a mature industry, and expect that U.S. rail tonnage will see 2.8% annualized growth from 2004 to 2020. However, we believe BNI has above industry average growth opportunities due to strong positions in intermodal transportation (driven by rising international trade and the outsourcing of manufacturing to Asia), and coal transportation (carrying rising volumes of relatively low-cost Powder River Basin coal longer distances). Over the past 10 years, BNI's intermodal volumes have grown at a compound annual growth rate of 6.8%, and coal carloads rose 2.5% versus 1.7% for total carloads. Helped by these forces, revenue ton miles rose 4.5%, to 597 billion in 2005, while freight revenue per thousand ton miles rose 12.3%, to \$21.13. We calculate that return on invested capital (ROIC) has over the past 10 years averaged 9.6% at BNI versus 6.1% for the industry. We see rising freight rates and profitability, high asset utilization, and share buybacks helping ROIC to rise from 11.9% in 2005 to 12.6% in 2007.

## Corporate Information

**Investor Contact**  
J. Ayers (817-352-4813)

**Office**  
2650 Lou Menk Dr, Fort Worth, TX 76131-2830

**Telephone**  
800-795-2673

**Email**  
investorrelations@bnsf.com

**Website**  
<http://www.bnsf.com>

## Officers

**Chairman, Pres. & CEO**  
M. K. Rose

**EVP & CFO**  
T. N. Hund

**EVP & Secy**  
J. R. Moreland

**Board of Directors**  
A. L. Boockman  
D. G. Cook  
V. S. Martinez  
M. F. Racicot  
R. S. Roberts  
M. K. Rose  
M. J. Shapiro  
J. C. Wetts, Jr.  
R. H. West  
J. S. Whisler  
E. E. Whitacre, Jr.

**Domicile**  
Delaware

**Founded**  
1994

**Employees**  
40,000

**Stockholders**  
35,000

## Burlington Northern Santa Fe Corp

## Quantitative Evaluations

|                                                                                                                     |    |                |
|---------------------------------------------------------------------------------------------------------------------|----|----------------|
| S&P Fair Value Rank                                                                                                 | 5+ |                |
|                                                                                                                     |    | LOWEST HIGHEST |
| Based on S&P's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5+). |    |                |

|                        |         |                                                                                                                                                  |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Fair Value Calculation | \$80.30 | Analysis of the stock's current worth, based on S&P's proprietary quantitative model suggests that BMI is slightly undervalued by 37.09 or 9.8%. |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |                          |
|-----------------------------------------------------------------------------------|--------------------------|
| Investability Quotient Percentile                                                 |                          |
|                                                                                   | LOWEST = 1 HIGHEST = 100 |
| BMI scored higher than 80% of all companies for which an S&P Report is available. |                          |

|                                                          |                        |
|----------------------------------------------------------|------------------------|
| Volatility                                               |                        |
|                                                          | LOWEST AVERAGE HIGHEST |
| BMI has had Average price volatility over the past year. |                        |

|                      |         |                                                                           |
|----------------------|---------|---------------------------------------------------------------------------|
| Technical Evaluation | BEARISH | Since December, 2008, the technical indicators for BMI have been BEARISH. |
|----------------------|---------|---------------------------------------------------------------------------|

|                  |                               |
|------------------|-------------------------------|
| Insider Activity |                               |
|                  | UNFAVORABLE NEUTRAL FAVORABLE |

## Expanded Ratio Analysis

|                                | 2005  | 2004  | 2003  | 2002  |
|--------------------------------|-------|-------|-------|-------|
| Price/Revenue                  | 2.08  | 1.63  | 1.28  | 1.10  |
| Price/EBITDA                   | 6.78  | 6.80  | 4.68  | 3.83  |
| Price/Pretax Income            | 11.05 | 14.00 | 9.78  | 8.15  |
| Price/Net Income               | 17.66 | 22.52 | 15.90 | 13.03 |
| Avg. Diluted Shares Outstg (M) | 381.8 | 376.6 | 372.3 | 380.8 |

Figures based on calendar year end price

## Key Growth Rates and Averages

| Past Growth Rate (%) | 1 Year | 3 Years | 5 Years | 9 Years |
|----------------------|--------|---------|---------|---------|
| Sales                | 18.65  | 13.41   | 6.75    | 3.84    |
| Net Income           | 93.55  | 23.60   | 7.30    | 0.38    |

## Ratio Analysis (Annual Avg.)

|                           |       |       |       |       |
|---------------------------|-------|-------|-------|-------|
| Net Margin (%)            | 11.79 | 9.09  | 8.75  | 10.04 |
| LTD of Capitalization (%) | 27.30 | 27.38 | 28.67 | 29.11 |
| Return on Equity (%)      | 15.63 | 11.33 | 10.64 | 12.19 |

## Company Financials

| Per Share Data (\$) Year Ended Dec 31 | 2005  | 2004  | 2003  | 2002  | 2001  | 2000  | 1999  | 1998  | 1997  | 1996  |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tangible Book Value                   | 25.57 | 24.71 | 22.84 | 21.10 | 20.33 | 19.08 | 17.98 | 16.53 | 14.53 | 12.95 |
| Cash Flow                             | 6.83  | 4.79  | 4.53  | 4.44  | 4.21  | 4.52  | 4.36  | 4.17  | 3.52  | 3.52  |
| Earnings                              | 4.01  | 2.10  | 2.09  | 2.00  | 1.89  | 2.36  | 2.45  | 2.43  | 1.88  | 1.90  |
| S&P Core Earnings                     | 4.10  | 2.03  | 2.01  | 1.75  | 1.73  | NA    | NA    | NA    | NA    | NA    |
| Dividends                             | 0.74  | 0.84  | 0.54  | 0.48  | 0.49  | 0.48  | 0.48  | 0.42  | 0.40  | 0.40  |
| Payout Ratio                          | 18%   | 30%   | 26%   | 24%   | 26%   | 20%   | 20%   | 17%   | 21%   | 21%   |
| Prices:High                           | 72.00 | 49.25 | 32.50 | 31.75 | 34.00 | 29.58 | 37.94 | 35.71 | 33.65 | 30.04 |
| Prices:Low                            | 44.58 | 29.52 | 23.29 | 23.18 | 22.40 | 19.06 | 22.88 | 26.88 | 23.42 | 24.50 |
| P/E Ratio:High                        | 18    | 23    | 16    | 18    | 18    | 13    | 15    | 15    | 18    | 16    |
| P/E Ratio:Low                         | 11    | 14    | 11    | 12    | 12    | 8     | 9     | 11    | 12    | 13    |

## Income Statement Analysis (Million \$)

|                    |        |        |       |       |       |       |       |       |       |       |
|--------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Revenue            | 12,987 | 10,946 | 9,413 | 8,979 | 9,208 | 9,205 | 9,100 | 8,941 | 8,413 | 8,187 |
| Operating Income   | 3,997  | 2,698  | 2,575 | 2,587 | 2,684 | 3,003 | 3,098 | 2,990 | 2,630 | 2,508 |
| Depreciation       | 1,075  | 1,012  | 910   | 931   | 909   | 895   | 897   | 832   | 773   | 760   |
| Interest Expense   | 437    | 409    | 420   | 428   | 463   | 453   | 387   | 354   | 344   | 301   |
| Pretax Income      | 2,448  | 1,273  | 1,231 | 1,216 | 1,182 | 1,585 | 1,819 | 1,849 | 1,404 | 1,440 |
| Effective Tax Rate | 37.5%  | 37.9%  | 36.9% | 37.5% | 37.6% | 38.2% | 37.5% | 37.5% | 37.0% | 38.3% |
| Net Income         | 1,531  | 791    | 777   | 760   | 737   | 980   | 1,137 | 1,155 | 885   | 889   |
| S&P Core Earnings  | 1,563  | 767    | 743   | 687   | 676   | NA    | NA    | NA    | NA    | NA    |

## Balance Sheet &amp; Other Financial Data (Million \$)

|                                    |        |        |        |        |        |        |        |        |        |        |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cash                               | 75.0   | 322    | 18.0   | 28.0   | 26.0   | 11.0   | 22.0   | 25.0   | 31.0   | 47.0   |
| Current Assets                     | 1,880  | 1,815  | 862    | 791    | 723    | 976    | 1,066  | 1,206  | 1,234  | 1,331  |
| Total Assets                       | 30,304 | 28,925 | 26,939 | 25,767 | 24,721 | 24,375 | 23,700 | 22,680 | 21,336 | 19,846 |
| Current Liabilities                | 3,229  | 2,716  | 2,348  | 2,091  | 2,161  | 2,186  | 2,075  | 2,197  | 2,080  | 2,311  |
| Long Term Debt                     | 6,698  | 6,051  | 6,440  | 6,641  | 6,363  | 6,614  | 5,655  | 5,188  | 5,181  | 4,546  |
| Common Equity                      | 9,925  | 9,311  | 8,495  | 7,932  | 7,849  | 7,480  | 8,172  | 7,770  | 6,812  | 5,981  |
| Total Capital                      | 24,539 | 23,182 | 22,416 | 21,548 | 20,943 | 20,516 | 19,924 | 18,820 | 17,168 | 15,256 |
| Capital Expenditures               | 1,750  | 1,527  | 1,728  | 1,358  | 1,459  | 1,399  | 1,788  | 2,147  | 2,182  | 2,234  |
| Cash Flow                          | 2,606  | 1,803  | 1,687  | 1,891  | 1,646  | 1,875  | 2,034  | 1,987  | 1,658  | 1,849  |
| Current Ratio                      | 0.6    | 0.6    | 0.4    | 0.4    | 0.3    | 0.4    | 0.5    | 0.5    | 0.6    | 0.6    |
| % Long Term Debt of Capitalization | 27.3   | 26.1   | 28.7   | 30.8   | 30.4   | 32.2   | 28.4   | 27.9   | 30.2   | 29.8   |
| % Net Income of Revenue            | 11.8   | 7.2    | 8.3    | 8.5    | 8.0    | 10.6   | 12.5   | 12.9   | 10.5   | 10.9   |
| % Return on Assets                 | 5.2    | 2.8    | 2.9    | 3.0    | 3.0    | 4.1    | 4.9    | 5.2    | 4.3    | 4.7    |
| % Return on Equity                 | 15.6   | 8.9    | 9.5    | 9.6    | 9.6    | 12.5   | 14.3   | 15.8   | 13.8   | 16.1   |

Data as org. rptd., bef. results of disc. operat/spec. items. Per share data adj. for stk. divs., EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

Redistribution or reproduction is prohibited without written permission. Copyright ©2008 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

# Burlington Northern Santa Fe Corp

## Sub-Industry Outlook

Our fundamental outlook for the S&P Railroads Index is neutral. We think shipping volumes and prices will continue to benefit from a broad economic expansion continuing into 2007, and expect profits to benefit. Nevertheless, we see neutral valuation indications and are concerned that if the economy's growth rate slows further, investors may increasingly rotate out of these stocks into other groups. In addition, the industry has generally underperformed after past interest rate hikes, although past performance is not necessarily a guide to future results.

We see rail revenues rising about 12% in 2006, following an approximate 14% advance in 2005. Traffic in ton miles (weight times distance) increased about 2.4% in the U.S. in 2005, and rose 2.6% year to date through December 23, according to estimates by the Association of American Railroads. Total carloadings in 2005 rose 0.9%, and were up 1.4% year to date through December 23. Intermodal volume set a record in 2005, rising 6.4%, to 11.7 million trailers or containers, and rose 5.2% year to date through December 23 to 12.1 million. We believe that freight rates will rise modestly in the coming year, on firm freight demand and tight capacity, partially offset by smaller fuel surcharges. We believe operating earnings for major U.S. railroads rose over 20% in 2005, and expect about 20% growth in 2006. However, our expectations for railroad shares are limited by the maturing economic cycle, perceived fair valuations, high fuel and employee costs, and difficulties in managing railroad system fluidity amid higher volumes.

Our longer-term outlook for railroads is favorable, although we expect moderating revenue and profit growth in 2007. We see the industry's core traffic base (coal, grain, chemicals and intermodal) increasing in line with the economy. In addition, we

think there is room to expand margins and operating efficiency by eliminating what we view as wasteful labor practices, improving service levels, and using improving information systems to boost future operating efficiency and aid capital budgeting decisions. As a result of 2001 guidelines by the Surface Transportation Board, we see future rail mergers among the four largest U.S. railroads as unlikely.

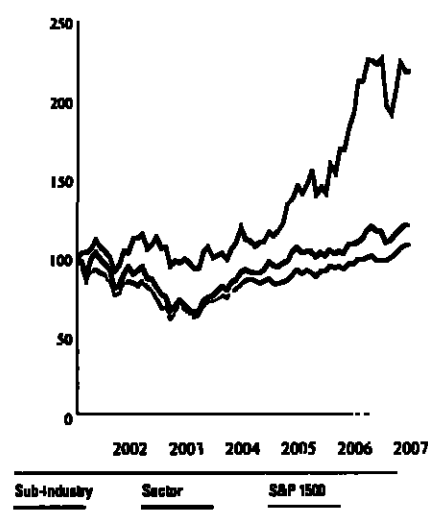
Year to date through December 20, the S&P Railroads Index was up 12.0%, versus a 13.7% increase for the S&P 1500.

-Kevin Kirkby, CFA

## Stock Performance

GICS Sector: Industrials  
Sub-Industry: Railroads

Based on S&P 1500 Indexes  
Month-end Price Performance as of 12/29/06



NOTE: All Sector & Sub Industry information is based on the Global Industry Classification Standard (GICS).

## Sub-Industry: Railroads Peer Group\*: Railroads (U.S.) - Major

| Peer Group                   | Stock Symbol | Std. Mkt. Cap (Mn \$) | Recent Stock Price | P/E Ratio | 12-Mo Trailing EPS | 30-Day Price Chg(%) | 1 Year Price Chg(%) | Beta | Yield (%) | Quality Ranking | Ret. on Equity (%) | Pretax Margin (%) | LTD to Cap (%) |
|------------------------------|--------------|-----------------------|--------------------|-----------|--------------------|---------------------|---------------------|------|-----------|-----------------|--------------------|-------------------|----------------|
| Burlington Northern Santa Fe | BMT          | 28,513                | 73.81              | 15        | 4.81               | -4%                 | 4%                  | 0.84 | 1.4       | A-              | 15.6               | 18.8              | 27.3           |
| CSX Corp                     | CSX          | 14,983                | 34.43              | 13        | 2.59               | 3%                  | 35%                 | 0.98 | 1.2       | B               | 8.8                | 12.0              | 25.3           |
| Kansas City Southern         | KSU          | 2,198                 | 28.98              | 40        | 0.72               | 6%                  | 17%                 | 1.03 | Nd        | B               | 7.5                | 5.8               | 47.5           |
| Norfolk Southern             | NSC          | 19,980                | 50.29              | 14        | 3.49               | 3%                  | 12%                 | 0.73 | 1.4       | B               | 14.8               | 19.9              | 28.4           |
| Union Pacific                | UNP          | 24,820                | 92.02              | 18        | 5.23               | 2%                  | 14%                 | 0.89 | 1.3       | B+              | 7.8                | 10.8              | 22.8           |

NA: Not Available; NM: Not Meaningful; NR: Not Rated. \*For Peer Groups with more than 15 companies or stocks, selection of issues is based on market capitalization.

# Burlington Northern Santa Fe Corp

**STANDARD  
& POOR'S**

## S&P Analyst Research Notes and other Company News

October 24, 2006

11:56 am EDT S&P DOWNGRADES SHARES OF BURLINGTON NORTHERN SANTA FE TO HOLD FROM BUY (BNI 78 13\*\*\*\*) Q3 EPS of \$1.33 vs \$1.09 vs \$0.04 ahead of our estimate, with revenue 19% higher on equal parts volume, pricing, and fuel surcharge. We expect revenue momentum to slow in '07, as we believe the majority of contracts have been repriced and about 90% of clients are now under some type of fuel recovery clause. BNI's asset utilization rates are at 10-year highs. We are increasing our '06 EPS estimate to \$4.99 from \$4.95, while '07's remains \$5.60. However, with shares bit below our target price of \$80 and valuations above 10-year average, we think BNI is fairly valued. /KKirkeby-CFA

October 24, 2006

NEW YORK (Standard & Poor's)--Oct 24, 2006, Burlington Northern Santa Fe Corp., announced 3Q EPS \$1.33 vs \$1.09 and 9 mos EPS \$3.68 vs \$2.88

July 25, 2006

09:47 am EDT. S&P REITERATES BUY RECOMMENDATION ON SHARES OF BURLINGTON NORTHERN SANTA FE (BNI 85 71\*\*\*\*) Q2 EPS of \$1.27, vs \$0.96, is above our \$1.18 estimate. Freight revenue rose 18%, reflecting 9% volume growth and an increase in fuel surcharges. The EPS upside reflects higher revenue growth than we expected, a lower-than-expected effective tax rate of 36%, and fewer shares outstanding. Given the Q2 upside and solid demand across all business units, we are raising our '06 EPS estimate to \$4.95 from \$4.88. But based on a decline in group average multiples, we are lowering our target price to \$80 from \$100, or 15.3X our forward 12-month EPS estimate of \$5.23. /J Hingher-CFA

July 25, 2006

NEW YORK (Standard & Poor's)--Jul 25, 2006, Burlington Northern Santa Fe Corp., announced 2Q EPS \$1.27 vs \$0.96 and 6 mos EPS \$2.35 vs \$1.79

April 28, 2006

NEW YORK (Standard & Poor's)--Apr 25, 2006, Burlington Northern Santa Fe Corp., announced 1Q EPS \$1.09 vs \$0.83

April 25, 2006

09:24 am EDT. S&P MAINTAINS BUY RECOMMENDATION ON SHARES OF BURLINGTON NORTHERN SANTA FE (BNI 88.84\*\*\*\*) Q1 EPS of \$1.09 vs \$0.83 is above our \$1.04 forecast, as revenue rose 18% on 5% volume growth. Results were assisted by a \$0.04 per share gain on an asset sale. We expect 14% revenue growth in '06, driven by volume, pricing and fuel surcharge increases, given firm freight demand and tight capacity. We see high asset utilization boosting operating margins and we are increasing our '06 and '07 EPS estimates to \$4.86 and \$5.53, respectively, from \$4.72 and \$5.29. Our 12-month target price rises to \$100 from \$90, based on a blend of our updated DCF and relative valuation models. /A West-CFA

February 6, 2006

03:21 pm EST S&P MAINTAINS BUY OPINION ON SHARES OF BURLINGTON NORTHERN SANTA FE (BNI 79 34\*\*\*\*) We are increasing our longer-term revenue targets for BNI, supported by its planned increase in capex for expanding capacity and improving service quality. We anticipate that the economic environment coupled with tight capacity will continue to support firm rail freight demand and pricing improvement. We now estimate an 8% rise in '07 revenues, split between volume and rate growth, and are increasing our '07 EPS estimate to \$5.29 from \$5.16. Based on a blend of our updated DCF and relative valuation models, we are increasing our 12-month target price to \$90 from \$80. /A West-CFA

January 24, 2006

UP 3:56 to 75.19 Posts \$1.13 vs \$0.91 Q4 EPS on 19% revenue rise S&P reiterates buy

January 24, 2006

09:28 am EST S&P REITERATES BUY OPINION ON BURLINGTON NORTHERN SANTA FE (BNI 71 83\*\*\*\*) BNI posts Q4 EPS of \$1.13 vs \$0.91, below our \$1.14 estimate, as results were limited by a \$0.12 loss on asset sales. Revenue rose 19% on 3% higher volume, 6% higher prices, and 9% higher fuel surcharges, led by growth in intermodal. For 2006, we believe BNI will focus on increasing capex to reduce bottlenecks and congestion, and on improving service levels. We see

revenues rising 11% in '06, driven by price and fuel surcharge increases and by higher coal and intermodal volume. We are reiterating our '06 EPS estimate of \$4.72, and our 12-month target price of \$80. /A West-CFA

January 24, 2006

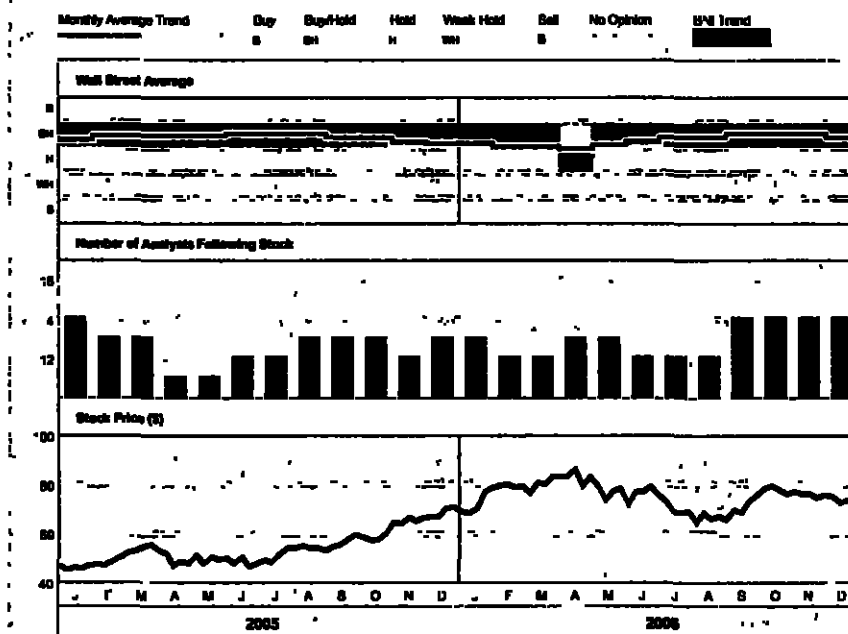
NEW YORK (Standard & Poor's)--Jan 24, 2006, Burlington Northern Santa Fe Corp., announced 4Q EPS \$1.13 vs \$0.91 and annual EPS \$4.01 vs \$2.10. Results for 2005, both periods, include loss of \$71M related to agmt. to sell certain line segments to the state of New Mexico. Results for the 2004 year incl after-tax charge of \$288M for a change in estimate of asbestos and environmental liabilities.

January 11, 2006

11:30 am EST S&P REITERATES BUY OPINION ON SHARES OF BURLINGTON NORTHERN SANTA FE (BNI 69.38\*\*\*\*) We are boosting our '06 growth outlook based on our projection that BNI's average rail freight prices will rise about 7% on hikes in base rates and fuel surcharge implementation. We see volumes rising 4% on continuing intermodal growth, coal inventory restocking following '05 service disruptions, and modest industrial freight growth. We project '06 revenues to rise 11%, and are increasing our '06 EPS estimate to \$4.72 from \$4.55 and '07's to \$5.16 from \$4.88. We are also raising our 12-mo target price, to \$80 from \$75, reflecting blend of our DCF and relative valuation models. /A West-CFA

# Burlington Northern Santa Fe Corp

## Analyst Recommendations



Of the total 16 companies following BNI, 14 analysts currently publish recommendations.

|              | No. of Ratings | % of Total | 1 Mo. Prior | 3 Mos. Prior |
|--------------|----------------|------------|-------------|--------------|
| Buy          | 4              | 29         | 5           | 5            |
| Buy/Hold     | 5              | 36         | 5           | 5            |
| Hold         | 5              | 38         | 4           | 4            |
| Weak Hold    | 0              | 0          | 0           | 0            |
| Sell         | 0              | 0          | 0           | 0            |
| No Opinion   | 0              | 0          | 0           | 0            |
| <b>Total</b> | <b>14</b>      | <b>100</b> | <b>14</b>   | <b>14</b>    |

## Wall Street Consensus Estimates



A company's earnings outlook plays a major part in any investment decision. Standard & Poor's organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years. This graph shows the trend in analyst estimates over the past 15 months.

## Wall Street Consensus Opinion

**BUY/HOLD**

## Companies Offering Coverage

AG Edwards & Sons  
 Argus Research Corp  
 BB&T Capital Markets  
 BMO Nesbitt Burns  
 Banc of America Securities LLC  
 Bear Stearns & Co  
 Credit Suisse First Boston  
 Deutsche Bank  
 JP Morgan Securities  
 Lehman Brothers, Inc  
 Merrill Lynch Research  
 Smith Barney  
 Stifel Nicolaus & Co  
 Tejas Securities Group, Inc  
 UBS Warburg  
 When2trade Group

## Wall Street Consensus vs. Performance

For fiscal year 2006, analysts estimate that BNI will earn \$5.00. For the 3rd quarter of fiscal year 2006, BNI announced earnings per share of \$1.33, representing 27% of the total annual estimate. For fiscal year 2007, analysts estimate that BNI's earnings per share will grow by 14% to \$5.68.

# Burlington Northern Santa Fe Corp

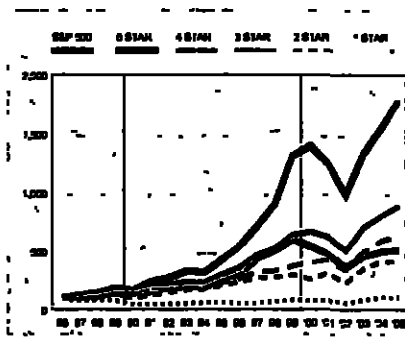
**STANDARD  
& POOR'S**

## Glossary

### S&P STARS

Since January 1, 1987, Standard and Poor's Equity Research Services has ranked a universe of common stocks based on a given stock's potential for future performance. Under proprietary STARS (Stock Appreciation Ranking System), S&P equity analysts rank stocks according to their individual forecast of a stock's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (S&P Asia 50 Index, S&P Europe 350 Index or S&P 500 Index)), based on a 12-month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective.

### STARS Average Annual Performance



### S&P 12-Month Target Price

The S&P equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics.

### Investment Style Classification

Characterizes the stock as either a growth- or value-oriented investment, and indicates the market value (size) of the company as large-cap, mid-cap or small-cap. Growth stocks typically have a higher price-to-earnings and price-to-cash flow ratio, that represents the premium that is being paid for the expected higher growth. Value stocks typically have higher dividends and more moderate price-to-earnings ratios consistent with their current return policies.

### Qualitative Risk Assessment

The S&P equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the S&P U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices.

### Quantitative Evaluations

In contrast to our qualitative STARS recommendations, which are assigned by S&P analysts, the quantitative evaluations described below are derived from proprietary arithmetic models. These computer-driven evaluations may at times contradict an analyst's qualitative assessment of a stock. One primary reason for this is that different measures are used to determine each. For instance, when designating STARS, S&P analysts assess many factors that cannot be reflected in a model, such as risks and opportunities, management changes, recent competitive shifts, patent expiration, litigation risk, etc.

### S&P Quality Ranking

Growth and stability of earnings and dividends are deemed key elements in establishing S&P's Quality Rankings for common stocks, which are designed to capitalize the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

|                  |                     |
|------------------|---------------------|
| A+ Highest       | B Below Average     |
| A High           | B- Lower            |
| A+ Above Average | C Lowest            |
| B+ Average       | D In Reorganization |
| NR Not Ranked    |                     |

### S&P Fair Value Rank

Using S&P's exclusive proprietary quantitative model, stocks are ranked in one of five groups, ranging from Group 5, listing the most undervalued stocks, to Group 1, the most overvalued issues. Group 5 stocks are expected to generally outperform all others. A positive (+) or negative (-) Timing Index is placed next to the Fair Value ranking to further aid the selection process. A stock with a (+) added to the Fair Value Rank simply means that this stock has a somewhat better chance to outperform other stocks with the same Fair Value Rank. A stock with a (-) has a somewhat lesser chance to outperform other stocks with the same Fair Value Rank. The Fair Value rankings imply the following: 5-Stock is significantly undervalued, 4-Stock is moderately undervalued, 3-Stock is fairly valued, 2-Stock is moderately overvalued, 1-Stock is significantly overvalued.

### S&P Fair Value Calculation

The price at which a stock should trade at, according to S&P's proprietary quantitative model that incorporates both actual and estimated variables (as opposed to only actual variables in the case of S&P Quality Ranking). Relying heavily on a company's actual return on equity, the S&P Fair Value model places a value on a security based on placing a formula-derived price-to-book multiple on a company's consensus earnings per share estimate.

### Insider Activity

Gives an insight as to insider sentiment by showing whether directors, officers and key employees who have proprietary information not available to the general public, are buying or selling the company's stock during the most recent six months.

### Investability Quotient (IQ)

The IQ is a measure of investment desirability. It serves as an indicator of potential medium to long-term return and as a caution against downside risk. The measure takes into account variables such as technical indicators, earnings estimates, liquidity, financial ratios and selected S&P proprietary measures.

### S&P's IQ Rationale:

#### Burlington Northern Santa Fe

|                               | Raw Score  | Max Value  |
|-------------------------------|------------|------------|
| Proprietary S&P Measures      | 81         | 115        |
| Technical Indicators          | 29         | 40         |
| Liquidity/Volatility Measures | 18         | 20         |
| Quantitative Measures         | 18         | 75         |
| <b>IQ Total</b>               | <b>126</b> | <b>250</b> |

### Volatility

Measures the volatility of the stock's price over the past year.

### Technical Evaluation

In researching the past market history of prices and

trading volume for each company, S&P's computer models apply special technical methods and formulas to identify and project price trends for the stock.

### Relative Strength Rank

Shows, on a scale of 1 to 99, how the stock has performed versus all other companies in S&P's universe on a rolling 13 week basis.

### Global Industry Classification Standard (GICS)

An industry classification standard, developed by Standard & Poor's in collaboration with Morgan Stanley Capital International (MSCI). GICS is currently comprised of 10 Sectors, 24 Industry Groups, 67 Industries, and 147 Sub Industries.

### S&P Core Earnings

Standard & Poor's Core Earnings is a uniform methodology for adjusting operating earnings by focusing on a company's after-tax earnings generated from its principal businesses. Included in the Standard & Poor's definition are employee stock option grant expenses, pension costs, restructuring charges from ongoing operations, write-downs of depreciable or amortizable operating assets, purchased research and development, M&A related expenses and unrealized gains/losses from hedging activities. Excluded from the definition are pension gains, impairment of goodwill charges, gains or losses from asset sales, reversal of prior year charges and provision from litigation or insurance settlements.

### S&P Issuer Credit Rating

A Standard & Poor's Issuer Credit Rating is a current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the nature of and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. In addition, it does not take into account the creditworthiness of the guarantors, insurers, or other forms of credit enhancement on the obligation. The Issuer Credit Rating is not a recommendation to purchase, sell, or hold a financial obligation issued by an obligor, as it does not comment on market price or suitability for a particular investor. Issuer Credit Ratings are based on current information furnished by obligors or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any Issuer Credit Rating and may, on occasion, rely on unaudited financial information. Issuer Credit Ratings may be changed, suspended, or withdrawn as a result of changes in or unavailability of, such information, or based on other circumstances.

### Exchange Type

ASE - American Stock Exchange, NNM - Nasdaq National Market, NSC - Nasdaq SmallCap, NYSE - New York Stock Exchange, BB - OTC Bulletin Board, OT - Over-the-Counter, TO - Toronto Stock Exchange.

### S&P Equity Research Services

Standard & Poor's Equity Research Services U.S. includes Standard & Poor's Investment Advisory Services LLC, Standard & Poor's Equity Research Services Europe includes Standard & Poor's LLC-London and Standard & Poor's AB (Sweden). Standard & Poor's Equity Research Services Asia includes Standard & Poor's LLC's offices in Hong Kong, Singapore and Tokyo, Standard & Poor's Malaysia Sdn Bhd, and Standard & Poor's Information Services (Australia) Pty Ltd.

Source: S&P

Redistribution or reproduction is prohibited without written permission. Copyright ©2008 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

# Burlington Northern Santa Fe Corp

**STANDARD  
& POOR'S**

## Required Disclosures

### S&P Global STARS Distribution

In the U.S.: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services U.S. have recommended 33.9% of issuers with buy recommendations, 58.8% with hold recommendations and 9.5% with sell recommendations.

In Europe: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Europe have recommended 43.8% of issuers with buy recommendations, 40.3% with hold recommendations and 15.7% with sell recommendations.

In Asia: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Asia have recommended 31.2% of issuers with buy recommendations, 58.8% with hold recommendations and 9.2% with sell recommendations.

Globally: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services globally have recommended 34.7% of issuers with buy recommendations, 55.2% with hold recommendations and 10.1% with sell recommendations.

★★★★★ **5-STAR (Strong Buy)** Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis.

★★★★☆ **4-STAR (Buy)** Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

★★★☆☆ **3-STAR (Hold)** Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

★★☆☆☆ **2-STAR (Sell)** Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain.

★☆☆☆☆ **1-STAR (Strong Sell)** Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis.

**Relevant benchmarks:** In the U.S. the relevant benchmark is the S&P 500 Index; in Europe and in Asia, the relevant benchmarks are generally the S&P Europe 350 Index and the S&P Asia 50 Index.

**For All Regions:** All of the views expressed in this research report accurately reflect the research analyst's personal views regarding any and all of the subject securities or issuers. No part of analyst compensation was, is, or will be directly or indirectly, related to the specific recommendations or views expressed in this research report.

Additional information is available upon request.

## Other Disclosures

This report has been prepared and issued by Standard & Poor's and/or one of its affiliates. In the United States, research reports are prepared by Standard & Poor's Investment Advisory Services LLC ("SPIAS"). In the United States, research reports are issued by Standard & Poor's ("S&P"), in the United Kingdom by Standard & Poor's LLC ("S&P LLC"), which is authorized and regulated by the Financial Services Authority; in Hong Kong by Standard & Poor's LLC which is regulated by the Hong Kong Securities Futures Commission; in Singapore by Standard & Poor's LLC, which is regulated by the Monetary Authority of Singapore; in Japan by Standard & Poor's LLC, which is regulated by the Kanto Financial Bureau; in Sweden by Standard & Poor's AB ("S&P AB"), in Malaysia by Standard & Poor's Malaysia Sdn Bhd ("S&P M") which is regulated by the Securities Commission and in Australia by Standard & Poor's Information Services (Australia) Pty Ltd ("SPIS") which is regulated by the Australian Securities & Investments Commission, and in Korea by SPIAS, which is also registered in Korea as a cross border investment advisory company.

The research and analytical services performed by SPIAS, S&P LLC, S&P AB, S&P M, and SPIS are each conducted separately from any other analytical activity of Standard & Poor's.

Standard & Poor's or an affiliate may license certain intellectual property or provide pricing or other services to, or otherwise have a financial interest in, certain issuers of securities, including exchange-traded funds whose investment objective is to substantially replicate the returns of a proprietary Standard & Poor's index, such as the S&P 500. In cases where Standard & Poor's or an affiliate is paid fees that are tied to the amount of assets that are invested in the fund or the volume of trading activity in the fund, investment in the fund will generally result in Standard & Poor's or an affiliate earning compensation in addition to the subscription fees or other compensation for services rendered by Standard & Poor's. A reference to a particular investment or security by Standard & Poor's and one of its affiliates is not a recommendation to buy, sell, or hold such investment or security, nor is it considered to be investment advice.

S&P and/or one of its affiliates has performed services for and received compensation from this company during the past twelve months.

## Disclaimer

This material is based upon information that we consider to be reliable, but neither S&P nor its affiliates warrant its completeness, accuracy or adequacy and it should

not be relied upon as such. With respect to reports issued by S&P LLC Japan and in the case of inconsistencies between the English and Japanese version of a report, the English version prevails. Neither S&P LLC nor S&P guarantees the accuracy of the translation. Assumptions, opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Neither S&P nor its affiliates are responsible for any errors or omissions or for results obtained from the use of this information. Past performance is not necessarily indicative of future results.

This material is not intended as an offer or solicitation for the purchase or sale of any security or other financial instrument. Securities, financial instruments or strategies mentioned herein may not be suitable for all investors. Any opinions expressed herein are given in good faith, are subject to change without notice, and are only correct as of the stated date of their issue. Prices, values, or income from any securities or investments mentioned in this report may fall against the interests of the investor and the investor may get back less than the amount invested. Where an investment is described as being likely to yield income, please note that the amount of income that the investor will receive from such an investment may fluctuate. Where an investment or security is denominated in a different currency to the investor's currency of reference, changes in rates of exchange may have an adverse effect on the value, price or income of or from that investment to the investor. The information contained in this report does not constitute advice on the tax consequences of making any particular investment decision. This material does not take into account your particular investment objectives, financial situations or needs and is not intended as a recommendation of particular securities, financial instruments or strategies to you. Before acting on any recommendation in this material, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice.

For residents of the U.K. - this report is only directed at and should only be relied on by persons outside of the United Kingdom or persons who are made the United Kingdom and who have professional experience in matters relating to investments or who are high net worth persons, as defined in Article 19(5) or Article 49(2) (a) to (d) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001, respectively.

For residents of Malaysia, all queries in relation to this report should be referred to Alexander Chua, Lee Leng Hoe, or Chong Weh Tam.

This investment analysis was prepared from the following sources: S&P MarketScope, S&P Compustat, S&P Industry Reports, I/B/E/S International, Inc., Standard & Poor's, 55 Water St., New York, NY 10041.

# CSX Corp

**STANDARD  
& POOR'S**

S&P Recommendation **HOLD** ★★☆☆☆

Price  
\$34.43 (as of Dec 29, 2006)

12-Mo Target Price  
\$39.00

Investment Style  
Large-Cap Value

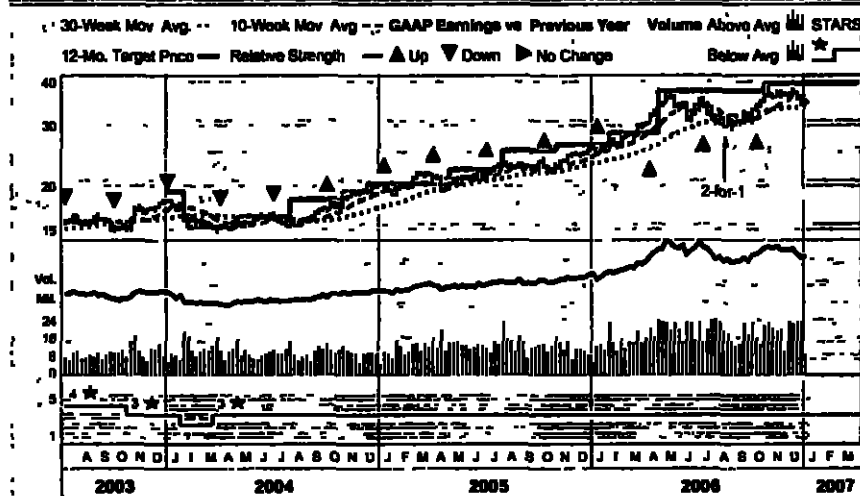
GICS Sector Industrials  
Sub-Industry Railroads

Comment This company operates a major U.S. rail network, and provides intermodal and U.S. container shipping services

## Key Stock Statistics (Source: S&P Victoria, company reports)

|                          |               |                    |      |                             |          |                     |        |
|--------------------------|---------------|--------------------|------|-----------------------------|----------|---------------------|--------|
| 52-Wk Range              | \$30.30-34.29 | S&P Oper EPS 2006E | 2.19 | P/E on S&P Oper EPS 2006E   | 15.7     | Dividend Rate/Share | \$0.40 |
| Trailing 12-Month EPS    | \$2.59        | S&P Oper EPS 2007E | 2.54 | Common Shares Outstg (M)    | 435.2    | Yield (%)           | 1.16   |
| Trailing 12-Month P/E    | 13.3          | S&P Core EPS 2006E | 2.13 | Market Capitalization(B)    | \$14.983 | Beta                | 0.98   |
| \$10K Invested 5 Yrs Ago | \$20,811      | S&P Core EPS 2007E | 2.50 | Institutional Ownership (%) | 73       | S&P Credit Rating   | BBB    |

## Price Performance



Options: ASE, CBOE, P, Ph

Analysis prepared by Kevin Kirkeby on October 19, 2006, when the stock traded at \$35.29.

## Highlights

- We expect revenue to increase 11% in 2006 and another 8% in 2007, with underlying volume gains of 1% anticipated for both years, and freight rates rising 5% and 3% in the respective years. Demand for coal and intermodal will likely be the primary contributors to the pricing gains, as we anticipate fuel surcharges stabilizing in 2007. We see a challenging environment for fertilizers and phosphates, as well as auto parts and forest products, and forecast volume declines in those segments.
- We expect operating margins in 2007 to widen modestly from the 20% level we anticipate for 2006, as several customer contracts come up for renewal and the roughly 20 capacity expansion projects scheduled for completion in late 2006 improve network dwell time and velocity. Partially offsetting these gains is the likely increase in CSX's cost of fuel, as the last of its fuel hedges rolled off in the third quarter of 2006.
- Results in 2007 are expected to benefit from reduced interest expense on lower debt levels. Excluding \$0.29 of one-time gains, we see 2007 EPS of \$2.54, up 18% from the \$2.19, before special items, projected for 2006.

## Investment Rationale/Risk

- We believe that the recent improvements to operations and profitability will start to slow in 2007 following several quarters of above-average price gains and margin expansion. Revenue per unit in CSX's merchandise segment, for example, was up 17% in the 2006 third quarter. While volume trends are expected to remain favorable in key markets such as coal and intermodal, we see fewer opportunities to raise freight rates or to drop lower-profit customers.
- Risks to our opinion and target price include an economic slowdown that affects freight volumes, declining railroad system fluidity, unusually severe weather, and rapid changes in diesel prices.
- Our DCF model derives an intrinsic value of \$41, based on a weighted average cost of capital of 9% and a 3.5% terminal growth rate. Applying a 7.3X forward enterprise value to EBITDA multiple, which we calculate as the historical five-year average and consider appropriate for the current stage of sector expansion, to our 2007 EBITDA estimate, we derive a value of \$37. Blending these models, we arrive at our 12-month target price of \$39.

## Qualitative Risk Assessment

|     |        |      |
|-----|--------|------|
| LOW | MEDIUM | HIGH |
|-----|--------|------|

Our risk assessment reflects what we believe is CSX's exposure to economic cycles, freight demand and pricing and fuel prices, offset by its consistently positive cash flow generation, moderate debt levels and diverse customer base.

## Quantitative Evaluation

|                        |   |    |   |    |    |   |              |
|------------------------|---|----|---|----|----|---|--------------|
| S&P Quality Ranking    |   |    |   |    |    |   | B            |
| D                      | C | B- | B | B+ | A- | A | A+           |
| Relative Strength Rank |   |    |   |    |    |   | WEAK         |
| 25                     |   |    |   |    |    |   |              |
| LOWEST = 1             |   |    |   |    |    |   | HIGHEST = 98 |

## Revenue/Earnings Data

| Revenue (Million \$) | 1Q    | 2Q    | 3Q    | 4Q    | Year  |
|----------------------|-------|-------|-------|-------|-------|
| 2006                 | 2,331 | 2,421 | 2,418 | --    | --    |
| 2005                 | 2,108 | 2,166 | 2,125 | 2,219 | 8,618 |
| 2004                 | 1,915 | 1,995 | 1,938 | 2,172 | 8,020 |
| 2003                 | 2,016 | 1,942 | 1,882 | 1,953 | 7,793 |
| 2002                 | 1,984 | 2,073 | 2,055 | 2,060 | 8,152 |
| 2001                 | 2,025 | 2,057 | 2,019 | 2,009 | 8,110 |

| Earnings Per Share (\$) | 1Q   | 2Q   | 3Q    | 4Q    | Year  |
|-------------------------|------|------|-------|-------|-------|
| 2006                    | 0.53 | 0.83 | 0.71  | E0.54 | E2.19 |
| 2005                    | 0.34 | 0.37 | 0.36  | 0.52  | 1.59  |
| 2004                    | 0.06 | 0.26 | 0.26  | 0.36  | 0.94  |
| 2003                    | 0.10 | 0.29 | -0.24 | 0.29  | 0.44  |
| 2002                    | 0.16 | 0.32 | 0.30  | 0.32  | 1.10  |
| 2001                    | 0.05 | 0.26 | 0.24  | 0.16  | 0.69  |

Fiscal year ended Dec. 31. Next earnings report expected: Late January. EPS estimates based on S&P Operating Earnings; historical GAAP earnings are as reported.

## Dividend Data (Dates, annual Payment Date, annual Yr)

| Amount (\$) | Date Decl. | Ex-Div. Date | Stk. of Record | Payment Date |
|-------------|------------|--------------|----------------|--------------|
| 0.130       | 05/03      | 05/23        | 05/25          | 06/15/06     |
| 2-for-1 Stk | 07/18      | 08/16        | 08/03          | 08/15/06     |
| 0.200       | 07/18      | 08/23        | 08/25          | 09/15/06     |
| 0.100       | 09/13      | 11/21        | 11/24          | 12/15/06     |

Dividends have been paid since 1922. Source: Company reports.

Please read the Required Disclosures and Analyst Certification on the last page of this report.

Redistribution or reproduction is prohibited without written permission. Copyright ©2006 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

**CSX Corp****STANDARD  
& POOR'S****Business Summary October 19, 2006**

**CORPORATE OVERVIEW** CSX operates the largest rail network in the eastern U.S., with a 22,000-mile rail network linking commercial markets in 23 states and two Canadian provinces, and owns companies providing intermodal and rail-to-truck transload services. In 1997, the company purchased a 42% stake in Conrail, bringing CSX's system into New York City, Boston, Philadelphia and Buffalo. In 2004, CSX gained direct ownership and control of Conrail's New York Central Lines. With these routes, the company was able to offer shippers broader geographic coverage, access more ports, and expand its share of north-south traffic. In 2003, CSX saw a decline in certain performance measures, including personal injury frequency, train accident frequency, train velocity, train reworks, and on-time originations and arrivals. CSX experienced continuing operational difficulties in 2004, with train velocity and on-time performance worsening. In the third quarter of 2004, CSX initiated a major initiative to improve network performance called the "One Plan," which we believe is leading to improving safety, efficiency and service quality.

**MARKET PROFILE** We believe CSX's intermodal business, representing 16% of 2005 revenue, will be its fastest growing segment longer term, driven by rising international trade and its cost savings over trucks for long-distance container movements, though we see CSX's service quality as inferior to its primary competitor. Coal, which we believe is CSX's most profitable segment, accounted for 23% of 2005 revenues. Most of this traffic originates from the Appalachian coal fields, and is primarily delivered to power utilities. CSX's merchandise freight provided 49% of freight revenues in 2005, and includes chemical, forest products, metals, and agricultural products. We believe this business is sensitive to U.S. GDP trends, and faces average long-term volume growth prospects. We believe automotive freight, at 10% of revenues in 2005, has a weak volume growth outlook, due to slowing domestic manufacturing trends.

**COMPETITIVE LANDSCAPE** The U.S. rail industry has an oligopoly-like structure, with over 80% of revenues generated by the four largest railroads. CSX and Norfolk Southern Corp. operating on the East Coast, and Union Pacific Corp. and Burlington Northern Santa Fe Corp. operating on the West Coast. Railroads simultaneously compete for customers while cooperating by sharing assets, interfacing systems, and completing customer movements.

Key suppliers include locomotive and rail equipment manufacturers, fuel suppliers, and labor. CSX's employees, most of whom are unionized, enjoy above national average compensation due to their significant bargaining power. We believe the market power of CSX's customers varies; large freight integrators and automotive, coal, and utility companies may exert significant power, while smaller customers with limited alternatives are often price takers. Railroads compete with trucking, shipping, and pipeline transportation. Rail rates are generally lower than trucking rates, as service is slower and less flexible than trucking, which provides most U.S. transportation. We believe rising fuel prices increase the cost attractiveness of railroads over less fuel-efficient trucking, which should help support CSX's pricing and volumes.

**FINANCIAL TRENDS** We consider railroads to be a mature industry, and expect 2.8% annualized U.S. rail tonnage growth over the next 15 years. We believe CSX's growth opportunities are at or below the industry average, as we see above average future growth in intermodal traffic being offset by expected slow coal traffic growth. We expect coal tonnage originating in CSX's eastern service area to experience only 0.75% compound annual growth over the next 10 years. Over the past 10 years, CSX's intermodal volumes have grown at a compound annual rate of 9.0%, and total carloads have grown 0.8%, compared to 4.1% and -0.1% respectively, for the overall industry. We calculate that return on invested capital (ROIC) has over the past 10 years averaged 5.7% at CSX vs. 8.7% for the industry. We see high asset utilization and rising freight pricing helping ROIC to rise from 6.5% in 2005 to over 9% in 2006 and 2007, which would surpass our estimated 8.0% cost of capital.

**Corporate Information**

**Investor Contact**  
D. Bagga (904-359-4812)

**Office**  
500 Water Street, Jacksonville, FL 32202

**Telephone**  
904-359-3200

**Fax**  
904-366-5121

**Website**  
<http://www.csx.com>

**Officers**

**Chairman, Pres. & CEO**  
M. J. Ward

**EVP & CFO**  
O. Munoz

**VP & Contr.**  
C. T. Sizemore

**Board of Directors**

D. M. Alvarado  
E. E. Bailey  
J. B. Breaux  
S. T. Halverson  
E. J. Kelly  
R. D. Kumsch  
S. J. Morcott  
D. M. Ratchke  
C. E. Rice  
W. C. Richardson  
F. S. Royal  
D. J. Shepard  
M. J. Ward

**Headquarters**  
Virginia

**Founded**  
1978

**Employees**  
35,109

**Stockholders**  
49,859

## CSX Corp

STANDARD  
& POOR'S

## Quantitative Evaluations

|                                                                                                                   |    |        |   |   |   |         |
|-------------------------------------------------------------------------------------------------------------------|----|--------|---|---|---|---------|
| S&P Fair Value Rank                                                                                               | 2- | 1      | 2 | 3 | 4 | 5       |
|                                                                                                                   |    | LOWEST |   |   |   | HIGHEST |
| Based on S&P's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5) |    |        |   |   |   |         |

|                        |         |                                                                                                                                          |  |  |  |  |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Fair Value Calculation | \$27.70 | Analysis of the stock's current worth, based on S&P's proprietary quantitative model suggests that CSX is overvalued by \$6.73 or 18.5%. |  |  |  |  |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|

|                                                                                  |            |               |
|----------------------------------------------------------------------------------|------------|---------------|
| Investability Quotient                                                           | 19         |               |
| Percentile                                                                       | LOWEST = 1 | HIGHEST = 100 |
| CSX scored higher than 79% of all companies for which an S&P Report is available |            |               |

|                                                         |     |         |      |
|---------------------------------------------------------|-----|---------|------|
| Volatility                                              | LOW | AVERAGE | HIGH |
| CSX has had Average price volatility over the past year |     |         |      |

|                      |         |                                                                          |
|----------------------|---------|--------------------------------------------------------------------------|
| Technical Evaluation | BEARISH | Since December, 2006, the technical indicators for CSX have been BEARISH |
|----------------------|---------|--------------------------------------------------------------------------|

|                  |             |         |           |
|------------------|-------------|---------|-----------|
| Insider Activity | UNFAVORABLE | NEUTRAL | FAVORABLE |
|------------------|-------------|---------|-----------|

## Expanded Ratio Analysis

|                               | 2005  | 2004  | 2003  | 2002  |
|-------------------------------|-------|-------|-------|-------|
| Price/Revenue                 | 1.34  | 1.12  | 0.99  | 0.74  |
| Price/EBITDA                  | 4.94  | 5.21  | 6.07  | 3.40  |
| Price/Pre-tax Income          | 11.17 | 14.16 | 29.08 | 8.36  |
| Price/Net Income              | 16.08 | 21.58 | 40.77 | 12.94 |
| Avg Diluted Shares Outstg (M) | 456.0 | 450.1 | 428.8 | 427.0 |

Figures based on calendar year-end price

## Key Growth Rates and Averages

| Past Growth Rate (%) | 1 Year | 3 Years | 5 Years | 9 Years |
|----------------------|--------|---------|---------|---------|
| Sales                | 7.46   | 1.97    | 0.50    | -3.47   |
| Net Income           | 72.25  | 23.28   | 4.00    | -3.17   |

| Ratio Analysis (Annual Avg) |       |       |       |       |
|-----------------------------|-------|-------|-------|-------|
| Net Margin (%)              | 8.35  | 5.33  | 5.07  | 5.07  |
| LTD of Capitalization (%)   | 25.35 | 31.41 | 33.50 | 36.72 |
| Return on Equity (%)        | 8.58  | 5.53  | 5.47  | 6.88  |

## Company Financials

| Per Share Data (\$) | Year Ended Dec 31 | 2005  | 2004  | 2003  | 2002  | 2001  | 2000  | 1999  | 1998  | 1997  | 1996  |
|---------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tangible Book Value |                   | 18.25 | 15.77 | 15.01 | 14.52 | 14.32 | 14.13 | 13.20 | 13.55 | 13.23 | 11.51 |
| Cash Flow           |                   | 3.41  | 2.55  | 1.94  | 2.62  | 2.16  | 2.76  | 1.46  | 2.73  | 3.36  | 3.45  |
| Earnings            |                   | 1.59  | 0.94  | 0.44  | 1.10  | 0.69  | 0.44  | 0.12  | 1.26  | 1.81  | 2.00  |
| S&P Core Earnings   |                   | 1.60  | 0.90  | 0.66  | 0.85  | 0.59  | NA    | NA    | NA    | NA    | NA    |
| Dividends           |                   | 0.22  | 0.20  | 0.20  | 0.20  | 0.40  | 0.80  | 0.60  | 0.80  | 0.54  | 0.52  |
| Payout Ratio        |                   | 14%   | 21%   | 45%   | 18%   | 58%   | 136%  | NM    | 48%   | 30%   | 26%   |
| Prices High         |                   | 25.80 | 20.23 | 18.15 | 20.70 | 20.65 | 16.72 | 26.97 | 30.38 | 31.22 | 28.56 |
| Prices Low          |                   | 18.45 | 14.40 | 12.75 | 12.55 | 12.41 | 9.75  | 14.41 | 18.25 | 20.63 | 21.06 |
| P/E Ratio High      |                   | 16    | 22    | 41    | 19    | 30    | 38    | NM    | 24    | 17    | 13    |
| P/E Ratio Low       |                   | 12    | 15    | 29    | 11    | 18    | 22    | NM    | 15    | 11    | 11    |

## Income Statement Analysis (Million \$)

|                    | 2005  | 2004  | 2003  | 2002  | 2001  | 2000  | 1999   | 1998  | 1997   | 1996   |
|--------------------|-------|-------|-------|-------|-------|-------|--------|-------|--------|--------|
| Revenue            | 8,618 | 8,020 | 7,793 | 8,152 | 8,110 | 8,191 | 10,811 | 9,898 | 10,621 | 10,536 |
| Operating Income   | 2,345 | 1,730 | 1,269 | 1,776 | 1,579 | 1,405 | 1,685  | 1,790 | 2,271  | 2,142  |
| Depreciation       | 833   | 730   | 643   | 649   | 622   | 600   | 621    | 630   | 688    | 620    |
| Interest Expense   | 423   | 435   | 418   | 445   | 518   | 543   | 521    | 506   | 451    | 249    |
| Pre-tax Income     | 1,036 | 637   | 265   | 723   | 448   | 656   | 130    | 808   | 1,224  | 1,316  |
| Effective Tax Rate | 30.5% | 34.4% | 28.7% | 35.4% | 34.6% | 13.9% | 67.7%  | 28.2% | 31.4%  | 35.0%  |
| Net Income         | 720   | 418   | 189   | 467   | 293   | 565   | 51.0   | 537   | 799    | 855    |
| S&P Core Earnings  | 729   | 405   | 280   | 363   | 249   | NA    | NA     | NA    | NA     | NA     |

## Balance Sheet &amp; Other Financial Data (Million \$)

|                                    | 2005   | 2004   | 2003   | 2002   | 2001   | 2000   | 1999   | 1998   | 1997   | 1996   |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cash                               | 309    | 859    | 368    | 284    | 618    | 684    | 974    | 533    | 690    | 682    |
| Current Assets                     | 2,372  | 2,987  | 1,903  | 1,789  | 2,074  | 2,048  | 2,563  | 1,984  | 2,175  | 2,072  |
| Total Assets                       | 24,232 | 24,581 | 21,780 | 20,951 | 20,801 | 20,491 | 20,720 | 20,427 | 19,957 | 19,957 |
| Current Liabilities                | 2,979  | 3,317  | 2,210  | 2,454  | 3,303  | 3,280  | 3,473  | 2,800  | 2,707  | 2,757  |
| Long Term Debt                     | 5,093  | 6,234  | 6,886  | 6,519  | 5,839  | 5,810  | 6,196  | 8,432  | 6,416  | 4,331  |
| Common Equity                      | 8,918  | 7,858  | 7,569  | 7,091  | 7,060  | 6,017  | 5,758  | 5,880  | 5,786  | 4,995  |
| Total Capital                      | 20,093 | 20,071 | 18,207 | 17,177 | 16,520 | 15,211 | 15,179 | 15,485 | 15,121 | 12,046 |
| Capital Expenditures               | 1,136  | 1,030  | 1,059  | 1,080  | 930    | 913    | 1,517  | 1,479  | 1,125  | 1,223  |
| Cash Flow                          | 1,553  | 1,148  | 832    | 1,116  | 915    | 1,165  | 623    | 1,167  | 1,487  | 1,475  |
| Current Ratio                      | 0.8    | 0.9    | 0.9    | 0.7    | 0.6    | 0.6    | 0.7    | 0.8    | 0.8    | 0.8    |
| % Long Term Debt of Capitalization | 25.3   | 31.1   | 37.8   | 38.0   | 35.3   | 38.2   | 40.8   | 41.5   | 42.4   | 36.0   |
| % Net Income of Revenue            | 8.4    | 5.2    | 2.4    | 5.7    | 3.6    | 6.9    | 0.5    | 5.4    | 7.5    | 8.1    |
| % Return on Assets                 | 2.9    | 1.8    | 0.9    | 2.2    | 1.4    | 2.7    | 0.2    | 2.7    | 4.3    | 5.5    |
| % Return on Equity                 | 8.8    | 5.4    | 2.6    | 8.8    | 4.2    | 9.8    | 0.9    | 9.2    | 14.8   | 18.5   |

Data as orig reptd, incl results of disc opera/spec items. Per share data adj for stk divs., EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

Redistribution or reproduction is prohibited without written permission. Copyright ©2008 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

## CSX Corp

STANDARD  
& POOR'S

## Sub-Industry Outlook

Our fundamental outlook for the S&P Railroads Index is neutral. We think shipping volumes and prices will continue to benefit from a broad economic expansion continuing into 2007, and expect profits to benefit. Nevertheless, we see neutral valuation indications and are concerned that if the economy's growth rate slows further, investors may increasingly rotate out of these stocks into other groups. In addition, the industry has generally underperformed after past interest rate hikes, although past performance is not necessarily a guide to future results.

We see rail revenues rising about 12% in 2006, following an approximate 14% advance in 2005. Traffic in ton miles (weight times distance) increased about 2.4% in the U.S. in 2005, and rose 2.6% year to date through December 23, according to estimates by the Association of American Railroads. Total carloadings in 2005 rose 0.9%, and were up 1.4% year to date through December 23. Intermodal volume set a record in 2005, rising 6.4%, to 11.7 million trailers or containers, and rose 5.2% year to date through December 23 to 12.1 million. We believe that freight rates will rise modestly in the coming year, on firm freight demand and tight capacity, partially offset by smaller fuel surcharges. We believe operating earnings for major U.S. railroads rose over 20% in 2005, and expect about 20% growth in 2006. However, our expectations for railroad shares are limited by the maturing economic cycle, perceived fair valuations, high fuel and employee costs, and difficulties in managing railroad system fluidity amid higher volumes.

Our longer-term outlook for railroads is favorable, although we expect moderating revenue and profit growth in 2007. We see the industry's core traffic base (coal, grain, chemicals and intermodal) increasing in line with the economy. In addition, we

think there is room to expand margins and operating efficiency by eliminating what we view as wasteful labor practices, improving service levels, and using improving information systems to boost future operating efficiency and aid capital budgeting decisions. As a result of 2001 guidelines by the Surface Transportation Board, we see future rail mergers among the four largest U.S. railroads as unlikely.

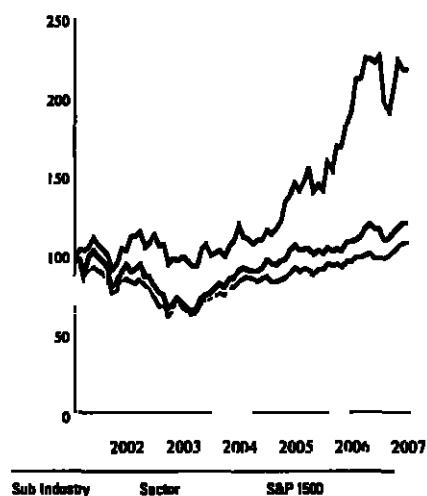
Year to date through December 20, the S&P Railroads Index was up 12.0%, versus a 13.7% increase for the S&P 1500.

-Kevin Kirkeby, CFA

## Stock Performance

GICS Sector Industrials  
Sub-Industry Railroads

Based on S&P 1500 Indexes  
Month-end Price Performance as of 12/29/06



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).

## Sub-Industry: Railroads Peer Group\* Railroads (U.S.) - Major

| Peer Group                   | Stock Symbol | Stk. Mkt. Cap (MIL \$) | Recent Stock Price | P/E Ratio | 12-Mo Trailing EPS | 30-Day Price Chg(%) | 1 Year Price Chg(%) | Beta | Yield (%) | Quality Ranking | Ret. on Equity (%) | Pre-tax Margin (%) | LTD to Cap (%) |
|------------------------------|--------------|------------------------|--------------------|-----------|--------------------|---------------------|---------------------|------|-----------|-----------------|--------------------|--------------------|----------------|
| CSX Corp.                    | CSX          | 14,983                 | 34.43              | 13        | 2.58               | -3%                 | 35%                 | 0.88 | 1.2       | B               | 8.8                | 12.0               | 25.3           |
| Burlington Northern Santa Fe | BNI          | 28,513                 | 73.81              | 15        | 4.81               | 1%                  | 4%                  | 0.84 | 1.4       | A               | 15.6               | 18.8               | 27.3           |
| Kansas City Southern         | KSU          | 2,198                  | 28.98              | 40        | 0.72               | 8%                  | 17%                 | 1.03 | Nil       | B-              | 7.5                | 5.8                | 47.5           |
| Norfolk Southern             | NSC          | 19,980                 | 50.28              | 14        | 3.49               | 3%                  | 12%                 | 0.73 | 1.4       | B               | 14.8               | 19.9               | 28.4           |
| Union Pacific                | UNP          | 24,820                 | 92.02              | 18        | 5.23               | 2%                  | 14%                 | 0.88 | 1.3       | B+              | 7.8                | 10.6               | 22.8           |

NA: Not Available; NM: Not Meaningful; NR: Not Rated. \*For Peer Groups with more than 15 companies or stocks, selection of peers is based on market capitalization.

# CSX Corp

## S&P Analyst Research Notes and other Company News

**October 18, 2006**

Posts \$0.54 (excl. special items) vs. \$0.36 Q3 EPS on 14% higher revenue from Surface Transportation business. Cites improved service, growing volumes, continued strong pricing.

**October 18, 2006**

11:11 am EDT. S&P MAINTAINS HOLD RECOMMENDATION ON SHARES OF CSX CORP (CSX 35.74\*\*\*). Q3 EPS of \$0.54 before \$0.17 in one-time gains, vs. year-ago \$0.36, is \$0.04 above our estimate. Revenue rose 14% on 4% higher revenue ton-miles, improved prices, and fuel surcharges. We see coal and intermodal remaining strong while autoparts declines going into '07. Contract renewals combined with improvements in system fluidity and on-time performance should contribute to improving margins in '07, in our view. We are increasing our '06 EPS estimate by \$0.05 to \$2.19 and '07's by \$0.04 to \$2.54. We are raising our target price to \$39 from \$37, blending DCF and P/E valuations. /K Kirkcoby-CFA\

**October 18, 2006**

NEW YORK (Standard & Poor's)--Oct 18, 2006, CSX Corp., announced 3Q EPS \$0.71 vs. \$0.36 and 9 mos. EPS \$2.07 vs. \$1.06. Results for the 9 mos. of 2005 exclude income of \$0.94 from discontinued operations.

**July 19, 2006**

Posts \$1.18 vs. \$0.96 Q2 EPS (before certain items) on 12% rise in Surface Transportation rev. Sets 2-for-1 stock split, post-split quarterly divd of \$0.10, an increase of 54%.

**July 18, 2006**

01:57 pm EDT. S&P MAINTAINS HOLD OPINION ON SHARES OF CSX CORP (CSX 64.88\*\*\*). Q2 operating EPS of \$1.18 vs. \$0.96 is \$0.03 above our estimate, as revenue rose 12% on improved pricing, fuel surcharges and a mix shift. We expect revenue growth, particularly in the coal and agricultural segments, combined with improved system efficiencies to support further margin expansion through the rest of '06. We are keeping our operating EPS estimate for '06 at \$4.27, '07's at \$5.00. Our 12-month target price remains \$74, blending a DCF valuation with a P/E of 14.8X our FY '07 EPS estimate, which we consider appropriate given our view of decelerating sector growth. /R. O'Reilly-CFA, K Kirkcoby.

**July 18, 2006**

NEW YORK (Standard & Poor's)--Jul 18, 2006, CSX Corp., announced 2Q EPS \$1.88 vs. \$0.73 and 6 mos. EPS \$0.73 vs. \$1.41. Results for 2006 include an after-tax gain of \$78M from insurance recoveries related to Hurricane Katrina. Results for the 6 mos. of 2005 exclude income of \$1.88 from discontinued operations.

**April 20, 2006**

NEW YORK (Standard & Poor's)--Apr 18, 2006, CSX Corp., announced 1Q EPS \$1.06 vs. \$0.68. Results for Feb. '05 exclude income of \$1.88 from discontinued operations.

**April 18, 2006**

UP 3.28 to 70.55. Posts \$1.06 vs. \$0.68 Q1 EPS on \$2.3B revenue. S&P raises estimates, target, maintains hold.

**April 19, 2006**

09:26 am EDT. S&P MAINTAINS HOLD RECOMMENDATION ON SHARES OF CSX CORP (CSX 67.27\*\*\*). CSX posts Q1 EPS of \$1.06 vs. \$0.68, above our \$0.69 estimate, as revenue rose 11% on 3% higher revenue ton-miles, higher freight rates and fuel surcharges. We believe significantly improved system efficiency and on-time performance helped control costs, allowing margins to expand, and should boost future volumes. We expect '06 revenue to rise 10% and are increasing our '06 and '07 EPS estimates to \$4.27 and \$5.00 from \$3.77 and \$4.33. We are also raising our 12-month target price, to \$74 from \$65, based on a blend of our updated DCF and relative valuation models. /A West-CFA.

**January 25, 2006**

NEW YORK (Standard & Poor's)--Jan 24, 2006, CSX Corp., announced 4Q EPS \$1.03 vs. \$0.71 and annual EPS \$3.17 vs. \$1.87. Results exclude income of \$1.87 for the 2005 year and losses of \$0.41 & \$0.35 for the 2004 4Q & year, from

discontinued operations.

**January 24, 2006**

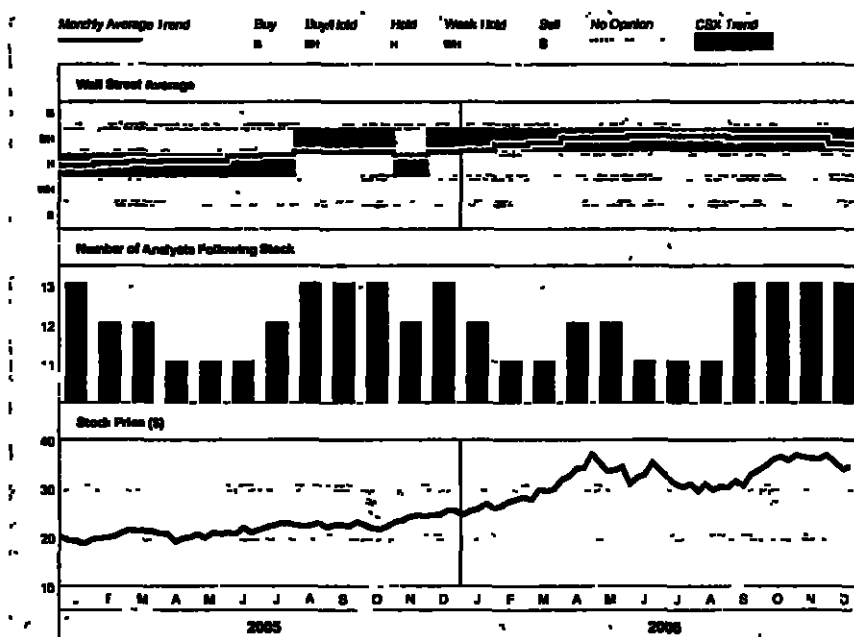
12:07 pm EST. S&P REITERATES HOLD RECOMMENDATION ON SHARES OF CSX CORP (CSX 51.84\*\*\*). CSX posts Q4 EPS of \$1.03 vs. \$0.71, above our \$0.95 estimate, as revenue rose 2% despite lower volumes, with margins rising on improving pricing and business mix combined with cost control measures. We expect revenue to rise 8% in '06, on increasing freight rates and fuel surcharges, and see volume growth assisted by a recovery from hurricane damage and by capital expenditures to add capacity. We are increasing our '06 EPS estimate to \$3.77 from \$3.75, and our 12-month target price to \$55 from \$51, based on a blend of our updated DCF and relative valuation models. /A West-CFA.

**November 2, 2005**

# CSX Corp

**STANDARD  
& POOR'S**

## Analysts' Recommendations



Of the total 14 companies following CSX, 13 analysts currently publish recommendations

|            | No of Ratings | % of Total | 1 Mo. Prior | 3 Mos Prior |
|------------|---------------|------------|-------------|-------------|
| Buy        | 4             | 31         | 5           | 5           |
| Buy/Hold   | 3             | 23         | 4           | 4           |
| Hold       | 6             | 46         | 4           | 4           |
| Weak Hold  | 0             | 0          | 0           | 0           |
| Sell       | 0             | 0          | 0           | 0           |
| No Opinion | 0             | 0          | 0           | 0           |
| Total      | 13            | 100        | 13          | 13          |

## Wall Street Consensus Estimates



| Fiscal Years    | Avg Est | High Est | Low Est | # of Est. | Est. P/E |
|-----------------|---------|----------|---------|-----------|----------|
| 2007            | 2.55    | 2.87     | 2.27    | 13        | 13.5     |
| 2006            | 2.21    | 2.25     | 2.18    | 13        | 15.8     |
| 2007 vs. 2006   | ▲ 15%   | ▲ 19%    | ▲ 4%    | 0%        | ▼ -13%   |
| Q4'07           | 0.68    | 0.65     | 0.59    | 5         | 50.6     |
| Q4'06           | 0.57    | 0.61     | 0.54    | 12        | 60.4     |
| Q4'07 vs. Q4'06 | ▲ 19%   | ▲ 7%     | ▲ 9%    | ▼ -58%    | ▼ -16%   |

A company's earnings outlook plays a major part in any investment decision. Standard & Poor's organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years. This graph shows the trend in analyst estimates over the past 16 months.

## Wall Street Consensus Opinion

**BUY/HOLD**

## Companies Offering Coverage

AG Edwards & Sons  
Argus Research Corp  
BB&T Capital Markets  
Bank of America Securities LLC  
Bear Stearns & Co  
Credit Suisse First Boston  
Deutsche Bank  
JP Morgan Securities  
Lehman Brothers, Inc  
Merrill Lynch Research  
Smith Barney  
Stifel Nicolaus & Co  
UBS Warburg  
When2trade Group

## Wall Street Consensus vs. Performance

For fiscal year 2006, analysts estimate that CSX will earn \$2.21. For the 3rd quarter of fiscal year 2006, CSX announced earnings per share of \$0.71, representing 32% of the total annual estimate. For fiscal year 2007, analysts estimate that CSX's earnings per share will grow by 15% to \$2.55.

## CSX Corp

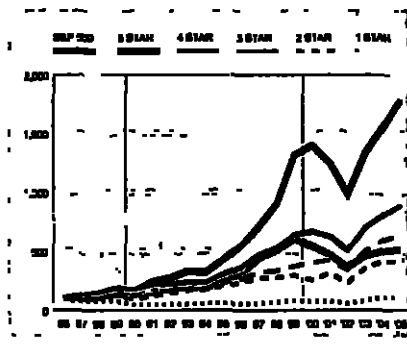
STANDARD  
& POOR'S

## Glossary

## S&amp;P STARS

Since January 1, 1987, Standard and Poor's Equity Research Services has ranked a universe of common stocks based on a given stock's potential for future performance. Under proprietary STARS (Stock Appreciation Ranking System), S&P equity analysts rank stocks according to their individual forecast of a stock's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (S&P Asia 50 Index, S&P Europe 350 Index or S&P 500 Index), based on a 12 month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective.

## STARS Average Annual Performance



## S&amp;P 12-Month Target Price

The S&P equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics.

## Investment Style Classification

Characterizes the stock as either a growth- or value-oriented investment, and, indicates the market value (size) of the company as large-cap, mid cap or small-cap. Growth stocks typically have a higher price-to-earnings and price-to-cash flow ratio, that represents the premium that is being paid for the expected higher growth. Value stocks typically have higher dividends and more moderate price-to-earnings ratios consistent with their current return policies.

## Qualitative Risk Assessment

The S&P equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the S&P U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices.

## Quantitative Evaluations

In contrast to our qualitative STARS recommendations, which are assigned by S&P analysts, the quantitative evaluations described below are derived from proprietary arithmetic models. These computer-driven evaluations may at times contradict an analyst's qualitative assessment of a stock. One primary reason for this is that different measures are used to determine each. For instance, when designating STARS, S&P analysts assess many factors that cannot be reflected in a model, such as risks and opportunities, management changes, recent competitive shifts, patent expiration, litigation risk, etc.

## S&amp;P Quality Ranking

Growth and stability of earnings and dividends are deemed key elements in establishing S&P's Quality Rankings for common stocks, which are designed to encapsulate the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analyses of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

|                  |                     |
|------------------|---------------------|
| A+ Highest       | B Below Average     |
| A High           | B- Lower            |
| A- Above Average | C Lowest            |
| B+ Average       | D In Reorganization |
| NR Not Ranked    |                     |

## S&amp;P Fair Value Rank

Using S&P's exclusive proprietary quantitative model, stocks are ranked in one of five groups, ranging from Group 5, listing the most undervalued stocks, to Group 1, the most overvalued issues. Group 5 stocks are expected to generally outperform all others. A positive (+) or negative (-) Timing Index is placed next to the Fair Value ranking to further aid the selection process. A stock with a (+) added to the Fair Value Rank simply means that this stock has a somewhat better chance to outperform other stocks with the same Fair Value Rank. A stock with a (-) has a somewhat lesser chance to outperform other stocks with the same Fair Value Rank. The Fair Value rankings imply the following: 5-Stock is significantly undervalued, 4-Stock is moderately undervalued, 3-Stock is fairly valued, 2-Stock is modestly overvalued, 1-Stock is significantly overvalued.

## S&amp;P Fair Value Calculation

The price at which a stock should trade at, according to S&P's proprietary quantitative model that incorporates both actual and estimated variables (as opposed to only actual variables in the case of S&P Quality Ranking). Relying heavily on a company's actual return on equity, the S&P Fair Value model places a value on a security based on placing a formula-derived price-to-book multiple on a company's consensus earnings per share estimate.

## Insider Activity

Gives an insight as to insider sentiment by showing whether directors, officers and key employees who have proprietary information not available to the general public, are buying or selling the company's stock during the most recent six months.

## Investability Quotient (IQ)

The IQ is a measure of investment desirability. It serves as an indicator of potential medium- to long-term return and as a caution against downside risk. The measure takes into account variables such as technical indicators, earnings estimates, liquidity, financial ratios and selected S&P proprietary measures.

S&P's IQ Rationale  
CSX Corp

|                               | Raw Score  | Max Value  |
|-------------------------------|------------|------------|
| Proprietary S&P Measures      | 50         | 115        |
| Technical Indicators          | 28         | 40         |
| Liquidity/Volatility Measures | 18         | 20         |
| Quantitative Measures         | 17         | 75         |
| <b>IQ Total</b>               | <b>113</b> | <b>250</b> |

## Volatility

Rates the volatility of the stock's price over the past year.

## Technical Evaluation

In researching the past market history of prices and

trading volume for each company, S&P's computer models apply special technical methods and formulas to identify and project price trends for the stock.

## Relative Strength Rank

Shows, on a scale of 1 to 99, how the stock has performed versus all other companies in S&P's universe on a rolling 13-week basis.

## Global Industry Classification Standard (GICS)

An industry classification standard, developed by Standard & Poor's in collaboration with Morgan Stanley Capital International (MSCI). GICS is currently comprised of 10 Sectors, 24 Industry Groups, 87 Industries, and 147 Sub Industries.

## S&amp;P Core Earnings

Standard & Poor's Core Earnings is a uniform methodology for adjusting operating earnings by focusing on a company's after-tax earnings generated from its principal businesses. Included in the Standard & Poor's definition are employee stock option grant expenses, pension costs, restructuring charges from ongoing operations, write-downs of depreciable or amortizable operating assets, purchased research and development, M&A related expenses and unrealized gains/losses from hedging activities. Excluded from the definition are pension gains, impairment of goodwill charges, gains or losses from asset sales, reversal of prior-year charges and provision from litigation or insurance settlements.

## S&amp;P Issuer Credit Rating

A Standard & Poor's Issuer Credit Rating is a current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the nature of and provisions of the obligation, as standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. In addition, it does not take into account the creditworthiness of the guarantors, insurers, or other forms of credit enhancement on the obligation. The Issuer Credit Rating is not a recommendation to purchase, sell, or hold a financial obligation issued by an obligor, as it does not comment on market price or suitability for a particular investor. Issuer Credit Ratings are based on current information furnished by obligors or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any Issuer Credit Rating and may, on occasion, rely on unaudited financial information. Issuer Credit Ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information, or based on other circumstances.

## Exchange Type

ASE - American Stock Exchange, NNM - Nasdaq National Market, NSC - Nasdaq SmallCap, NYSE - New York Stock Exchange, BB - OTC Bulletin Board, OT - Over the Counter, TO - Toronto Stock Exchange.

## S&amp;P Equity Research Services

Standard & Poor's Equity Research Services U.S. includes Standard & Poor's Investment Advisory Services LLC, Standard & Poor's Equity Research Services Europe includes Standard & Poor's LLC-London and Standard & Poor's AB (Sweden), Standard & Poor's Equity Research Services Asia includes Standard & Poor's LLC's offices in Hong Kong, Singapore and Tokyo, Standard & Poor's Malaysia Sdn Bhd, and Standard & Poor's Information Services (Australia) Pty Ltd.

Source: S&amp;P

Redistribution or reproduction is prohibited without written permission. Copyright ©2008 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

# CSX Corp

## Required Disclosures

### S&P Global STARS Distribution

**In the U.S.:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services U.S. have recommended 33.9% of issuers with buy recommendations, 58.8% with hold recommendations and 9.5% with sell recommendations.

**In Europe:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Europe have recommended 43.8% of issuers with buy recommendations, 48.5% with hold recommendations and 15.7% with sell recommendations.

**In Asia:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Asia have recommended 31.2% of issuers with buy recommendations, 59.8% with hold recommendations and 9.2% with sell recommendations.

**Globally:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services globally have recommended 34.7% of issuers with buy recommendations, 55.2% with hold recommendations and 10.1% with sell recommendations.

★★★★★ **5-STARS (Strong Buy)** Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis.

★★★★☆ **4-STARS (Buy)** Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

★★★☆☆ **3-STARS (Hold)** Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

★★☆☆☆ **2-STARS (Sell)** Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain.

★☆☆☆☆ **1-STAR (Strong Sell)** Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis.

**Relevant benchmarks:** In the U.S. the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are generally the S&P Europe 350 Index and the S&P Asia 50 Index.

**For All Regions:** All of the views expressed in this research report accurately reflect the research analyst's personal views regarding any and all of the subject securities or issuers. No part of analyst compensation was, is, or will be directly or indirectly, related to the specific recommendations or views expressed in this research report.

Additional information is available upon request.

## Other Disclosures

This report has been prepared and issued by Standard & Poor's and/or one of its affiliates. In the United States, research reports are prepared by Standard & Poor's Investment Advisory Services LLC ("SPIAS"). In the United States, research reports are issued by Standard & Poor's ("S&P"), in the United Kingdom by Standard & Poor's LLC ("S&P LLC"), which is authorized and regulated by the Financial Services Authority; in Hong Kong by Standard & Poor's LLC which is regulated by the Hong Kong Securities Futures Commission, in Singapore by Standard & Poor's LLC, which is regulated by the Monetary Authority of Singapore, in Japan by Standard & Poor's LLC, which is regulated by the Kanto Financial Bureau, in Sweden by Standard & Poor's AB ("S&P AB"), in Malaysia by Standard & Poor's Malaysia Sdn Bhd ("S&P M") which is regulated by the Securities Commission and in Australia by Standard & Poor's Information Services (Australia) Pty Ltd ("SPIS") which is regulated by the Australian Securities and Investments Commission, and in Korea by SPIAS, which is also registered in Korea as a cross-border investment advisory company.

The research and analytical services performed by SPIAS, S&P LLC, S&P AB, S&P M, and SPIS are each conducted separately from any other analytical activity of Standard & Poor's.

Standard & Poor's or an affiliate may license certain intellectual property or provide pricing or other services to, or otherwise have a financial interest in, certain issuers of securities, including exchange-traded funds whose investment objective is to substantially replicate the returns of a proprietary Standard & Poor's index, such as the S&P 500. In cases where Standard & Poor's or an affiliate is paid fees that are tied to the amount of assets that are invested in the fund or the volume of trading activity in the fund, investment in the fund will generally result in Standard & Poor's or an affiliate earning compensation in addition to the subscription fees or other compensation for services rendered by Standard & Poor's. A reference to a particular investment or security by Standard & Poor's and one of its affiliates is not a recommendation to buy, sell, or hold such investment or security, nor is it considered to be investment advice.

S&P and/or one of its affiliates has performed services for and received compensation from this company during the past twelve months.

## Disclosures

This material is based upon information that we consider to be reliable, but neither S&P nor its affiliates warrant its completeness, accuracy or adequacy and it should

not be relied upon as such. With respect to reports issued by S&P LLC Japan and in the case of inconsistencies between the English and Japanese version of a report, the English version prevails. Neither S&P LLC nor S&P guarantees the accuracy of the translation. Assumptions, opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Neither S&P nor its affiliates are responsible for any errors or omissions or for results obtained from the use of this information. Past performance is not necessarily indicative of future results.

This material is not intended as an offer or solicitation for the purchase or sale of any security or other financial instrument. Securities, financial instruments or strategies mentioned herein may not be suitable for all investors. Any opinions expressed herein are given in good faith, are subject to change without notice, and are only correct as of the stated date of their issue. Prices, values, or income from any securities or investments mentioned in this report may fall against the interests of the investor and the investor may get back less than the amount invested. Where an investment is described as being likely to yield income, please note that the amount of income that the investor will receive from such an investment may fluctuate. Where an investment or security is denominated in a different currency to the investor's currency of reference, changes in rates of exchange may have an adverse effect on the value, price or income of or from that investment to the investor. The information contained in this report does not constitute advice on the tax consequences of making any particular investment decision. This material does not take into account your particular investment objectives, financial situations or needs and is not intended as a recommendation of particular securities, financial instruments or strategies to you. Before acting on any recommendation in this material, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice.

For residents of the U.K. this report is only directed at and should only be relied on by persons outside of the United Kingdom or persons who are inside the United Kingdom and who have professional experience in matters relating to investments or who are high net worth persons, as defined in Article 19(5) or Article 49(2) (a) to (d) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001, respectively.

For residents of Malaysia, all queries in relation to this report should be referred to Alexander Chai, Lee Leng Hoe, or Chung Wah Tam.

This investment analysis was prepared from the following sources: S&P MarketScope, S&P Compustat, S&P Industry Reports, I/B/E/S International, Inc., Standard & Poor's, 55 Water St., New York, NY 10041.

# Norfolk Southern Corp

**STANDARD  
& POOR'S**

**S&P Recommendation** **HOLD** ★★☆☆☆

**Price**  
\$50.29 (as of Dec 29, 2006)

**12-Mo Target Price**  
\$54.00

**Investment Style**  
Large-Cap Blend

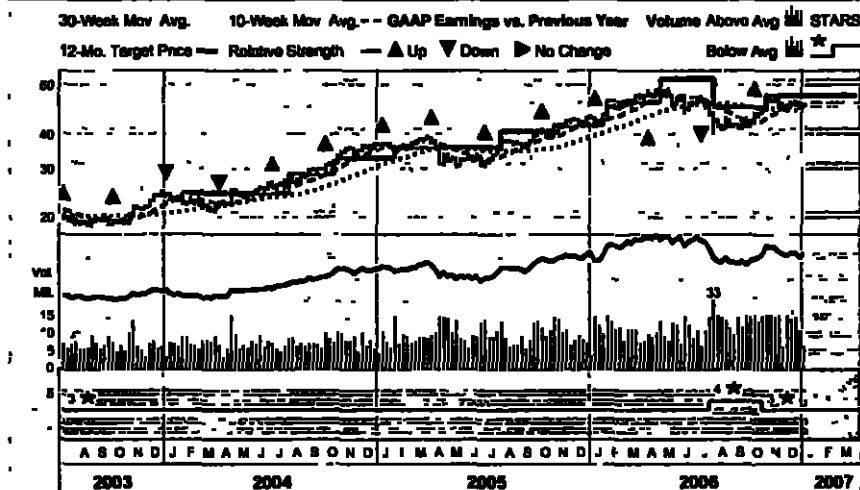
**QICS Sector Industrials**  
Sub-Industry Railroads

**Comment** This railroad operates 21,200 route miles serving 22 Eastern states, the District of Columbia, and Ontario, Canada

## Key Stock Statistics (Source S&P Vantage, company reports)

|                          |               |                    |      |                             |          |                     |        |
|--------------------------|---------------|--------------------|------|-----------------------------|----------|---------------------|--------|
| 52-Wk Range              | \$57.71-39.10 | S&P Oper EPS 2006E | 3.53 | P/E on S&P Oper EPS 2006E   | 14.2     | Dividend Rate/Share | \$0.72 |
| Trailing 12-Month EPS    | \$3.49        | S&P Oper EPS 2007E | 3.97 | Common Shares Outstg (M)    | 398.9    | Yield (%)           | 1.43   |
| Trailing 12-Month P/E    | 14.4          | S&P Core EPS 2006E | 3.23 | Market Capitalization(B)    | \$19.960 | Beta                | 0.73   |
| \$10K Invested 5 Yrs Ago | \$29.381      | S&P Core EPS 2007E | 3.74 | Institutional Ownership (%) | 68       | S&P Credit Rating   | BBB+   |

## Price Performance



Options CBOE

Analysis prepared by Kevin Kirkeby on November 08, 2006, when the stock traded at \$52.68.

## Highlights

- We expect revenue growth to slow from the 13% anticipated in 2006 to 8% in 2007 on flattening fuel surcharges and a 4% volume increase. We see the intermodal segment leading anticipated volume growth in both years, reflecting more service offerings that we think will help convert highway shipping to rail service. We forecast modestly rising coal revenues in 2007, boosted by price increases and greater utility coal usage. Additional auto parts volumes from international manufacturers are likely to offset production downsizing efforts at Ford and GM.
- We see 2007 operating margins improving from the 27.7% anticipated for 2006, as efficiency gains from improved asset utilization are likely to offset higher wage expenses and a greater exposure to market prices for diesel fuel. Interest expenses are forecast to decline in 2007 on lower debt levels.
- We expect NSC's effective tax rate to rise to 36% in 2006 and 2007 due to lower synthetic fuel-related tax credits. We forecast operating EPS of \$3.53 for 2006 and \$3.97 for 2007.

## Investment Rationale/Risk

- Trends in NSC's primary markets, in our opinion, remain favorable and support continued volume and price gains, albeit at a declining rate. We see investments in its network improving capacity on heavily trafficked lines, and leading to higher railcar utilization and greater system fluidity. The improving free cash flow we expect NSC to generate over the next five years increases the likelihood of further dividend increases, in our view. However, with the shares approaching their all-time high, and the forecast of slowing growth, we believe NSC is appropriately valued.
- Risks to our opinion and target price include unfavorable fuel price fluctuations, weaker than expected economic and freight demand growth, declining railroad system fluidity, and a higher than projected rise in interest rates.
- Blending a forward P/E of 12X our 2007 EPS estimate, which we consider appropriate for this stage of the business cycle, with our DCF model that assumes a 9.1% weighted average cost of capital, 7% average net income growth over the next five years and a 3% terminal growth rate, we arrive at our 12-month target price of \$54.

## Quantitative Risk Assessment

|     |        |      |
|-----|--------|------|
| LOW | MEDIUM | HIGH |
|-----|--------|------|

Our risk assessment reflects what we see as NSC's exposure to economic cycles, regulations, labor and fuel costs, significant capital expenditure requirements, and challenges in maintaining system fluidity, offset by our view of a diverse customer base, historically positive free cash flow, and moderate financial leverage.

## Quantitative Evaluations

**S&P Quality Ranking** B

|   |   |    |   |    |    |   |    |
|---|---|----|---|----|----|---|----|
| D | C | B- | B | B+ | A- | A | A+ |
|---|---|----|---|----|----|---|----|

**Relative Strength Rank** MODERATE

|            |              |
|------------|--------------|
| LOWEST - 1 | HIGHEST - 98 |
|------------|--------------|

## Revenue/Earnings Data

|      | 1Q    | 2Q    | 3Q    | 4Q    | Year  |
|------|-------|-------|-------|-------|-------|
| 2006 | 2,303 | 2,392 | 2,393 | —     | —     |
| 2005 | 1,961 | 2,154 | 2,155 | 2,257 | 8,527 |
| 2004 | 1,693 | 1,813 | 1,857 | 1,949 | 7,312 |
| 2003 | 1,561 | 1,633 | 1,598 | 1,676 | 6,468 |
| 2002 | 1,498 | 1,593 | 1,598 | 1,581 | 6,270 |
| 2001 | 1,540 | 1,592 | 1,508 | 1,530 | 6,170 |

## Earnings Per Share (\$)

|      | 072  | 089  | 102  | E0 93 | E3 53 |
|------|------|------|------|-------|-------|
| 2006 | 0.72 | 0.89 | 1.02 | E0 93 | E3 53 |
| 2005 | 0.47 | 1.04 | 0.73 | 0.87  | 3.11  |
| 2004 | 0.40 | 0.54 | 0.72 | 0.65  | 2.31  |
| 2003 | 0.54 | 0.35 | 0.35 | 0.13  | 1.05  |
| 2002 | 0.22 | 0.31 | 0.32 | 0.33  | 1.18  |
| 2001 | 0.16 | 0.28 | 0.20 | 0.30  | 0.94  |

Fiscal year ended Dec 31. Next earnings report expected: Late January. EPS Estimates based on S&P Operating Earnings, historical GAAP earnings are as reported.

## Dividend Data (Date, annual Payment Date, annual Yr)

| Amount (\$) | Date Decl. | Ex-Div. Date | Stk. of Record | Payment Date |
|-------------|------------|--------------|----------------|--------------|
| 0.160       | 01/24      | 02/01        | 02/03          | 03/10/06     |
| 0.160       | 04/25      | 05/03        | 05/05          | 06/10/06     |
| 0.180       | 07/25      | 08/02        | 08/04          | 09/11/06     |
| 0.180       | 10/23      | 11/01        | 11/03          | 12/11/06     |

Dividends have been paid since 1901. Source: Company reports.

# Norfolk Southern Corp

**STANDARD  
& POOR'S**
**Business Summary November 08, 2008**

**CORPORATE OVERVIEW** Norfolk Southern provides rail transportation service in the eastern U.S., operating over 21,000 miles of road, with an extensive intermodal and coal service network and a significant general freight business, including an automotive business that is the largest in North America. NSC owns 58% of Conrail's shares, with CSX holding the remainder, and holds 50% voting rights. NSC and CSX operate separate portions of Conrail's rail routes and assets. NSC's non-rail activities include real estate and natural resources.

**MARKET PROFILE.** We believe NSC's intermodal business, representing 21% of 2005 freight revenues, should be NSC's fastest growing segment longer term, driven by rising international trade and its cost savings over trucks for long-distance container movements. We believe the superior system fluidity of its most extensive intermodal network on the East Coast, supported by ongoing investment in facilities, should provide NSC with a continuing edge in garnering east coast intermodal traffic. Coal, which we believe is NSC's most profitable segment, accounted for 25% of 2005 freight revenues. Most of this traffic originates from the Appalachian coal fields, and is primarily delivered to power utilities. General merchandise, sensitive to U.S. GDP trends, provided 54% of freight revenues in 2005. We believe chemicals, agricultural products and automotive, representing 11%, 10% and 12% of 2005 freight revenues, respectively, are significant general merchandise subsegments that are facing low long-term volume growth prospects.

**COMPETITIVE LANDSCAPE** The U.S. rail industry has an oligopoly-like structure, with over 80% of revenues generated by the four largest railroads: NSC and CSX Corp. operating on the East Coast, and Union Pacific Corp. and Burlington Northern Santa Fe Corp. operating on the West Coast. Railroads simultaneously compete for customers while cooperating by sharing assets, interfacing systems, and completing customer movements. Key suppliers include locomotive and rail equipment manufacturers, fuel suppliers, and labor. NSC's employees, about 85% of whom are unionized, enjoy above national average compensation due to their significant bargaining power.

We believe the market power of NSC's customers varies, large freight integrators and automotive, coal and utility companies may exert significant pricing power, while smaller customers with limited alternatives are often price takers. Railroads compete with trucking, shipping, and pipeline transportation. Rail rates are generally lower than trucking rates, as service is slower and less flexible, in our view, than trucking, which provides most U.S. transportation. We believe rising fuel prices increase the cost attractiveness of railroads over less fuel-efficient trucking, which should help support NSC's pricing and volumes over the next five years, assisted by NSC's relatively strong freight service quality.

**FINANCIAL TRENDS** We consider railroads to be a mature industry, and expect 2.8% annualized U.S. rail tonnage growth from 2004 to 2020. We believe NSC's growth opportunities are at the industry average, as we see above average future growth in intermodal traffic being offset by expected slow coal traffic growth. We expect coal tonnage originating in NSC's eastern service area to experience only 0.75% compound annual growth from 2005 to 2015. Over the past 10 years, NSC's intermodal volumes have grown at a compound annual growth rate of 9.8%, and total carloads have grown 3.5%, compared to 4.1% and -0.1% for the industry. We calculate that return on invested capital (ROIC) has over the past 10 years averaged 5.9% at NSC, versus 6.1% for the industry. We see high asset utilization and increased freight pricing helping ROIC rise from 7.5% in 2004 to 9.3% in 2005 and 9.6% in 2006, which would surpass our 9.1% estimate of NSC's cost of capital.

**Corporate Information**

**Investor Contact**  
L. Manley (757-629-2861)

**Office**  
Three Commercial Place, Norfolk, VA 23510-2191

**Telephone**  
757-629-2680

**Website**  
<http://www.nscorp.com>

**Officers**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Chairman, Pres &amp; CEO</b> | <b>VP &amp; Chair</b> |
| C.W. Moorman                    | M.R. Stewart          |

|                                |                        |
|--------------------------------|------------------------|
| <b>Vice Chairman &amp; COO</b> | <b>General Counsel</b> |
| S.C. Tobias                    | J.C. Dimino            |

|                                |
|--------------------------------|
| <b>Vice Chairman &amp; CFO</b> |
| H.C. Wolf                      |

**Board of Directors**

G.L. Bahies  
D.A. Carp  
G.R. Carter  
A.D. Correll  
D.R. Goode  
L. Hillard  
B.M. Joyce  
S.F. Leer  
C.W. Moorman  
J.M. O'Brien  
H.W. Pota  
J.P. Reason  
H. Wolf

|                 |                |
|-----------------|----------------|
| <b>Domestic</b> | <b>Auditor</b> |
| Virginia        | KPMG           |

**Founded**  
1980

**Employees**  
30,294

**Stockholders**  
48,180

## Norfolk Southern Corp

STANDARD  
& POOR'S

## Quantitative Evaluations

|                                                                                                                   |        |   |   |   |         |
|-------------------------------------------------------------------------------------------------------------------|--------|---|---|---|---------|
| S&P Fair Value Rank                                                                                               | 4      | 1 | 2 | 3 | 5       |
|                                                                                                                   | LOWEST |   |   |   | HIGHEST |
| Based on S&P's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5) |        |   |   |   |         |

|                        |         |                                                                                                                         |
|------------------------|---------|-------------------------------------------------------------------------------------------------------------------------|
| Fair Value Calculation | \$50.00 | Analysis of the stock's current worth, based on S&P's proprietary quantitative model suggests that NSC is fairly valued |
|------------------------|---------|-------------------------------------------------------------------------------------------------------------------------|

|                                                                                  |    |            |               |
|----------------------------------------------------------------------------------|----|------------|---------------|
| Investability<br>Quotient<br>Percentile                                          | 75 | LOWEST = 1 | HIGHEST = 100 |
| NSC scored higher than 75% of all companies for which an S&P Report is available |    |            |               |

|                                                         |     |         |      |
|---------------------------------------------------------|-----|---------|------|
| Volatility                                              | LOW | AVERAGE | HIGH |
| NSC has had Average price volatility over the past year |     |         |      |

|                      |         |                                                                          |
|----------------------|---------|--------------------------------------------------------------------------|
| Technical Evaluation | NEUTRAL | Since November, 2008, the technical indicators for NSC have been NEUTRAL |
|----------------------|---------|--------------------------------------------------------------------------|

|                  |             |         |           |
|------------------|-------------|---------|-----------|
| Insider Activity | UNFAVORABLE | NEUTRAL | FAVORABLE |
|------------------|-------------|---------|-----------|

## Expanded Ratio Analysis

|                                | 2005  | 2004  | 2003  | 2002  |
|--------------------------------|-------|-------|-------|-------|
| Price/Revenue                  | 2.17  | 1.98  | 1.43  | 1.24  |
| Price/EBITDA                   | 6.36  | 6.25  | 5.82  | 6.73  |
| Price/Pre-tax Income           | 10.89 | 11.10 | 15.82 | 11.04 |
| Price/Net Income               | 14.43 | 15.68 | 22.58 | 16.95 |
| Avg. Diluted Shares Outstg (M) | 412.3 | 399.3 | 392.0 | 390.0 |

Figures based on calendar year-end price

## Key Growth Rates and Averages

| Past Growth Rate (%) | 1 Year | 3 Years | 5 Years | 9 Years |
|----------------------|--------|---------|---------|---------|
| Sales                | 16.62  | 11.02   | 6.39    | 7.39    |
| Net Income           | 38.79  | 47.43   | 43.89   | 4.40    |

## Ratio Analysis (Annual Avg.)

|                           |       |       |       |       |
|---------------------------|-------|-------|-------|-------|
| Net Margin (%)            | 15.02 | 11.33 | 9.44  | 9.58  |
| LTD of Capitalization (%) | 29.37 | 33.81 | 37.56 | 41.70 |
| Return on Equity (%)      | 14.83 | 11.09 | 9.33  | 8.68  |

## Company Financials

| Per Share Data (\$) Year Ended Dec 31 | 2005  | 2004  | 2003  | 2002  | 2001  | 2000  | 1999  | 1998  | 1997  | 1996  |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tangible Book Value                   | 22.66 | 19.98 | 17.83 | 16.71 | 15.78 | 15.17 | 15.53 | 15.61 | 14.44 | 13.27 |
| Cash Flow                             | 5.02  | 3.83  | 2.40  | 2.50  | 2.27  | 1.80  | 1.91  | 2.83  | 2.98  | 3.15  |
| Earnings                              | 3.11  | 2.31  | 1.05  | 1.18  | 0.94  | 0.45  | 0.63  | 1.65  | 1.84  | 2.03  |
| S&P Core Earnings                     | 2.97  | 2.13  | 0.95  | 0.70  | 0.41  | NA    | NA    | NA    | NA    | NA    |
| Dividends                             | 0.48  | 0.48  | 0.30  | 0.26  | 0.24  | 0.80  | 0.80  | 0.80  | 0.80  | 0.75  |
| Payout Ratio                          | 15%   | 20%   | 29%   | 22%   | 26%   | 178%  | 127%  | 48%   | 43%   | 37%   |
| Prices High                           | 45.81 | 36.69 | 24.82 | 28.98 | 24.11 | 22.75 | 36.44 | 41.75 | 38.13 | 32.21 |
| Prices Low                            | 29.60 | 20.38 | 17.35 | 17.20 | 13.41 | 11.94 | 19.63 | 27.44 | 28.21 | 25.46 |
| P/E Ratio High                        | 15    | 16    | 23    | 23    | 26    | 51    | 58    | 25    | 21    | 18    |
| P/E Ratio Low                         | 10    | 9     | 17    | 15    | 14    | 27    | 31    | 17    | 15    | 13    |

## Income Statement Analysis (Million \$)

|                    |       |       |       |       |       |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Revenue            | 8,527 | 7,312 | 6,468 | 6,270 | 6,170 | 6,159 | 5,195 | 4,221 | 4,223 | 4,770 |
| Operating Income   | 2,904 | 2,311 | 1,592 | 1,158 | 1,521 | 1,150 | 1,207 | 1,502 | 1,845 | 1,826 |
| Depreciation       | 787   | 609   | 528   | 515   | 514   | 517   | 489   | 450   | 432   | 429   |
| Interest Expense   | 500   | 506   | 497   | 518   | 553   | 551   | 561   | 516   | 385   | 159   |
| Pre-tax Income     | 1,897 | 1,302 | 586   | 706   | 553   | 250   | 351   | 845   | 998   | 1,197 |
| Effective Tax Rate | 24.5% | 29.1% | 29.9% | 34.8% | 34.5% | 31.2% | 31.9% | 25.4% | 30.0% | 35.6% |
| Net Income         | 1,281 | 923   | 411   | 460   | 362   | 172   | 239   | 630   | 699   | 770   |
| S&P Core Earnings  | 1,224 | 849   | 365   | 270   | 155   | NA    | NA    | NA    | NA    | NA    |

## Balance Sheet &amp; Other Financial Data (Million \$)

|                                    |        |        |        |        |        |        |        |        |        |        |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cash                               | 289    | 579    | 284    | 184    | 204    | NA     | 37.0   | 5.00   | 34.0   | 403    |
| Current Assets                     | 2,650  | 1,967  | 1,425  | 1,299  | 1,047  | 849    | 1,371  | 913    | 1,103  | 1,457  |
| Total Assets                       | 25,881 | 24,750 | 20,596 | 19,958 | 19,418 | 18,976 | 19,250 | 18,180 | 17,350 | 11,416 |
| Current Liabilities                | 1,921  | 2,201  | 1,801  | 1,853  | 2,386  | 1,887  | 1,924  | 1,117  | 1,093  | 1,190  |
| Long Term Debt                     | 6,616  | 6,863  | 6,800  | 7,006  | 7,027  | 7,339  | 7,568  | 7,483  | 7,398  | 1,800  |
| Common Equity                      | 9,289  | 7,990  | 6,976  | 6,500  | 6,090  | 5,824  | 5,932  | 5,921  | 5,445  | 4,978  |
| Total Capital                      | 22,525 | 21,403 | 17,008 | 16,561 | 15,943 | 15,958 | 16,225 | 15,998 | 15,372 | 6,827  |
| Capital Expenditures               | 1,025  | 1,041  | 720    | 689    | 746    | 731    | 912    | 956    | 875    | 688    |
| Cash Flow                          | 2,068  | 1,532  | 939    | 975    | 876    | 689    | 728    | 1,080  | 1,131  | 1,199  |
| Current Ratio                      | 1.4    | 0.9    | 0.8    | 0.7    | 0.4    | 0.4    | 0.7    | 0.8    | 1.0    | 1.2    |
| % Long Term Debt of Capitalization | 29.4   | 32.1   | 40.0   | 42.3   | 44.1   | 48.0   | 48.8   | 46.8   | 48.1   | 26.4   |
| % Net Income of Revenue            | 15.0   | 12.6   | 6.4    | 7.3    | 5.9    | 2.8    | 4.6    | 14.9   | 16.6   | 16.1   |
| % Return on Assets                 | 5.1    | 4.1    | 2.0    | 2.3    | 1.9    | 0.9    | 1.3    | 3.5    | 4.9    | 6.9    |
| % Return on Equity                 | 14.8   | 12.3   | 6.1    | 7.3    | 6.1    | 2.9    | 4.0    | 11.1   | 13.4   | 15.7   |

Data is original, but results of disc operations. Cash flow per share data adj for stock data, EPS diluted E-Estimated NA-Not Available NM-Not Meaningful NR-Not Ranked UR-Under Review

Redistribution or reproduction is prohibited without written permission. Copyright ©2009 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

# Norfolk Southern Corp

## Sub-Industry Outlook

Our fundamental outlook for the S&P Railroads Index is neutral. We think shipping volumes and prices will continue to benefit from a broad economic expansion continuing into 2007, and expect profits to benefit. Nevertheless, we see neutral valuation indications and are concerned that if the economy's growth rate slows further, investors may increasingly rotate out of these stocks into other groups. In addition, the industry has generally underperformed after past interest rate hikes, although past performance is not necessarily a guide to future results.

We see rail revenues rising about 12% in 2006, following an approximate 14% advance in 2005. Traffic in ton miles (weight times distance) increased about 2.4% in the U.S. in 2005, and rose 2.6% year to date through December 23, according to estimates by the Association of American Railroads. Total carloadings in 2005 rose 0.9%, and were up 1.4% year to date through December 23. Intermodal volume set a record in 2005, rising 6.4%, to 11.7 million trailers or containers, and rose 5.2% year to date through December 23 to 12.1 million. We believe that freight rates will rise modestly in the coming year, on firm freight demand and tight capacity, partially offset by smaller fuel surcharges. We believe operating earnings for major U.S. railroads rose over 20% in 2005, and expect about 20% growth in 2006. However, our expectations for railroad shares are limited by the maturing economic cycle, perceived fair valuations, high fuel and employee costs, and difficulties in managing railroad system fluidity amid higher volumes.

Our longer-term outlook for railroads is favorable, although we expect moderating revenue and profit growth in 2007. We see the industry's core traffic base (coal, grain, chemicals and intermodal) increasing in line with the economy. In addition, we

think there is room to expand margins and operating efficiency by eliminating what we view as wasteful labor practices, improving service levels, and using improving information systems to boost future operating efficiency and aid capital budgeting decisions. As a result of 2001 guidelines by the Surface Transportation Board, we see future rail mergers among the four largest U.S. railroads as unlikely.

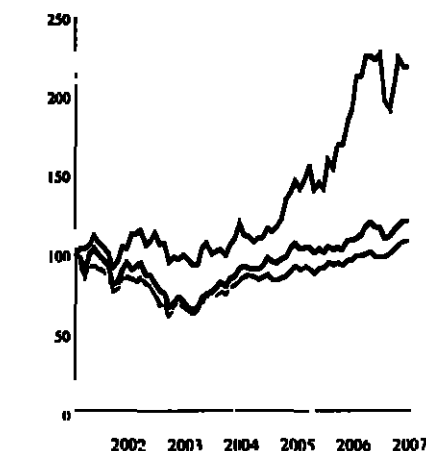
Year to date through December 20, the S&P Railroads Index was up 12.0%, versus a 13.7% increase for the S&P 1500.

-Kevin Kirkaby, CFA

## Stock Performance

**IGICS Sector Industrials  
Sub-Industry Railroads**

Based on S&P 1500 Indexes  
Month-and Price Performance as of 12/29/06



Sub Industry      Sector      S&P 1500

NOTE: All Sector & Sub Industry information is based on the Global Industry Classification Standard (IGICS).

## Sub-Industry: Railroads Peer Group\*: Railroads (U.S.) - Major

| Peer Group                   | Stock Symbol | Stk. Mkt. Cap. (MIL \$) | Recent Stock Price | P/E Ratio | 12-Mo Trailing EPS | 30-Day Price Chg(%) | 1 Year Price Chg(%) | Beta | Yield (%) | Quality Ranking | Ret. on Equity (%) | Pretax Margin (%) | LTD to Cap (%) |
|------------------------------|--------------|-------------------------|--------------------|-----------|--------------------|---------------------|---------------------|------|-----------|-----------------|--------------------|-------------------|----------------|
| Norfolk Southern             | NSC          | 19,890                  | 50.29              | 14        | 3.49               | 3%                  | 12%                 | 0.79 | 1.4       | B               | 14.8               | 19.9              | 29.4           |
| Burlington Northern Santa Fe | BNI          | 28,513                  | 73.81              | 15        | 4.81               | 1%                  | 4%                  | 0.84 | 1.4       | A               | 15.8               | 18.8              | 27.3           |
| CSX Corp                     | CSX          | 14,983                  | 34.43              | 13        | 2.59               | 3%                  | 35%                 | 0.98 | 1.2       | B               | 8.8                | 12.0              | 25.3           |
| Kansas City Southern         | KSU          | 2,198                   | 28.88              | 40        | 0.72               | 8%                  | 17%                 | 1.03 | Nil       | B               | 7.5                | 5.8               | 47.5           |
| Union Pacific                | UNP          | 24,820                  | 92.02              | 18        | 5.23               | 2%                  | 14%                 | 0.88 | 1.3       | B+              | 7.8                | 10.6              | 22.8           |

NA Not Available NM Not Meaningful NR Not Rated. \*For Peer Groups with more than 15 companies or stocks, selection of issues is based on market capitalization.

# Norfolk Southern Corp

**STANDARD  
& POOR'S**

## S&P Analyst Research Notes and other Company News

**November 14, 2006**

**DOWN 3 03 to 49 65** At Citigroup Transportation Conference, co said Q4 carloads to date are down modestly from last year, expects revenue increases to moderate, reflecting tempered volume growth, tough comparisons with strong Q4 '05

**October 25, 2006**

**UP 4 73 to 53 53** Posts \$1 02 vs \$0 73 Q3 EPS on 11% revenue rise S&P downgrades to hold from buy

**October 25, 2006**

**11:06 am EDT. S&P DOWNGRADES OPINION ON SHARES OF NORFOLK SOUTHERN TO HOLD FROM BUY (NSC 54 12\*\*\*\*)** NSC posts Q3 EPS of \$1 02 vs \$0 73 on an 11% rise in revenue and a 330 bps increase in operating margin, exceeding our \$0.93 estimate. The company bought some 3% of its stock during the quarter for over \$700M. While we expect further earnings growth in '07, we think momentum has peaked and that outpaced price and volume gains will be harder to achieve. With about a 28% rise in share price since late July, we believe NSC is fairly valued. We are raising our '06 EPS estimate by \$0 09 to \$3 53, '07 s by \$0 06 to \$3 97, and boosting our 12-month target price to \$54 from \$49 /KKirkeby-CFA

**October 25, 2006**

**NEW YORK (Standard & Poor's)--Oct 25, 2006, Norfolk Southern Corp., announced 3Q EPS \$1 02 vs \$0 73 and 9 mos EPS \$2 62 vs \$2 24**

**July 26, 2006**

**Posts \$0 89 vs \$1 04 Q2 EPS despite 11% revenue rise** Notes Q2 '05 included benefit from effects of Ohio tax legislation, settlement of two coal rate cases, which combined increase '05 EPS by \$0 29

**July 26, 2006**

**12:47 pm EDT. S&P UPGRADES SHARES OF NORFOLK SOUTHERN TO BUY FROM HOLD (NSC 40 54\*\*\*\*)** Shares are down about 10% today after NSC posts Q2 operating EPS of \$0 89 versus \$0 75, below our \$0 95 estimate largely due to a reduction in tax credits. We see this as a market overreaction as volume growth, led by intermodal and coal, is expected to continue into '07, and margins are projected to widen on improving asset utilization. We are maintaining our operating EPS estimates for '06 at \$3 44 and for '07 at \$3 91. Our target price falls to \$49 from \$62 reflecting a lower forward P/E multiple assumption, given the maturing business cycle, blended with our DCF valuation. /K Kirkeby-CFA

**July 26, 2006**

**NEW YORK (Standard & Poor's)--Jul 26, 2006, Norfolk Southern Corp., announced 2Q EPS \$0 89 vs \$1.04 and 6 mos EPS \$1 61 vs \$1 51**

**April 25, 2006**

**UP 0 97 to 55 22** Posts \$0.72 vs \$0 47 Q1 EPS on 17% higher total railway operating revenue S&P maintains hold

**April 25, 2006**

**10:01 am EDT. S&P MAINTAINS HOLD OPINION ON SHARES OF NORFOLK SOUTHERN (NSC 55 17\*\*\*\*)** NSC posts Q1 EPS of \$0 72 vs \$0 47, above our \$0 61 estimate, as revenue rose 17% on 5% higher freight volumes coupled with rising freight rates and fuel surcharges. We expect revenues to increase over 12% in '06, driven by continuing volume growth, led by intermodal and coal traffic, and by higher pricing. We expect margins to benefit from rising capacity utilization and lower depreciation and casualty costs. We are raising our '06 EPS estimates to \$3 44 from \$3 26, and our 12-month target price to \$62 from \$51, based on a blend of our updated DCF and relative valuation models. /A West-CFA

**April 25, 2006**

**NEW YORK (Standard & Poor's)--Apr 25, 2006, Norfolk Southern Corp., announced 1Q EPS \$0 72 vs \$0 47**

**April 4, 2006**

**Apr 3, 2006--Norfolk Southern Corp (NYSE: NSC) announced that L. Prillaman has retired as vice chairman and chief marketing officer**

**January 25, 2006**

**UP 2.01 to 47 81** Posts \$0 87 vs \$0 85 Q4 EPS on 16% revenue rise S&P maintains hold

**January 25, 2006**

**10:17 am EST S&P MAINTAINS HOLD OPINION ON SHARES OF NORFOLK SOUTHERN (NSC 47 75\*\*\*\*)** NSC posts Q4 EPS of \$0 87 vs \$0 66, above our \$0 81 estimate, as revenues increased 16% on rising freight pricing and fuel surcharges and on 3% higher volumes. We project revenue will increase 9% in '06 on 3% volume growth led by intermodal, despite a challenging automotive and chemical outlook, coupled with 6% higher overall pricing. Given our view of continuing strong asset utilization and pricing, we are raising our '06 EPS estimate to \$3.26 from \$3 14. Based on a blend of updated DCF and relative valuation models, we are increasing our 12-month target price to \$51 from \$46. /A West-CFA

**January 25, 2006**

**NEW YORK (Standard & Poor's)--Jan 25, 2006, Norfolk Southern Corp., announced 4Q EPS \$0 87 vs \$0 66 and annual EPS \$3 11 vs \$2 31**

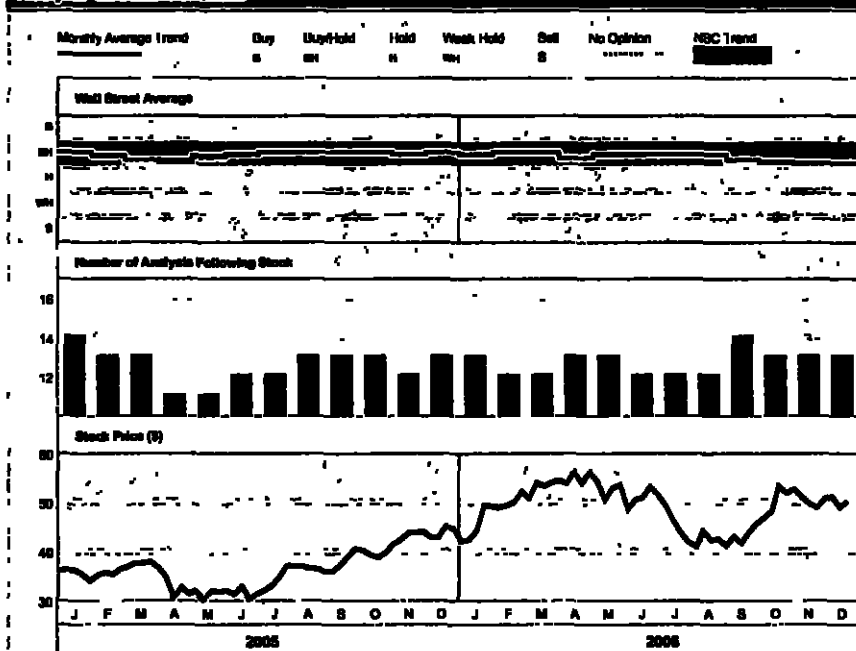
**January 25, 2006**

**Jan 24, 2006--Norfolk Southern Corp (NYSE: NSC) announced that it named its president and chief executive officer, Charles W. Moorman, to the additional post of chairman, effective Feb 1, 2006. Mr. Moorman will succeed David R. Goode, who will remain on the board until the company's annual meeting of stockholders in May.**

# Norfolk Southern Corp

**STANDARD  
& POOR'S**

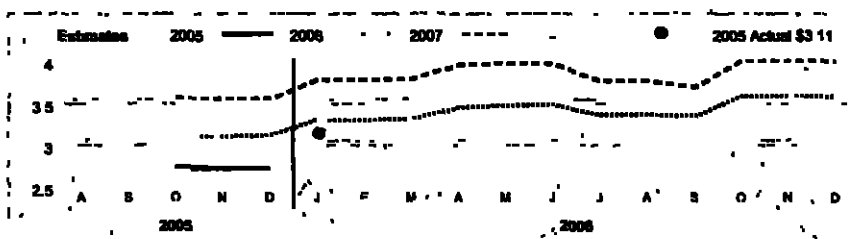
## Analysts' Recommendations



Of the total 13 companies following NSC, 13 analysts currently publish recommendations

|            | No. of Ratings | % of Total | 1 Mo. Prior | 3 Mos. Prior |
|------------|----------------|------------|-------------|--------------|
| Buy        | 3              | 23         | 3           | 4            |
| Buy/Hold   | 3              | 23         | 3           | 4            |
| Hold       | 6              | 46         | 6           | 5            |
| Weak Hold  | 1              | 8          | 1           | 1            |
| Sell       | 0              | 0          | 0           | 0            |
| No Opinion | 0              | 0          | 0           | 0            |
| Total      | 13             | 100        | 13          | 14           |

## Wall Street Consensus Estimates



| Fiscal Years    | Avg Est. | High Est. | Low Est. | # of Est. | Est. P/E |
|-----------------|----------|-----------|----------|-----------|----------|
| 2007            | 3.99     | 4.14      | 3.90     | 11        | 12.6     |
| 2006            | 3.57     | 3.63      | 3.37     | 12        | 14.1     |
| 2007 vs. 2006   | ▲ 12%    | ▲ 14%     | ▲ 16%    | ▼ -8%     | ▼ -11%   |
| Q4'07           | 1.10     | 1.16      | 1.05     | 3         | 45.7     |
| Q4'06           | 0.97     | 1.00      | 0.92     | 11        | 51.8     |
| Q4'07 vs. Q4'06 | ▲ 13%    | ▲ 16%     | ▲ 14%    | ▼ -73%    | ▼ -12%   |

A company's earnings outlook plays a major part in any investment decision. Standard & Poor's organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years. This graph shows the trend in analyst estimates over the past 15 months.

## Wall Street Consensus Opinion

**BUY/HOLD**

## Companies Offering Coverage

AG Edwards & Sons  
Argus Research Corp  
BB&T Capital Markets  
Bank of America Securities LLC  
Bear Stearns & Co  
Credit Suisse First Boston  
Deutsche Bank  
JP Morgan Securities  
Lehman Brothers, Inc  
Merrill Lynch Research  
Smith Barney  
Stifel Nicolaus & Co  
UBS Warburg

## Wall Street Consensus vs. Performance

For fiscal year 2006, analysts estimate that NSC will earn \$3.57. For the 3rd quarter of fiscal year 2006, NSC announced earnings per share of \$1.02, representing 29% of the total annual estimate. For fiscal year 2007, analysts estimate that NSC's earnings per share will grow by 12% to \$3.99.

# Norfolk Southern Corp

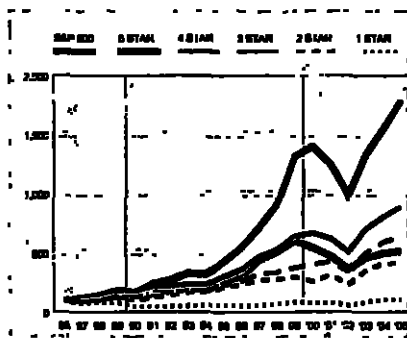
**STANDARD  
& POOR'S**

## Glossary

### S&P STARS

Since January 1, 1987, Standard and Poor's Equity Research Services has ranked a universe of common stocks based on a given stock's potential for future performance. Under proprietary STARS (STock Appreciation Ranking System), S&P equity analysts rank stocks according to their individual forecast of a stock's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index (S&P Asia 50 Index, S&P Europe 350 Index or S&P 500 Index)), based on a 12 month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective.

### STARS Average Annual Performance



### S&P 12-Month Target Price

The S&P equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics.

### Investment Style Classification

Characterizes the stock as either a growth or value-oriented investment, and, indicates the market value (size) of the company as large-cap, mid cap or small cap. Growth stocks typically have a higher price-to-earnings and price-to-cash flow ratio, that represents the premium that is being paid for the expected higher growth. Value stocks typically have higher dividends and more moderate price-to-earnings ratios consistent with their current return policies.

### Qualitative Risk Assessment

The S&P equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the S&P U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices.

### Quantitative Evaluations

In contrast to our qualitative STARS recommendations, which are assigned by S&P analysts, the quantitative evaluations described below are derived from proprietary arithmetic models. These computer-driven evaluations may at times contradict an analyst's qualitative assessment of a stock. One primary reason for this is that different measures are used to determine each. For instance, when designating STARS, S&P analysts assess many factors that cannot be reflected in a model, such as risks and opportunities, management changes, recent competitive shifts, patent expiration, litigation risk, etc.

### S&P Quality Ranking

Growth and stability of earnings and dividends are deemed key elements in establishing S&P's Quality Rankings for common stocks, which are designed to encapsulate the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

|                  |                     |
|------------------|---------------------|
| A+ Highest       | B Below Average     |
| A High           | B- Lower            |
| A- Above Average | C Lowest            |
| B+ Average       | D In Reorganization |
| NR Not Ranked    |                     |

### S&P Fair Value Rank

Using S&P's exclusive proprietary quantitative model, stocks are ranked in one of five groups, ranging from Group 5, listing the most undervalued stocks, to Group 1, the most overvalued issues. Group 5 stocks are expected to generally outperform all others. A positive (+) or negative (-) Timing Index is placed next to the Fair Value ranking to further aid the selection process. A stock with a (+) added to the Fair Value Rank simply means that this stock has a somewhat better chance to outperform other stocks with the same Fair Value Rank. A stock with a (-) has a somewhat lesser chance to outperform other stocks with the same Fair Value Rank. The Fair Value rankings imply the following: 5-Stock is significantly undervalued, 4-Stock is moderately undervalued, 3-Stock is fairly valued, 2-Stock is modestly overvalued, 1-Stock is significantly overvalued.

### S&P Fair Value Calculation

The price at which a stock should trade at, according to S&P's proprietary quantitative model that incorporates both actual and assumed variables (as opposed to only actual variables in the case of S&P Quality Ranking). Relying heavily on a company's actual return on equity, the S&P Fair Value model places a value on a security based on placing a formula-derived price to book multiple on a company's consensus earnings per share estimate.

### Insider Activity

Gives an insight as to insider sentiment by showing whether directors, officers and key employees who have proprietary information not available to the general public, are buying or selling the company's stock during the most recent six months.

### Investability Quotient (IQ)

The IQ is a measure of investment desirability. It serves as an indicator of potential medium- to long-term return and as a caution against downside risk. The measure takes into account variables such as technical indicators, earnings estimates, liquidity, financial ratios and selected S&P proprietary measures.

### S&P's IQ Rationale: Norfolk Southern

|                               | Raw Score  | Max Value  |
|-------------------------------|------------|------------|
| Proprietary S&P Measures      | 50         | 115        |
| Technical Indicators          | 24         | 40         |
| Liquidity/Volatility Measures | 18         | 20         |
| Quantitative Measures         | 19         | 75         |
| <b>IQ Total</b>               | <b>111</b> | <b>250</b> |

### Volatility

Rates the volatility of the stock's price over the past year.

### Technical Evaluation

In researching the past market history of prices and

trading volume for each company, S&P's computer models apply special technical methods and formulas to identify and project price trends for the stock.

### Relative Strength Rank

Shows, on a scale of 1 to 99, how the stock has performed versus all other companies in S&P's universe on a rolling 13-week basis.

### Global Industry Classification Standard (GICS)

An industry classification standard developed by Standard & Poor's in collaboration with Morgan Stanley Capital International (MSCI). GICS is currently comprised of 10 Sectors, 24 Industry Groups, 67 Industries, and 147 Sub Industries.

### S&P Core Earnings

Standard & Poor's Core Earnings is a uniform methodology for adjusting operating earnings by focusing on a company's after-tax earnings generated from its principal businesses. Included in the Standard & Poor's definition are employee stock option grant expenses, pension costs, restructuring charges from ongoing operations, write-downs of depreciable or amortizable operating assets, purchased research and development, M&A related expenses and unrealized gains/losses from hedging activities. Excluded from the definition are pension gains, impairment of goodwill charges, gains or losses from asset sales, reversal of prior-year charges and provision from litigation or insurance settlements.

### S&P Issuer Credit Rating

A Standard & Poor's Issuer Credit Rating is a current opinion of an obligor's overall financial capacity (its creditworthiness) to pay its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. It does not apply to any specific financial obligation, as it does not take into account the nature of and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. In addition, it does not take into account the creditworthiness of the guarantors, insurers, or other forms of credit enhancement on the obligation. The Issuer Credit Rating is not a recommendation to purchase, sell, or hold a financial obligation issued by an obligor, as it does not comment on market price or suitability for a particular investor. Issuer Credit Ratings are based on current information furnished by obligors or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any Issuer Credit Rating and may, on occasion, rely on unaudited financial information. Issuer Credit Ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information, or based on other circumstances.

### Exchange Type

ASE - American Stock Exchange, NNM - Nasdaq National Market, NSC - Nasdaq SmallCap, NYSE - New York Stock Exchange, BB - OTC Bulletin Board, OT - Over-the Counter, TO - Toronto Stock Exchange.

### S&P Equity Research Services

Standard & Poor's Equity Research Services U.S. includes Standard & Poor's Investment Advisory Services LLC, Standard & Poor's Equity Research Services Europe includes Standard & Poor's LLC London and Standard & Poor's AB (Sweden), Standard & Poor's Equity Research Services Asia includes Standard & Poor's LLC offices in Hong Kong, Singapore and Tokyo, Standard & Poor's Malaysia Sdn Bhd, and Standard & Poor's Information Services (Australia) Pty Ltd.

Source: S&P

Redistribution or reproduction is prohibited without written permission. Copyright ©2008 The McGraw-Hill Companies, Inc.

The McGraw-Hill Companies

# Norfolk Southern Corp

**STANDARD  
& POOR'S**

## Required Disclosures

### S&P Global STARS Distribution

**In the U.S.:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services U.S. have recommended 33.9% of issuers with buy recommendations, 58.8% with hold recommendations and 9.5% with sell recommendations

**In Europe:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Europe have recommended 43.8% of issuers with buy recommendations, 40.5% with hold recommendations and 15.7% with sell recommendations

**In Asia:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Asia have recommended 31.2% of issuers with buy recommendations, 59.8% with hold recommendations and 9.2% with sell recommendations

**Globally:** As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services globally have recommended 34.7% of issuers with buy recommendations, 55.2% with hold recommendations and 10.1% with sell recommendations

★★★★★ **5-STARS (Strong Buy)** Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis

★★★★★ **4-STARS (Buy)** Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis

★★★★★ **3-STARS (Hold)** Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis

★★★★★ **2-STARS (Sell)** Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain

★★★★★ **1-STAR (Strong Sell)** Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis

**Relevant benchmarks:** In the U.S. the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are generally the S&P Europe 350 Index and the S&P Asia 50 Index

**For All Regions:** All of the views expressed in this research report accurately reflect the research analyst's personal views regarding any and all of the subject securities or issuers. No part of analyst compensation was, is, or will be directly or indirectly, related to the specific recommendations or views expressed in this research report.

Additional information is available upon request.

## Other Disclosures

This report has been prepared and issued by Standard & Poor's and/or one of its affiliates. In the United States, research reports are prepared by Standard & Poor's Investment Advisory Services LLC ("SPIAS"). In the United States, research reports are issued by Standard & Poor's ("S&P"), in the United Kingdom by Standard & Poor's LLC ("S&P LLC"), which is authorized and regulated by the Financial Services Authority; in Hong Kong by Standard & Poor's LLC which is regulated by the Hong Kong Securities Futures Commission, in Singapore by Standard & Poor's LLC, which is regulated by the Monetary Authority of Singapore, in Japan by Standard & Poor's LLC, which is regulated by the Kanto Financial Bureau, in Sweden by Standard & Poor's AB ("S&P AB"), in Malaysia by Standard & Poor's Malaysia Sdn Bhd ("S&P M") which is regulated by the Securities Commission and in Australia by Standard & Poor's Information Services (Australia) Pty Ltd ("SPIS") which is regulated by the Australian Securities & Investments Commission, and in Korea by SPIAS, which is also registered in Korea as a cross-border investment advisory company

The research and analytical services performed by SPIAS, S&P LLC, S&P AB, S&P M, and SPIS are each conducted separately from any other analytical activity of Standard & Poor's

Standard & Poor's or an affiliate may license certain intellectual property or provide pricing or other services to, or otherwise have a financial interest in, certain issuers of securities, including exchange traded funds whose investment objective is to substantially replicate the returns of a proprietary Standard & Poor's index, such as the S&P 500. In cases where Standard & Poor's or an affiliate is paid fees that are tied to the amount of assets that are invested in the fund or the volume of trading activity in the fund, investment in the fund will generally result in Standard & Poor's or an affiliate earning compensation in addition to the subscription fees or other compensation for services rendered by Standard & Poor's. A reference to a particular investment or security by Standard & Poor's and one of its affiliates is not a recommendation to buy, sell or hold such investment or security, nor is it considered to be investment advice

S&P and/or one of its affiliates has performed services for and received compensation from this company during the past twelve months

## Disclaimers

This material is based upon information that we consider to be reliable, but neither S&P nor its affiliates warrant its completeness, accuracy or adequacy and it should

not be relied upon as such. With respect to reports issued by S&P LLC-Japan and in the case of inconsistencies between the English and Japanese version of a report, the English version prevails. Neither S&P LLC nor S&P guarantees the accuracy of the translation. Assumptions, opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Neither S&P nor its affiliates are responsible for any errors or omissions or for results obtained from the use of this information. Past performance is not necessarily indicative of future results.

This material is not intended as an offer or solicitation for the purchase or sale of any security or other financial instrument. Securities, financial instruments or strategies mentioned herein may not be suitable for all investors. Any opinions expressed herein are given in good faith, are subject to change without notice, and are only correct as of the stated date of their issue. Prices, values, or income from any securities or investments mentioned in this report may fall against the interests of the investor and the investor may get back less than the amount invested. Where an investment is described as being likely to yield income, please note that the amount of income that the investor will receive from such an investment may fluctuate. Where an investment or security is denominated in a different currency to the investor's currency of reference, changes in rates of exchange may have an adverse effect on the value, price or income of or from that investment to the investor. The information contained in this report does not constitute advice on the tax consequences of making any particular investment decision. This material does not take into account your particular investment objectives, financial situations or needs and is not intended as a recommendation of particular securities, financial instruments or strategies to you. Before acting on any recommendation in this material, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice

For residents of the U.K. this report is only directed at and should only be relied on by persons outside of the United Kingdom or persons who are made the United Kingdom and who have professional experience in matters relating to investments or who are high net worth persons, as defined in Article 19(5) or Article 49(2) (a) to (d) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001, respectively

For residents of Malaysia, all queries in relation to this report should be referred to Alexander Chua, Lee Leng Hoe, or Chung Wei Tam

This investment analysis was prepared from the following sources: S&P MarketScope, S&P Compustat, S&P Industry Reports, I/B/E/S International, Inc., Standard & Poor's, 55 Water St., New York, NY 10041

# Union Pacific Corp

**STANDARD  
& POOR'S**

**S&P Recommendation** **HOLD** ★★☆☆☆

**Price**  
\$92.02 (as of Dec 23, 2006)

**12-Mo Target Price**  
\$99.00

**Investment Style**  
Large-Cap Blend

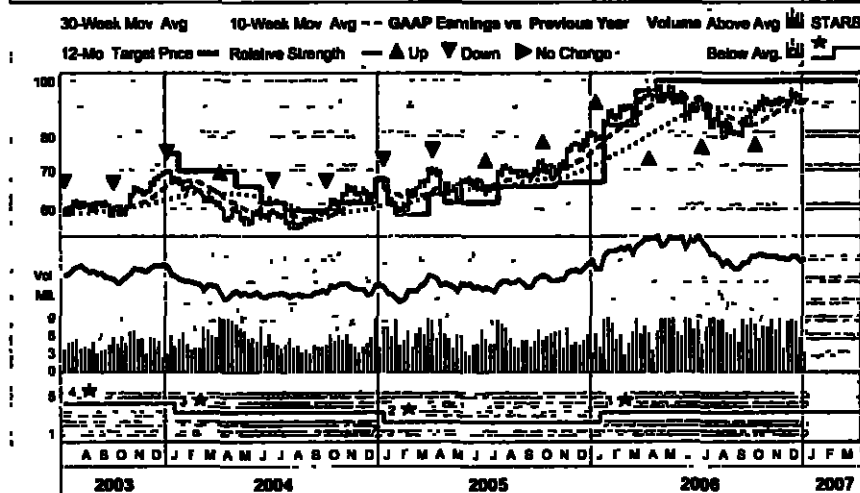
**GICS Sector** Industrials  
**Sub-Industry** Railroads

**Comment** Union Pacific operates the largest U.S. railroad, with over 32,000 miles of rail serving the western two-thirds of the country

## Key Stock Statistics (Source: S&P, Yahoo!, company reports)

|                          |               |                     |      |                             |          |                     |        |
|--------------------------|---------------|---------------------|------|-----------------------------|----------|---------------------|--------|
| 52-Wk Range              | \$87.49-77.62 | S&P Oper. EPS 2006E | 5.82 | P/E on S&P Oper. EPS 2006E  | 16.4     | Dividend Rate/Share | \$1.20 |
| Trailing 12-Month EPS    | \$5.23        | S&P Oper. EPS 2007E | 6.36 | Common Shares Outstg. (M)   | 289.7    | Yield (%)           | 1.30   |
| Trailing 12-Month P/E    | 17.8          | S&P Core EPS 2006E  | 5.37 | Market Capitalization (B)   | \$24.820 | Beta                | 0.69   |
| \$10K Invested 5 Yrs Ago | \$17,507      | S&P Core EPS 2007E  | 6.11 | Institutional Ownership (%) | 83       | S&P Credit Rating   | BBB    |

## Price Performance



Options: CBOE, Ph

Analysis prepared by Kewa Kirksey on October 23, 2006, when the stock traded at \$91.14.

## Highlights

- ▶ We see revenue growth slowing to 7% in 2007, following an anticipated 16% rise in 2006, as fewer customer contracts are up for renewal and fuel surcharges stabilize. We expect the intermodal and agricultural segments to be the primary contributors to volume gains in 2007, while infrastructure constraints in the Powder River Basin are expected to limit growth in coal. In July, UNP announced it was considering a 15% increase to its capital spending program for 2007 to accelerate capacity expansions.
- ▶ We expect operating margins to rise to about 18% in 2006, on pricing gains, net of fuel costs, along with improved asset utilization and efforts to shed low-margin businesses. For 2007, we see a modest widening of margins, coming largely from service improvements. We also see the effective tax rate returning to a more historical level of 37.5% in both years, up from the unusually low 28.6% in 2005.
- ▶ We forecast 2006 operating EPS of \$5.62, up 64% from adjusted operating EPS of \$3.42 in 2005. We estimate a 13% increase in 2007, to \$6.36. Our 2006 S&P Core EPS of \$5.37 reflects adjustments to remove gains on asset sales and insurance recoveries.

## Investment Rationale/Risk

- ▶ Given our expectation for slowing volume growth and limited pricing gains, we view current valuations as fair. For the period 2007-2012, we forecast compound annual revenue and EPS growth to slow to 3.7% and 8.0%, respectively. Among the drivers are expansion in intermodal trade with Asia and in NAFTA and a shifting of long-haul volumes from trucking companies to the railroads.
- ▶ Risks to our opinion and target price include weaker than expected economic growth, capacity constraints in parts of the rail network, a rapid increase in fuel prices that leads to slower than anticipated cost recovery, wage pressures, and unusually severe weather.
- ▶ Our relative valuation model suggests a forward price to sales multiple of about 1.4X, reflecting the current stage of economic and sector expansion, and a value of \$91. Our discounted cash flow model, which assumes an 8% weighted average cost of capital and a 3% terminal growth rate, estimates an intrinsic value of \$108. Blending these models, we arrive at our 12-month target price of \$99.

## Qualitative Risk Assessment

**LOW** **MEDIUM** **HIGH**

Our risk assessment reflects UNP's exposure to economic cycles, regulations, labor and fuel costs, coupled with significant capital expenditure requirements, and challenges in maintaining system fluidity, offset by the company's historically positive cash flow generation and moderate financial leverage.

## Quantitative Evaluations

**S&P Quality Ranking** **B+**

**D** **C** **B-** **B** **C** **A-** **A** **A+**

**Relative Strength Rank** **MODERATE**

**LOWEST = 1** **HIGHEST = 90**

## Revenue/Earnings Data

| Revenue (Million \$) | 1Q    | 2Q    | 3Q    | 4Q    | Year   |
|----------------------|-------|-------|-------|-------|--------|
| 2006                 | 3,710 | 3,923 | 3,983 | —     | —      |
| 2005                 | 3,152 | 3,344 | 3,461 | 3,821 | 13,578 |
| 2004                 | 2,893 | 3,029 | 3,076 | 3,217 | 12,215 |
| 2003                 | 2,736 | 2,894 | 2,956 | 2,965 | 11,551 |
| 2002                 | 2,967 | 3,154 | 3,199 | 3,171 | 12,491 |
| 2001                 | 2,943 | 2,998 | 3,026 | 3,006 | 11,973 |

| Earnings Per Share (\$) | 1Q   | 2Q   | 3Q   | 4Q   | Year |
|-------------------------|------|------|------|------|------|
| 2006                    | 1.15 | 1.43 | 1.54 | —    | —    |
| 2005                    | 0.48 | 0.88 | 1.38 | 1.10 | 3.85 |
| 2004                    | 0.83 | 0.80 | 0.77 | 0.30 | 2.30 |
| 2003                    | 0.60 | 1.10 | 1.21 | 1.28 | 4.07 |
| 2002                    | 0.86 | 1.15 | 1.63 | 1.41 | 5.05 |
| 2001                    | 0.72 | 0.95 | 1.04 | 1.06 | 3.77 |

Fiscal year ended Dec. 31. Next earnings report expected Mid January. EPS estimates based on S&P Operating Earnings, historical GAAP earnings are as reported.

## Dividend Data (Data as of Payment Date as of 12/17/06)

| Amount (\$) | Date Decl. | Ex-Div. Date | Std. of Record | Payment Date |
|-------------|------------|--------------|----------------|--------------|
| 0.300       | 02/23      | 03/06        | 03/08          | 04/03/06     |
| 0.300       | 05/04      | 05/26        | 05/31          | 07/03/06     |
| 0.300       | 07/27      | 08/29        | 08/31          | 10/02/06     |
| 0.300       | 11/16      | 11/28        | 11/30          | 01/02/07     |

Dividends have been paid since 1900. Source: Company reports.

# Union Pacific Corp

**STANDARD  
& POOR'S**

Business Summary, October 23, 2006

**CORPORATE OVERVIEW** We believe Union Pacific, operating the largest U.S. railroad, will focus on improving service levels, system fluidity, and removing bottlenecks, challenges which we believe hampered its results in 2004 and 2005. UNP's system spans about 33,000 miles, linking Pacific Coast and Gulf Coast ports to midwestern and eastern gateways, and schedules are coordinated with other carriers.

**MARKET PROFILE** We believe UNP's intermodal business, representing 19% of 2005 revenue, should be UNP's fastest growing segment longer term, driven by rising international trade and the outsourcing of manufacturing to Asia. However, weak service and timeliness levels in 2004 and 2005 hampered its ability to effectively compete with other railroad and trucking companies, in our view. Industrial products, sensitive to GDP trends, provided 22% of freight revenues in 2005, and included building products, metals and minerals. Energy, which we believe is UNP's most profitable segment, accounted for 20% of 2005 freight revenues. UNP is a major transporter of low-sulfur coal, with 67% of its energy traffic consisting of coal originating in the Powder River Basin of Wyoming and Montana, primarily delivered to power utilities. We believe chemicals, agricultural products and automotive, representing 14%, 15% and 10% of 2005 freight revenues, respectively, all face low long-term volume growth prospects.

**COMPETITIVE LANDSCAPE** The U.S. rail industry has an oligopoly-like structure, with over 80% of revenues generated by the four largest railroads: UNP and Burlington Northern Santa Fe Corp. operating on the West Coast, and CSX Corp. and Norfolk Southern Corp. operating on the East Coast. Railroads simultaneously compete for customers while cooperating by sharing assets, interfacing systems, and completing customer movements. Key suppliers include locomotive and rail equipment manufacturers, fuel suppliers, and labor. UNP's employees, about 85% of whom are unionized, enjoy above national average compensation due to their significant bargaining power.

We believe the market power of UNP's customers varies; large freight integrators and automotive, coal and utility companies may exert significant power, while smaller customers with limited alternatives are often price takers. Railroads compete with trucking, shipping, and pipeline transportation. Rail rates are generally lower than trucking rates, as service is slower and less flexible than trucking, which provides most U.S. transportation. We believe the rising price of fuel increases the cost attractiveness of railroads over less fuel-efficient trucking, which should help support UNP's pricing and volumes over the next five years. However, we think intermodal freight service levels must improve to gain market share from trucking.

**FINANCIAL TRENDS** We consider railroads a mature industry, and expect 2.8% annualized U.S. rail tonnage growth from 2004 to 2020. We believe UNP has below industry average growth opportunities due to our view of its inferior service offering in intermodal transportation and the physical capacity constraints of its rail network, which requires increased investment to support volume growth. Over the past nine years, UNP's intermodal volumes have grown at a compound annual rate of 1.9%, and total carloads have grown 1.0%, both at less than half the pace of its closest competitor. We calculate that return on invested capital (ROIC) has over the past 10 years averaged 5.4% at UNP, versus 6.7% for the industry. We see improving service levels and freight pricing helping ROIC to rise from 5.4% in 2004 and 5.6% in 2005 to 7.7% in 2006 and 8.4% in 2007. However, we expect UNP's ROIC to remain below average for the industry, only modestly surpassing its estimated 8.0% cost of capital in 2007 and 2008.

## Corporate Information

**Investor Contact**  
M. S. Jones (402-544-6111)

**Office**  
1400 Douglas St., Omaha, NE 68179-1001

**Telephone**  
402-544-5000

**Fax**  
402-271-6408

**Website**  
<http://www.up.com>

## Officers

|                                        |                                                  |
|----------------------------------------|--------------------------------------------------|
| <b>Chairman</b><br>R. K. Davidson      | <b>SVP &amp; General Counsel</b><br>J. M. Hemmer |
| <b>Pres. &amp; CEO</b><br>J. R. Young  | <b>SVP &amp; CIO</b><br>L. Tarnison              |
| <b>EVP &amp; CFO</b><br>R. Knight, Jr. |                                                  |

## Board of Directors

A. Card  
R. K. Davidson  
E. B. Davis, Jr.  
T. J. Donohue  
A. W. Dunham  
J. R. Hope  
C. C. Krulak  
M. McConnell  
T. McLarty  
S. R. Rogel  
J. R. Young

**Domestic**  
Utah

**Founded**  
1862

**Employees**  
49,747

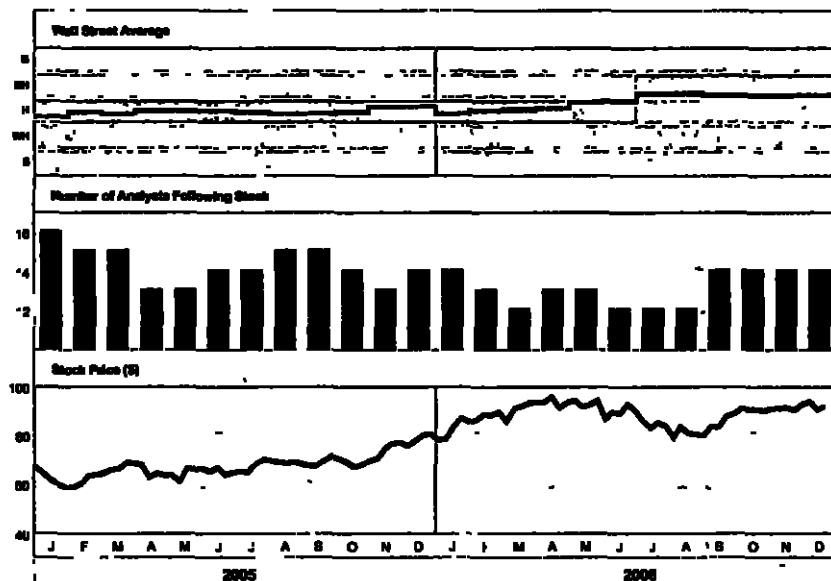
**Stockholders**  
29,173

# Union Pacific Corp

**STANDARD  
& POOR'S**

## Analyst Recommendations

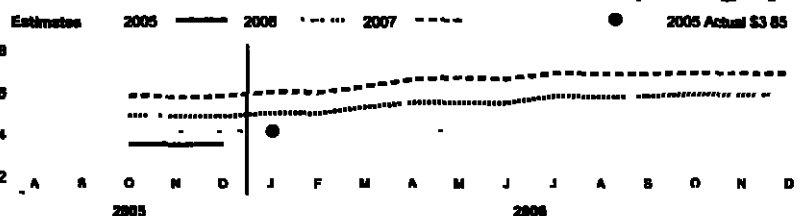
Monthly Average Trend Buy Buy/Hold Hold Weak Hold Sell No Opinion UNP Trend



Of the total 15 companies following UNP, 14 analysts currently publish recommendations

|            | No of Ratings | % of Total | 1 Mo Prior | 3 Mos Prior |
|------------|---------------|------------|------------|-------------|
| Buy        | 3             | 21         | 3          | 3           |
| Buy/Hold   | 3             | 21         | 3          | 3           |
| Hold       | 8             | 57         | 8          | 8           |
| Weak Hold  | 0             | 0          | 0          | 0           |
| Sell       | 0             | 0          | 0          | 0           |
| No Opinion | 0             | 0          | 0          | 0           |
| Total      | 14            | 100        | 14         | 14          |

## Wall Street Consensus Estimate



| Fiscal Years    | Avg Est. | High Est. | Low Est. | # of Est. | Est. P/E |
|-----------------|----------|-----------|----------|-----------|----------|
| 2007            | 6.68     | 7.10      | 6.20     | 14        | 13.8     |
| 2006            | 5.70     | 5.78      | 5.62     | 12        | 16.1     |
| 2007 vs. 2006   | ▲ 17%    | ▲ 23%     | ▲ 10%    | ▲ 17%     | ▼ -14%   |
| Q4'07           | 1.80     | 1.80      | 1.58     | 5         | 51.1     |
| Q4'06           | 1.56     | 1.65      | 1.47     | 13        | 59.0     |
| Q4'07 vs. Q4'06 | ▲ 15%    | ▲ 9%      | ▲ 7%     | ▼ -62%    | ▼ -13%   |

A company's earnings outlook plays a major part in any investment decision. Standard & Poor's organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years. This graph shows the trend in analyst estimates over the past 15 months.

## Wall Street Consensus Opinion

BUY/HOLD

## Companies Offering Coverage

AG Edwards & Sons  
Argus Research Corp  
BB&T Capital Markets  
BMO Nesbitt Burns  
Bank of America Securities LLC  
Bear Stearns & Co  
Credit Suisse First Boston  
Deutsche Bank  
JP Morgan Securities  
Lehman Brothers, Inc  
Merrill Lynch Research  
Smith Barney  
Stifel Nicolaus & Co  
Tajac Securities Group, Inc  
UBS Warburg

## Wall Street Consensus vs. Performance

For fiscal year 2006, analysts estimate that UNP will earn \$5.70. For the 3rd quarter of fiscal year 2006, UNP announced earnings per share of \$1.54, representing 27% of the total annual estimate. For fiscal year 2007, analysts estimate that UNP's earnings per share will grow by 17% to \$6.68.

# Union Pacific Corp

**STANDARD  
& POOR'S**

## Required Disclosures

### S&P Global STARS Distribution

In the U.S.: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services U.S. have recommended 33.9% of issuers with buy recommendations, 58.8% with hold recommendations and 9.5% with sell recommendations.

In Europe: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Europe have recommended 43.8% of issuers with buy recommendations, 40.5% with hold recommendations and 15.7% with sell recommendations.

In Asia: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services Asia have recommended 31.2% of issuers with buy recommendations, 58.9% with hold recommendations and 9.2% with sell recommendations.

Global: As of September 30, 2008, research analysts at Standard & Poor's Equity Research Services globally have recommended 34.7% of issuers with buy recommendations, 55.2% with hold recommendations and 10.1% with sell recommendations.

★★★★★ **5-STARS (Strong Buy)** Total return is expected to outperform the total return of a relevant benchmark, by a wide margin over the coming 12 months, with shares rising in price on an absolute basis.

★★★★☆ **4-STARS (Buy)** Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

★★★☆☆ **3-STARS (Hold)** Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

★★☆☆☆ **2-STARS (Sell)** Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price not anticipated to show a gain.

★☆☆☆☆ **1-STAR (Strong Sell)** Total return is expected to underperform the total return of a relevant benchmark by a wide margin over the coming 12 months, with shares falling in price on an absolute basis.

**Relevant benchmarks:** In the U.S. the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are generally the S&P Europe 350 Index and the S&P Asia 50 Index.

**For All Readers:** All of the views expressed in this research report accurately reflect the research analyst's personal views regarding any and all of the subject securities or issuers. No part of analyst compensation was, is, or will be directly or indirectly, related to the specific recommendations or views expressed in this research report.

Additional information is available upon request.

## Other Disclosures

This report has been prepared and issued by Standard & Poor's and/or one of its affiliates. In the United States, research reports are prepared by Standard & Poor's Investment Advisory Services LLC ("SPIAS"). In the United States, research reports are issued by Standard & Poor's ("S&P"), in the United Kingdom by Standard & Poor's LLC ("S&P LLC"), which is authorized and regulated by the Financial Services Authority; in Hong Kong by Standard & Poor's LLC which is regulated by the Hong Kong Securities Futures Commission, in Singapore by Standard & Poor's LLC, which is regulated by the Monetary Authority of Singapore, in Japan by Standard & Poor's LLC, which is regulated by the Kanto Financial Bureau, in Sweden by Standard & Poor's AB ("S&P AB"), in Malaysia by Standard & Poor's Malaysia Sdn Bhd ("S&P M") which is regulated by the Securities Commission and in Australia by Standard & Poor's Information Services (Australia) Pty Ltd ("SPIS") which is regulated by the Australian Securities & Investments Commission, and in Korea by SPIAS, which is also registered in Korea as a cross border investment advisory company.

The research and analytical services performed by SPIAS, S&P LLC, S&P AB, S&P M, and SPIS are each conducted separately from any other analytical activity of Standard & Poor's.

Standard & Poor's or an affiliate may license certain intellectual property or provide pricing or other services to, or otherwise have a financial interest in, certain issuers of securities, including exchange-traded funds whose investment objective is to substantially replicate the returns of a proprietary Standard & Poor's index, such as the S&P 500. In cases where Standard & Poor's or an affiliate is paid fees that are tied to the amount of assets that are invested in the fund or the volume of trading activity in the fund, investment in the fund will generally result in Standard & Poor's or an affiliate earning compensation in addition to the subscription fees or other compensation for services rendered by Standard & Poor's. A reference to a particular investment or security by Standard & Poor's and one of its affiliates is not a recommendation to buy, sell, or hold such investment or security, nor is it considered to be investment advice.

S&P and/or one of its affiliates has performed services for and received compensation from this company during the past twelve months.

## Disclaimers

This material is based upon information that we consider to be reliable, but neither S&P nor its affiliates warrant its completeness, accuracy or adequacy and it should

not be relied upon as such. With respect to reports issued by S&P LLC-Japan and in the case of inconsistencies between the English and Japanese version of a report, the English version prevails. Neither S&P LLC nor S&P guarantees the accuracy of the translation. Assumptions, opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Neither S&P nor its affiliates are responsible for any errors or omissions or for results obtained from the use of this information. Past performance is not necessarily indicative of future results.

This material is not intended as an offer or solicitation for the purchase or sale of any security or other financial instrument. Securities, financial instruments or strategies mentioned herein may not be suitable for all investors. Any opinions expressed herein are given in good faith, are subject to change without notice, and are only correct as of the stated date of their issue. Prices, values, or income from any securities or investments mentioned in this report may fall against the interests of the investor and the investor may get back less than the amount invested. Where an investment is described as being likely to yield income, please note that the amount of income that the investor will receive from such an investment may fluctuate. Where an investment or security is denominated in a different currency to the investor's currency of reference, changes in rates of exchange may have an adverse effect on the value, price or income of or from that investment to the investor. The information contained in this report does not constitute advice on the tax consequences of making any particular investment decision. This material does not take into account your particular investment objectives, financial situations or needs and is not intended as a recommendation of particular securities, financial instruments or strategies to you. Before acting on any recommendation in this material, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice.

For residents of the U.K. this report is only directed at and should only be relied on by persons outside of the United Kingdom or persons who are inside the United Kingdom and who have professional experience in matters relating to investments or who are high net worth persons, as defined in Article 19(5) or Article 49(2) (a) to (d) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2001, respectively.

For residents of Malaysia, all queries in relation to this report should be referred to Alexander Chua, Lee Leng Hoe, or Ching Wah Tan.

This investment analysis was prepared from the following sources: S&P MarketScope, S&P Compustat, S&P Industry Reports, I/B/E/S International, Inc., Standard & Poor's, 55 Water St., New York, NY 10041.



**Railroad Industry Weighted Average Cost Of Capital Assuming a 60/40 Equity To Debt Mix -- 2003 To 2006**

|                                             |                           | Railroad Industry COC |             |             |             |
|---------------------------------------------|---------------------------|-----------------------|-------------|-------------|-------------|
| Item<br>(1)                                 | Source<br>(2)             | 2003<br>(3)           | 2004<br>(4) | 2005<br>(5) | 2006<br>(6) |
| <u>Calculation of Levered Beta</u>          |                           |                       |             |             |             |
| 1 Railroad Industry Debt to Equity Ratio    |                           |                       |             |             |             |
| a Debt Portion of Capital Structure         | Assumed                   | 40.0%                 | 40.0%       | 40.0%       | 40.0%       |
| b Equity Portion of Capital Structure       | Assumed                   | 60.0%                 | 60.0%       | 60.0%       | 60.0%       |
| c Debt/Equity Ratio                         | Line 1a ÷ Line 1b         | 0.67                  | 0.67        | 0.67        | 0.67        |
| 2 Railroad Industry Unlevered Beta          | Exhibit No 5              | 0.37                  | 0.40        | 0.56        | 0.64        |
| 3 Railroad Industry Levered Beta            | (1+ Line 1c) x Line 2     | 0.62                  | 0.67        | 0.93        | 1.06        |
| <u>Calculation of Cost of Equity</u>        |                           |                       |             |             |             |
| 4 Average Risk Free Rate                    | Exhibit No 4              | 4.96%                 | 5.05%       | 4.65%       | 4.99%       |
| 5 Railroad Risk Premium                     |                           |                       |             |             |             |
| a Equity Risk Premium                       | Exhibit No 3              | 7.20%                 | 7.20%       | 7.10%       | 7.10%       |
| b Railroad Industry Levered Beta            | Line 3                    | 0.62                  | 0.67        | 0.93        | 1.06        |
| c Railroad Industry Risk Premium            | Line 5a x Line 5b         | 4.48%                 | 4.84%       | 6.64%       | 7.52%       |
| 6 Railroad Industry Size Premium            | Exhibit No 7              | 0.18%                 | 0.27%       | 0.04%       | -0.20%      |
| 7 Railroad Industry Cost of Equity          | Line 4 + Line 5c + Line 6 | 9.61%                 | 10.16%      | 11.32%      | 12.31%      |
| <u>Calculation of Cost of Capital</u>       |                           |                       |             |             |             |
| 8 Weighted Cost of Equity                   |                           |                       |             |             |             |
| a Railroad Industry Cost of Equity          | Line 7                    | 9.61%                 | 10.16%      | 11.32%      | 12.31%      |
| b Equity Portion of Capital Structure       | Line 1b                   | 60.0%                 | 60.0%       | 60.0%       | 60.0%       |
| c Weighted Cost of Railroad Industry Equity | Line 8a x Line 8b         | 5.77%                 | 6.10%       | 6.79%       | 7.39%       |
| 9 Weighted Cost of Debt                     |                           |                       |             |             |             |
| a Railroad Industry Cost of Debt            | STB/AAR 1/                | 5.00%                 | 5.25%       | 5.36%       | 5.97%       |
| b Debt Portion of Capital Structure         | Line 1a                   | 40.0%                 | 40.0%       | 40.0%       | 40.0%       |
| c Weighted Cost of Railroad Industry Debt   | Line 9a x Line 9b         | 2.00%                 | 2.10%       | 2.14%       | 2.39%       |
| 10 Weighted Average Cost of Capital         | Line 8c + Line 9c         | 7.77%                 | 8.20%       | 8.94%       | 9.78%       |

1/ Sources STB 2003, 2004 and 2005 decisions in Ex Parte No 558, and Rocky VS



**Railroad Industry Weighted Average Cost of Capital Assuming a 50/50 Equity To Debt Mix -- 2003 To 2006**

| Item<br>(1)                                  | Source<br>(2)             | Railroad Industry COC |             |             |             |
|----------------------------------------------|---------------------------|-----------------------|-------------|-------------|-------------|
|                                              |                           | 2003<br>(3)           | 2004<br>(4) | 2005<br>(5) | 2006<br>(6) |
| <b><u>Calculation of Levered Beta</u></b>    |                           |                       |             |             |             |
| 1 Railroad Industry Debt to Equity Ratio     |                           |                       |             |             |             |
| a Debt Portion of Capital Structure          | Assumed                   | 50.0%                 | 50.0%       | 50.0%       | 50.0%       |
| b Equity Portion of Capital Structure        | Assumed                   | 50.0%                 | 50.0%       | 50.0%       | 50.0%       |
| c Debt/Equity Ratio                          | Line 1a ÷ Line 1b         | 1.00                  | 1.00        | 1.00        | 1.00        |
| 2 Railroad Industry Unlevered Beta           | Exhibit No 5              | 0.37                  | 0.40        | 0.56        | 0.64        |
| 3 Railroad Industry Levered Beta             | (1+ Line 1c) x Line 2     | 0.75                  | 0.81        | 1.12        | 1.27        |
| <b><u>Calculation of Cost of Equity</u></b>  |                           |                       |             |             |             |
| 4 Average Risk Free Rate                     | Exhibit No 4              | 4.96%                 | 5.05%       | 4.65%       | 4.99%       |
| 5 Railroad Risk Premium                      |                           |                       |             |             |             |
| a Equity Risk Premium                        | Exhibit No 3              | 7.20%                 | 7.20%       | 7.10%       | 7.10%       |
| b Railroad Industry Levered Beta             | Line 3                    | 0.75                  | 0.81        | 1.12        | 1.27        |
| c Railroad Industry Risk Premium             | Line 5a x Line 5b         | 5.37%                 | 5.81%       | 7.97%       | 9.02%       |
| 6 Railroad Industry Size Premium             | Exhibit No 7              | 0.18%                 | 0.27%       | 0.04%       | -0.20%      |
| 7 Railroad Industry Cost of Equity           | Line 4 + Line 5c + Line 6 | 10.51%                | 11.13%      | 12.65%      | 13.82%      |
| <b><u>Calculation of Cost of Capital</u></b> |                           |                       |             |             |             |
| 8 Weighted Cost of Equity                    |                           |                       |             |             |             |
| a Railroad Industry Cost of Equity           | Line 7                    | 10.51%                | 11.13%      | 12.65%      | 13.82%      |
| b Equity Portion of Capital Structure        | Line 1b                   | 50.0%                 | 50.0%       | 50.0%       | 50.0%       |
| c Weighted Cost of Railroad Industry Equity  | Line 8a \ Line 8b         | 5.25%                 | 5.57%       | 6.33%       | 6.91%       |
| 9 Weighted Cost of Debt                      |                           |                       |             |             |             |
| a Railroad Industry Cost of Debt             | STB/AAR 1/                | 5.00%                 | 5.25%       | 5.36%       | 5.97%       |
| b Debt Portion of Capital Structure          | Line 1a                   | 50.0%                 | 50.0%       | 50.0%       | 50.0%       |
| c Weighted Cost of Railroad Industry Debt    | Line 9a \ Line 9b         | 2.50%                 | 2.63%       | 2.68%       | 2.99%       |
| 10 Weighted Average Cost of Capital          | Line 8c + Line 9c         | 7.75%                 | 8.19%       | 9.01%       | 9.89%       |

1/ Sources STB 2003, 2004 and 2005 decisions in Ex Parte No. 558, and Rockey VS



**Railroad Industry Weighted Average Cost Of Capital Assuming a 100 Percent Common Equity Capital Structure -- 2003 To 2006**

| Item<br>(1)                           | Source<br>(2)                             | Railroad Industry COC     |             |             |             |        |
|---------------------------------------|-------------------------------------------|---------------------------|-------------|-------------|-------------|--------|
|                                       |                                           | 2003<br>(3)               | 2004<br>(4) | 2005<br>(5) | 2006<br>(6) |        |
| <b>Calculation of Cost of Equity</b>  |                                           |                           |             |             |             |        |
| 1                                     | Average Risk Free Rate                    | Exhibit No 4              | 4.96%       | 5.05%       | 4.65%       | 4.99%  |
| 2                                     | Railroad Risk Premium                     |                           |             |             |             |        |
| a                                     | Equity Risk Premium                       | Exhibit No 3              | 7.20%       | 7.20%       | 7.10%       | 7.10%  |
| b                                     | Railroad Industry Unlevered Beta          | Exhibit No 5 1/           | 0.37        | 0.40        | 0.56        | 0.64   |
| c                                     | Railroad Industry Risk Premium            | Line 2a x Line 2b         | 2.69%       | 2.90%       | 3.98%       | 4.51%  |
| 3                                     | Railroad Industry Size Premium            | Exhibit No 7              | 0.18%       | 0.27%       | 0.04%       | -0.20% |
| 4                                     | Railroad Industry Cost of Equity          | Line 1 + Line 2c + Line 3 | 7.82%       | 8.23%       | 8.67%       | 9.31%  |
| <b>Calculation of Cost of Capital</b> |                                           |                           |             |             |             |        |
| 5                                     | Weighted Cost of Equity                   |                           |             |             |             |        |
| a                                     | Railroad Industry Cost of Equity          | Line 4                    | 7.82%       | 8.23%       | 8.67%       | 9.31%  |
| b                                     | Equity Portion of Capital Structure       | Assumed                   | 100.0%      | 100.0%      | 100.0%      | 100.0% |
| c                                     | Weighted Cost of Railroad Industry Equity | Line 5a x Line 5b         | 7.82%       | 8.23%       | 8.67%       | 9.31%  |
| 6                                     | Weighted Cost of Debt                     |                           |             |             |             |        |
| a                                     | Railroad Industry Cost of Debt            | STB/AAR 2/                | 5.00%       | 5.25%       | 5.36%       | 5.97%  |
| b                                     | Debt Portion of Capital Structure         | Assumed                   | 0.0%        | 0.0%        | 0.0%        | 0.0%   |
| c                                     | Weighted Cost of Railroad Industry Debt   | Line 6a x Line 6b         | 0.00%       | 0.00%       | 0.00%       | 0.00%  |
| 7                                     | Weighted Average Cost of Capital          | Line 5c + Line 6c         | 7.82%       | 8.23%       | 8.67%       | 9.31%  |

1/ With 100 percent common equity capital structure, the levered and unlevered Beta are equal

2/ Sources STB 2003, 2004 and 2005 decisions in Ex Parte No 558 and Rockey VS However, with no debt in the capital structure, the cost of debt is effectively zero (0)



**Railroad Industry Weighted Average Cost Of Capital With  
STB/AAR COE And COD And Alternative Target Capital Structures -- 2003 To 2006**

|                                                  | Item<br>(1)                                  | Source<br>(2)         | Railroad Industry COC |                    |                    |                    |
|--------------------------------------------------|----------------------------------------------|-----------------------|-----------------------|--------------------|--------------------|--------------------|
|                                                  |                                              |                       | <u>2003</u><br>(3)    | <u>2004</u><br>(4) | <u>2005</u><br>(5) | <u>2006</u><br>(6) |
| <b><u>60% Common Equity/40% Debt Capital</u></b> |                                              |                       |                       |                    |                    |                    |
| 1                                                | Weighted Cost of Equity                      |                       |                       |                    |                    |                    |
|                                                  | a. Railroad Industry Cost of Equity          | STB/AAR I/<br>Assumed | 12.70%                | 13.16%             | 15.18%             | 16.10%             |
|                                                  | b. Equity Portion of Capital Structure       |                       | <del>60.0%</del>      | <del>60.0%</del>   | <del>60.0%</del>   | <del>60.0%</del>   |
|                                                  | c. Weighted Cost of Railroad Industry Equity | Line 1a x Line 1b     | 7.62%                 | 7.90%              | 9.11%              | 9.66%              |
| 2.                                               | Weighted Cost of Debt                        |                       |                       |                    |                    |                    |
|                                                  | a. Railroad Industry Cost of Debt            | STB/AAR I/<br>Assumed | 5.00%                 | 5.25%              | 5.36%              | 5.97%              |
|                                                  | b. Debt Portion of Capital Structure         |                       | <del>40.0%</del>      | <del>40.0%</del>   | <del>40.0%</del>   | <del>40.0%</del>   |
|                                                  | c. Weighted Cost of Railroad Industry Debt   | Line 2a x Line 2b     | 2.00%                 | 2.10%              | 2.14%              | 2.39%              |
| 3                                                | Weighted Average Cost of Capital             | Line 1c + Line 2c     | 9.62%                 | 10.00%             | 11.25%             | 12.05%             |
| <b><u>50% Common Equity/50% Debt Capital</u></b> |                                              |                       |                       |                    |                    |                    |
| 4                                                | Weighted Cost of Equity                      |                       |                       |                    |                    |                    |
|                                                  | a. Railroad Industry Cost of Equity          | STB/AAR I/<br>Assumed | 12.70%                | 13.16%             | 15.18%             | 16.10%             |
|                                                  | b. Equity Portion of Capital Structure       |                       | <del>50.0%</del>      | <del>50.0%</del>   | <del>50.0%</del>   | <del>50.0%</del>   |
|                                                  | c. Weighted Cost of Railroad Industry Equity | Line 4a x Line 4b     | 6.35%                 | 6.58%              | 7.59%              | 8.05%              |
| 5                                                | Weighted Cost of Debt                        |                       |                       |                    |                    |                    |
|                                                  | a. Railroad Industry Cost of Debt            | STB/AAR I/<br>Assumed | 5.00%                 | 5.25%              | 5.36%              | 5.97%              |
|                                                  | b. Debt Portion of Capital Structure         |                       | <del>50.0%</del>      | <del>50.0%</del>   | <del>50.0%</del>   | <del>50.0%</del>   |
|                                                  | c. Weighted Cost of Railroad Industry Debt   | Line 5a x Line 5b     | 2.50%                 | 2.63%              | 2.68%              | 2.99%              |
| 6                                                | Weighted Average Cost of Capital             | Line 4c + Line 5c     | 8.85%                 | 9.21%              | 10.27%             | 11.04%             |

1/ Sources STB 2003, 2004 and 2005 decisions in Ex Parte No. 558, and Rockey VS



**Comparison Of Cash Distributed To Common Equity Holders And Railroad Net Capital Expenditures**  
**(millions of dollars)**

| Item<br>(1)                                                                                                             | 2003<br>(2) | 2004<br>(3) | 2005<br>(4) | 2006<br>(5) | Annual Net Change 1/<br>2003-2004 2004-2005 2005-2006 |         |         | Cumulative<br>Change<br>2003-2006 2/<br>(9) |
|-------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------------------------------------------------|---------|---------|---------------------------------------------|
|                                                                                                                         |             |             |             |             | (6)                                                   | (7)     | (8)     |                                             |
| <b>1 Cash Distributed to Common Equity Holders</b>                                                                      |             |             |             |             |                                                       |         |         |                                             |
| a Dividends Paid                                                                                                        | \$628       | \$769       | \$868       | \$1,055     | \$141                                                 | \$99    | \$187   | \$427                                       |
| b Common Stock Repurchases                                                                                              | \$217       | \$376       | \$1,399     | \$2,159     | \$159                                                 | \$1,023 | \$760   | \$1,942                                     |
| c Total Cash to Common Equity Holders                                                                                   | \$845       | \$1,145     | \$2,267     | \$3,214     | \$300                                                 | \$1,122 | \$947   | \$2,369                                     |
| <b>2 Net Capital Expenditures 3/</b>                                                                                    | \$5,029     | \$5,254     | \$5,785     | \$6,821     | \$225                                                 | \$531   | \$1,036 | \$1,792                                     |
| <b>3 Differences In Annual Net Changes in Cash Distributed to Common Equity Holders and Net Capital Expenditures 4/</b> | ---         | ---         | ---         | ---         | \$75                                                  | \$591   | (\$89)  | \$577                                       |

- 1/ Current Year Less Previous Year Columns (2) to (5)  
2/ Column (5) - Column (2)  
3/ Capital expenditures net of cash received from disposal of assets  
4/ Line 1c - Line 2 for Columns (6) to (8)

Source Railroad SEC Forms 10-K



**Net Cash Received and Distributed To Long-Term Debt Holders**  
**(millions of dollars)**

| <b><u>Item</u></b><br><b>(1)</b>                           | <b><u>2003</u></b><br><b>(2)</b> | <b><u>2004</u></b><br><b>(3)</b> | <b><u>2005</u></b><br><b>(4)</b> | <b><u>2006</u></b><br><b>(5)</b> | <b><u>Cumulative<br/>Net Cash<br/>Distributed 1/</u></b><br><b>(6)</b> |
|------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------------------------------------------|
| <b>1 Net Cash to Debt Holders (Excluding Interest)</b>     |                                  |                                  |                                  |                                  |                                                                        |
| a Principal Payments on Long-Term Debt                     | \$3,384                          | \$1,777                          | \$3,335                          | \$2,009                          | \$10,505                                                               |
| b Proceeds From Issuance of Long-Term Debt                 | <u>\$2,174</u>                   | <u>\$1,574</u>                   | <u>\$1,038</u>                   | <u>\$771</u>                     | <u>\$5,557</u>                                                         |
| c Net Cash Distributed to Long-Term Debt Holders <u>2/</u> | \$1,210                          | \$203                            | \$2,297                          | \$1,238                          | \$4,948                                                                |

---

1/ Sum of Columns (2) to (5)

2/ Line 1a - Line 1b

Source: Railroad SEC Forms 10-K

B

**Exhibit B**

**UBS Investment Research, *When Pigs Fly III:  
Silk Purses from Sow's Ears*, dated April 18, 2006**

## UBS Investment Research

## Railroads

Americas

Railroads

Sector Comment

## When Pigs Fly III: Silk Purses from Sow's Ears

18 April 2006

[www.ubs.com/investmentresearch](http://www.ubs.com/investmentresearch)

Rick Paterson

Analyst

[rick.paterson@ubs.com](mailto:rick.paterson@ubs.com)

+1-212-713 7944

Fadi Chamoun, CFA

Analyst

[fadi.chamoun@ubs.com](mailto:fadi.chamoun@ubs.com)

+1-416-350 4855

Kevin Crissey

Analyst

[kevin.crissey@ubs.com](mailto:kevin.crissey@ubs.com)

+1-212-713 3562

Elizabeth Mielke

Associate Analyst

[elizabeth.mielke@ubs.com](mailto:elizabeth.mielke@ubs.com)

+1-212-713 3683

Stephanie Phillips, CA

Associate Analyst

[stephanie.phillips@ubs.com](mailto:stephanie.phillips@ubs.com)

+1-416-814 1440

### ■ Sector ROIC one quarter away from WACC

Our last installment of "Pigs" was on January 5th, at which time we were forecasting the sector earning its cost of capital in Q4/06 (on a four-quarter trailing basis). Following a strong Q4 earnings season and some recent earnings upgrades, we now expect the sector to earn its WACC in the second quarter of this year. It's also conceivable that it happens in Q1 if some big upside surprises materialize.

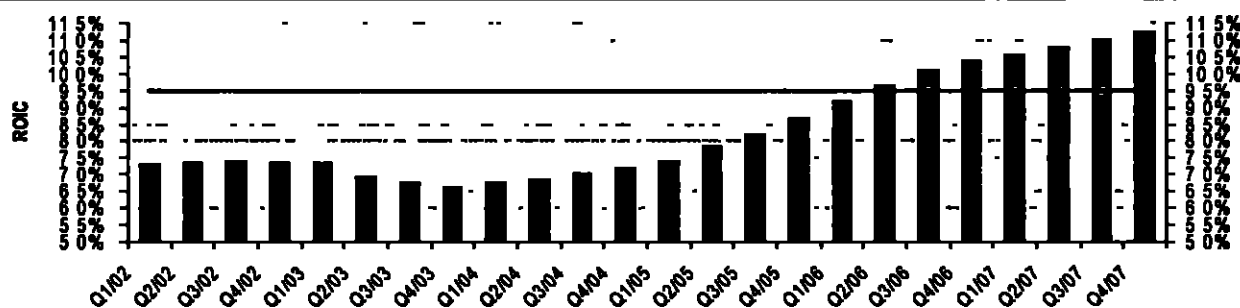
### ■ CN and BN across the line; NS and CP closing in

The exact WACC of these companies is debatable, and the closest thing we can find to a consensus among CFOs and investors is about 9.5%, hence that's the benchmark we're using. Under our definition of ROIC (see page 2), CN and BN both clearly earn their cost of capital (11.9% for both) and CP (Q1/06E 9.3%) and NS (Q1/06E 9.1%) are just about over the line and should earn their WACC in Q2.

### ■ CSX, UP, and KCS the laggards

CSX (Q1/06E 8%) and UP (Q1/06E 6.4%) are clearly lagging the other large caps, however, we believe CSX's operational recovery is underway and UP appears to be at an inflection point where things start getting better, not worse. We believe this may allow these companies to play catch-up at an accelerated rate. KCS has the TFM integration to digest, after which we expect ROIC to improve materially.

Chart 1: Railroad ROIC (columns) versus WACC (line at 9.5%)



Source: UBS estimates

This report has been prepared by UBS Securities LLC

### ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 3

UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

## Invested Capital

Defined as net debt (interest bearing debt less cash) plus shareholders' equity

Table 1: Invested Capital, Q1/06E-Q4/07E

| Railroad             | Q1/06E | Q2/06E | Q3/06E | Q4/06E | Q1/07E | Q2/07E | Q3/07E | Q4/07E |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Union Pacific        | 20,486 | 20,160 | 20,193 | 20,341 | 20,890 | 20,755 | 20,937 | 21,245 |
| Burlington Northern  | 16,746 | 17,103 | 16,952 | 16,969 | 17,479 | 17,467 | 17,235 | 17,174 |
| CSX                  | 13,230 | 13,372 | 13,687 | 13,630 | 13,794 | 13,820 | 14,179 | 14,268 |
| Norfolk Southern     | 15,684 | 15,706 | 15,907 | 16,074 | 16,225 | 15,980 | 15,968 | 15,971 |
| Kansas City Southern | 3,352  | 3,362  | 3,384  | 3,394  | 3,410  | 3,447  | 3,478  | 3,482  |
| Canadian National    | 12,387 | 12,578 | 12,663 | 12,729 | 12,624 | 12,759 | 12,840 | 12,936 |
| Canadian Pacific     | 6,395  | 6,347  | 6,295  | 6,541  | 6,598  | 6,545  | 6,496  | 6,772  |
| Total                | 88,280 | 88,627 | 89,080 | 89,878 | 91,020 | 90,773 | 91,134 | 91,848 |

Source: UBS estimates

## Return on Invested Capital

Post-tax EBIT (using flat 35% rate) divided by invested capital

Table 2: Return on Invested Capital, Q1/06E-Q4/07E

| Railroad             | Q1/06E | Q2/06E | Q3/06E | Q4/06E | Q1/07E | Q2/07E | Q3/07E | Q4/07E |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Union Pacific        | 6.4%   | 7.0%   | 7.6%   | 8.1%   | 8.3%   | 8.6%   | 8.8%   | 9.1%   |
| Burlington Northern  | 12.5%  | 12.9%  | 13.2%  | 13.6%  | 13.7%  | 14.1%  | 14.4%  | 14.7%  |
| CSX                  | 8.0%   | 8.3%   | 8.8%   | 9.0%   | 9.1%   | 9.2%   | 9.4%   | 9.6%   |
| Norfolk Southern     | 9.1%   | 9.5%   | 10.1%  | 10.3%  | 10.4%  | 10.6%  | 10.9%  | 11.2%  |
| Kansas City Southern | 2.7%   | 4.1%   | 4.6%   | 5.1%   | 5.4%   | 5.7%   | 5.9%   | 6.2%   |
| Canadian National    | 12.4%  | 12.6%  | 13.1%  | 13.2%  | 13.4%  | 13.6%  | 13.8%  | 14.0%  |
| Canadian Pacific     | 9.3%   | 9.6%   | 9.9%   | 10.2%  | 10.4%  | 10.6%  | 10.7%  | 10.8%  |

Source: UBS estimates

## Sector Weighted Average ROIC

Each railroad's ROIC multiplied by its percentage of sector invested capital. Q2/06 ROIC hits the sector's WACC

Table 3: Railroad Contribution to Sector ROIC, Q1/06E-Q4/07E

| Invested Capital     | Q1/06E | Q2/06E | Q3/06E | Q4/06E | Q1/07E | Q2/07E | Q3/07E | Q4/07E |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Union Pacific        | 1.5%   | 1.6%   | 1.7%   | 1.8%   | 1.9%   | 2.0%   | 2.0%   | 2.1%   |
| Burlington Northern  | 2.4%   | 2.5%   | 2.5%   | 2.6%   | 2.6%   | 2.7%   | 2.7%   | 2.7%   |
| CSX                  | 1.2%   | 1.3%   | 1.3%   | 1.4%   | 1.4%   | 1.4%   | 1.5%   | 1.5%   |
| Norfolk Southern     | 1.6%   | 1.7%   | 1.8%   | 1.8%   | 1.9%   | 1.9%   | 1.9%   | 1.9%   |
| Kansas City Southern | 0.1%   | 0.2%   | 0.2%   | 0.2%   | 0.2%   | 0.2%   | 0.2%   | 0.2%   |
| Canadian National    | 1.7%   | 1.8%   | 1.9%   | 1.9%   | 1.9%   | 1.9%   | 1.9%   | 2.0%   |
| Canadian Pacific     | 0.7%   | 0.7%   | 0.7%   | 0.7%   | 0.8%   | 0.8%   | 0.8%   | 0.8%   |
| Sector ROIC          | 9.2%   | 9.7%   | 10.1%  | 10.4%  | 10.6%  | 10.8%  | 11.0%  | 11.3%  |

Source: UBS estimates

---

■ **Statement of Risk**

Risks to railroad stocks include economic (volumes and pricing), financial (debt), event (M&A), and volatile fuel prices. There is also the risk of valuation multiple compression as investors move away from the sector at different stages of the business cycle.

■ **Analyst Certification**

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

## Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG (UBS).

For information on the ways in which UBS manages conflicts and maintains independence of its research product, historical performance information, and certain additional disclosures concerning UBS research recommendations, please visit [www.ubs.com/disclosures](http://www.ubs.com/disclosures)

### UBS Investment Research: Global Equity Ratings Definitions and Allocations

| UBS rating       | Definition                                                              | UBS rating       | Definition                                                             | Rating category     | Coverage <sup>1</sup> | IB services <sup>2</sup> |
|------------------|-------------------------------------------------------------------------|------------------|------------------------------------------------------------------------|---------------------|-----------------------|--------------------------|
| <b>Buy 1</b>     | FSR is > 10% above the MRA, higher degree of predictability             | <b>Buy 2</b>     | FSR is > 10% above the MRA, lower degree of predictability             | <b>Buy</b>          | 39%                   | 35%                      |
| <b>Neutral 1</b> | FSR is between -10% and 10% of the MRA, higher degree of predictability | <b>Neutral 2</b> | FSR is between -10% and 10% of the MRA, lower degree of predictability | <b>Hold/Neutral</b> | 50%                   | 33%                      |
| <b>Reduce 1</b>  | FSR is > 10% below the MRA, higher degree of predictability             | <b>Reduce 2</b>  | FSR is > 10% below the MRA, lower degree of predictability             | <b>Sell</b>         | 11%                   | 27%                      |

1 Percentage of companies under coverage globally within this rating category

2 Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months

Source UBS, as of 31 March 2006

### KEY DEFINITIONS

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for the equity risk premium and not a forecast)

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

**Rating/Return Divergence (RRD)** This qualifier is automatically appended to the rating when stock price movement has caused the prevailing rating to differ from that which would be assigned according to the rating system and will be removed when there is no longer a divergence, either through market movement or analyst intervention.

### EXCEPTIONS AND SPECIAL CASES

**US Closed-End Fund ratings and definitions are:** Buy Higher stability of principal and higher stability of dividends, Neutral Potential loss of principal, stability of dividend, Reduce High potential for loss of principal and dividend risk.

**UK and European Investment Fund ratings and definitions are:** Buy Positive on factors such as structure, management, performance record, discount, Neutral Neutral on factors such as structure, management, performance record, discount, Reduce Negative on factors such as structure, management, performance record, discount.

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-10% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned table in the relevant research piece.

**Companies mentioned**

| Company Name                          | Reuters | Rating          | Price     | Price date/time       |
|---------------------------------------|---------|-----------------|-----------|-----------------------|
| Burlington Northern <sup>18</sup>     | BNI N   | Neutral 2       | US\$83.39 | 14 Apr 2006 19:36 EDT |
| Canadian National <sup>4a,18</sup>    | CNR TO  | Buy 2           | C\$53.19  | 14 Apr 2006 19:36 EDT |
| Canadian Pacific <sup>18</sup>        | CP TO   | Buy 2 (RRD)     | C\$61.73  | 14 Apr 2006 19:36 EDT |
| CSX Corp. <sup>2a,4b,6,7,18,25</sup>  | CSX N   | Buy 2 (RRD)     | US\$65.05 | 14 Apr 2006 19:36 EDT |
| Kansas City Southern <sup>13,18</sup> | KSU N   | Buy 2           | US\$23.85 | 14 Apr 2006 19:36 EDT |
| Norfolk Southern <sup>18</sup>        | NSC N   | Buy 2           | US\$53.84 | 14 Apr 2006 19:36 EDT |
| Union Pacific Corp. <sup>2b,18</sup>  | UNP N   | Neutral 2 (RRD) | US\$93.52 | 14 Apr 2006 19:36 EDT |

Source: UBS EDT Eastern daylight time

- 2a UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company or one of its affiliates within the past three years
- 2b UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company or one of its affiliates within the past five years
- 4a Within the past three years, UBS Securities Canada Inc or an affiliate has received compensation for investment banking services from this company/entity
- 4b Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity
- 6 This company is, or within the past 12 months has been, a client of UBS Securities LLC, and non-investment banking securities-related services are being, or have been, provided
- 7 Within the past 12 months, UBS Securities LLC has received compensation for products and services other than investment banking services from this company
- 13 UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company's common equity securities as of last month's end (or the prior month's end if this report is dated less than 10 days after the most recent month's end)
- 18 UBS Securities LLC makes a market in the securities and/or ADRs of this company
- 25 UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month's end (or the prior month's end if this report is dated less than 10 working days after the most recent month's end)

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report.

## Global Disclaimer

This report has been prepared by UBS Securities LLC or an affiliate thereof ("UBS"). In certain countries UBS AG is referred to as UBS SA.

This report is for distribution only under such circumstances as may be permitted by applicable law. It has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. It is published solely for informational purposes and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning UBS AG, its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities, markets or developments referred to in the report. The report should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS as a result of using different assumptions and criteria. The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information. UBS is under no obligation to update or keep current the information contained herein. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither UBS nor any of its affiliates, nor any of UBS' or any of its affiliates, directors, employees or agents accepts any liability for any loss or damage arising out of the use of all or any part of this report. Additional information will be made available upon request.

United Kingdom, Sweden and Netherlands: Except as otherwise specified herein, this material is communicated by UBS Limited, a subsidiary of UBS AG, to persons who are market counterparties or intermediate customers (as defined in the FSA Rules) and is only available to such persons. The information contained herein does not apply to, and should not be relied upon by, private customers. France: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France SA, Germany: Prepared by UBS Limited. Distributed by UBS Limited and UBS Deutschland AG. UBS Limited is regulated by FSA. UBS Deutschland AG is regulated by Bundesanstalt für Finanzdienstleistungsaufsicht, Spain: Prepared by UBS Limited and distributed by UBS Securities España SV SA, a member of the Comisión Nacional del Mercado de Valores, Russia: Prepared and distributed by the Moscow Representative Office of UBS Cyprus Moscow Limited, Switzerland: Distributed by UBS AG to persons who are institutional investors only. Italy: Should persons receiving this research in Italy require additional information or wish to effect transactions in the relevant securities, they should contact UBS Italia SIM S.p.A. South Africa: UBS South Africa (Pty) Limited is a member of the JSE Limited. UBS South Africa (Pty) Limited is an authorised Financial Services Provider. United States: Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG, or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a "non-US affiliate") to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc. and not through a non-US affiliate. Canada: Distributed by UBS Securities Canada Inc., a subsidiary of UBS AG and a member of the principal Canadian stock exchanges & CIPF. A statement of its financial condition and a list of its directors and senior officers will be provided upon request. Hong Kong: Distributed by UBS Securities Asia Limited, Singapore: Distributed by UBS Securities Pte Ltd or UBS AG, Singapore Branch, Japan: Distributed by UBS Securities Japan Ltd to institutional investors only. Australia: Distributed by UBS AG (Holder of Australian Financial Services Licence No 231087) and UBS Securities Australia Ltd (Holder of Australian Financial Services Licence No 231088) only to "Wholesale" clients as defined by s761G of the Corporations Act 2001. New Zealand: Distributed by UBS New Zealand Ltd.

© 2006 UBS. All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect.



c

## Exhibit C

UBS Investment Research, *Hungry Like The Wolf*, dated March 26, 2007



## UBS Investment Research

### Norfolk Southern Corp.

#### Hungry Like The Wolf

##### ■ Notes from the road - New York

On March 23 we hosted a day of investor meetings with NS CFO Hank Wolf and Accounting Director Michael Hostutler. Interest and attendance were both high. The key overall takeaway was that - despite the stock going sideways for a year - the company believes it is well positioned, has a good story to tell, and management is getting out there and marketing the name.

##### ■ Re-levering likely but don't look for a big bang

NS acknowledged the current debt/cap of 41% is too low. This will fall to about 39% on May 15 when NS makes a debt payment of \$351m. At the same time the company was uncomfortable at 60% following the Conrail acquisition and doesn't want to go back there. We're modeling a ramp up from 39% to 45% through 2010, helping drive \$1b in annual share buybacks; just over half with FCF and the rest with debt.

##### ■ Smart use of capital for Heartland Corridor & KCS JV

The Heartland Corridor project will improve capacity, efficiency, and service on the key intermodal route between Illinois and Virginia, helping drive financials from 2009. The total cost of the project is about \$160m with state and federal governments funding almost two-thirds, ensuring a compelling ROIC for NS. The company also remains content with its strategic JV with KCS.

##### ■ Valuation: Buy 2 rating maintained and PT of \$65

Our \$65 PT (unchanged) is based on a forward P/E of 14.5x

| Highlights (US\$m)        | 12/05          | 12/06 | 12/07E | 12/08E | 12/09E |
|---------------------------|----------------|-------|--------|--------|--------|
| Revenues                  | 8,472          | 9,407 | 8,620  | 10,249 | 10,816 |
| EBIT (UBS)                | 2,097          | 2,557 | 2,705  | 2,982  | 3,258  |
| Net income (UBS)          | 1,189          | 1,481 | 1,571  | 1,694  | 1,851  |
| EPS (UBS, US\$)           | 2.88           | 3.57  | 3.92   | 4.36   | 4.92   |
| Net DPS (UBS, US\$)       | 0.48           | 0.68  | 0.88   | 1.06   | 1.27   |
| Profitability & Valuation | 5-yr hist. av. | 12/06 | 12/07E | 12/08E | 12/09E |
| EBIT margin %             | 20.2           | 27.2  | 28.1   | 29.1   | 30.1   |
| ROIC (EBIT) %             | 14.9           | 17.6  | 19.3   | 21.0   | 22.5   |
| EV/EBITDA x               | 6.3            | 7.5   | 7.2    | 6.6    | 6.2    |
| PE (UBS) x                | 15.6           | 13.8  | 13.3   | 11.9   | 10.6   |
| Net dividend yield %      | 1.3            | 1.4   | 1.7    | 2.0    | 2.4    |

Source: Company accounts, Thomson Financial. UBS estimates (UBS) valuations are stated before goodwill-related charges and other adjustments for abnormal and economic items at the analysts' judgement.

Valuations, based on an average share price that year (E) based on a share price of US\$51.97 on 23 Mar 2007 19:35 EDT

**Rick Paterson**  
Analyst  
rick.paterson@ubs.com  
+1-212-713 7944

**Fadi Chamoun, CFA**  
Analyst  
fadi.chamoun@ubs.com  
+1-416-350 4855

**Elizabeth Mielke**  
Associate Analyst  
ekzabeth.mielke@ubs.com  
+1-212-713 3683

## Global Equity Research

Americas

Railroads

Rating

Buy 2

Unchanged

Price target

US\$65.00

Unchanged

Price

US\$51.97

RIC NSC N BBG NSC US

26 March 2007

#### Trading data

|                         |                 |
|-------------------------|-----------------|
| 52-wk. range            | US\$57.35-40.65 |
| Market cap              | US\$20.6bn      |
| Shares o/s              | 397m            |
| Free float              | 99%             |
| Avg daily volume ('000) | 2,493           |
| Avg daily value (US\$m) | 123.6           |

#### Balance sheet data 12/07E

|                      |              |
|----------------------|--------------|
| Shareholders' equity | US\$10.1bn   |
| P/BV (UBS)           | 2.1x         |
| Net cash (debt)      | (US\$5.78bn) |

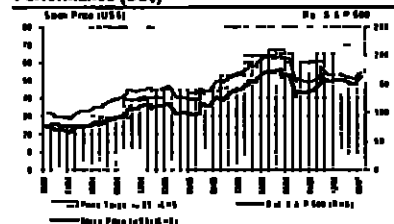
#### Forecast returns

|                             |        |
|-----------------------------|--------|
| Forecast price appreciation | +25.1% |
| Forecast dividend yield     | 1.8%   |
| Forecast stock return       | +26.9% |
| Market return assumption    | 9.6%   |
| Forecast excess return      | +17.3% |

#### EPS (UBS, US\$)

|        | 12/07E | 12/06       |
|--------|--------|-------------|
|        | UBS    | Cons Actual |
| Q1E    | 0.77   | 0.78 0.72   |
| Q2E    | 1.02   | 1.02 0.89   |
| Q3E    | 1.10   | 1.10 1.02   |
| Q4E    | 1.03   | 1.04 0.95   |
| 12/07E | 3.92   | 3.94        |
| 12/08E | 4.36   | 4.35        |

#### Performance (US\$)



Source: UBS  
www.ubs.com/investmentresearch

This report has been prepared by UBS Securities LLC

#### ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 3

UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Customers of UBS in the United States can receive independent, third-party research on the company or companies covered in this report, at no cost to them, where such research is available. Customers can access this independent research at [www.ubs.com/independentresearch](http://www.ubs.com/independentresearch) or may call +1 877-208-5700 to request a copy of this research.

## **Current Intermodal Weakness**

Management commented on the current intermodal weakness and made the point that while its core intermodal partners (JB Hunt, Schneider, and U S Xpress) continue to drive volumes to NS, some of the freight brokers like Hub Group are reacting to recently reduced truck rates and channeling business from rail to truck. This is hurting all the rails. The timing of Chinese New Year could also soften international intermodal volumes through the end of Q1, but with "catch up" likely in the second quarter.

Falling truck spot rates hurting rail vs. truck intermodal share

There has also been some concerns that CSX is taking intermodal market share from NS but in our view we're not seeing it. YTD NS intermodal volumes are down 1.5% versus -0.4% for CSX, however, NS is lapping a +7.8% intermodal growth comp in Q1/06 while CSX laps a -2.3% comp. Intermodal is a service sensitive business and CSX has a lot more work to do to narrow the service gap to the point where it can take share.

No evidence of intermodal share losses to CSX

## **Capacity Remains Tight, Particularly in South**

Despite the temporary slowing in traffic levels, the company noted that capacity – particularly in its southern region around Atlanta – remains tight. Rail demand still exceeds rail supply.

Rail demand still exceeds rail supply

## **Long Term Sustainable Pricing: 2-3% above CPI**

Norfolk Southern achieved an average price increase of 6% ex-fuel surcharges in 2006, which was in line with the other US rails. Some of that was the result of long term contracts rolling over at materially higher rates, and these "legacy" contracts are a unique situation that can't last forever (we think about 15% of total NS sales remains under these old deals). In terms of a long term sustainable rate of price growth, once all these one-off deals have been repriced, the company noted that 2-3% above CPI was probably reasonable. Our own view is that pricing will ultimately settle at about 3% annual increase in revenue per load.

Pricing strength likely secular, not cyclical

## **Operating Ratio Can Go Into the 60s**

The company stated that it can further improve its operating ratio (1-operating margin) and an annual improvement of 1% is possible in a "decent" economy. NS believes it can take the operating ratio down into the high 60s, even without the move from two to one man locomotive crews. We certainly concur and are modeling a 90 bps improvement in 2007 and 100bps/year thereafter through 2010 (to 68.9%). Interestingly, the company also made the point that it is possible – but obviously more difficult – to improve the operating ratio in an environment of negative volume growth and flat revenue growth. Exactly the scenario we expect in H1/07. We see a material risk that our 2007 operating ratio is a little optimistic, but over the longer term we maintain high conviction that NS will deliver an operating ratio that begins with a "6"

High 60s OR is possible, and in our view probable

---

■ **Norfolk Southern Corp.**

Norfolk Southern operates a freight rail network in the eastern United States. It is the fourth largest railroad in the United States, with 2004 sales of \$7.3 billion. Major commodity groups include coal (24% of sales), intermodal containers and truck trailers (21%), automotive (13%), chemicals (12%), metals and construction (11%), agricultural, consumer, and government (10%), and paper, clay, and forest products (9%). The company also owns a natural resource management company called Pocahontas Land Corporation.

■ **Statement of Risk**

Risks to our NSC price target include economic (volumes and pricing), event (M&A), financial (debt), and volatile fuel prices. There is also the risk of valuation multiple compression as investors move away from the sector at different stages of the business cycle.

■ **Analyst Certification**

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

## Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG (UBS)

For information on the ways in which UBS manages conflicts and maintains independence of its research product, historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit [www.ubs.com/disclosures](http://www.ubs.com/disclosures).

### UBS Investment Research: Global Equity Ratings Definitions and Allocations

| UBS rating       | Definition                                                            | UBS rating       | Definition                                                           | Rating category     | Coverage <sup>1</sup> | IB services <sup>2</sup> |
|------------------|-----------------------------------------------------------------------|------------------|----------------------------------------------------------------------|---------------------|-----------------------|--------------------------|
| <b>Buy 1</b>     | FSR is > 6% above the MRA, higher degree of predictability            | <b>Buy 2</b>     | FSR is > 6% above the MRA, lower degree of predictability            | <b>Buy</b>          | 44%                   | 36%                      |
| <b>Neutral 1</b> | FSR is between -6% and 6% of the MRA, higher degree of predictability | <b>Neutral 2</b> | FSR is between -6% and 6% of the MRA, lower degree of predictability | <b>Hold/Neutral</b> | 43%                   | 36%                      |
| <b>Reduce 1</b>  | FSR is > 6% below the MRA, higher degree of predictability            | <b>Reduce 2</b>  | FSR is > 6% below the MRA, lower degree of predictability            | <b>Sell</b>         | 13%                   | 26%                      |

1 Percentage of companies under coverage globally within this rating category

2 Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months

Source UBS Ratings allocations are as of 31 December 2006

### KEY DEFINITIONS

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium)

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

### EXCEPTIONS AND SPECIAL CASES

**US Closed-End Fund ratings and definitions are:** Buy Higher stability of principal and higher stability of dividends, Neutral Potential loss of principal, stability of dividend, Reduce High potential for loss of principal and dividend risk

**UK and European Investment Fund ratings and definitions are:** Buy Positive on factors such as structure, management, performance record, discount, Neutral Neutral on factors such as structure, management, performance record, discount, Reduce Negative on factors such as structure, management, performance record, discount

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned or Company Disclosure table in the relevant research piece.

## Companies mentioned

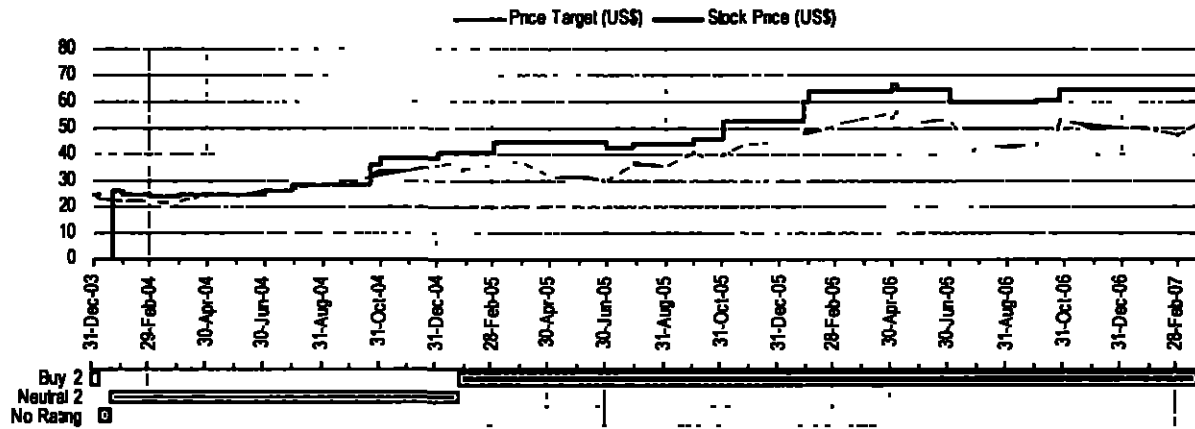
| Company Name                                        | Reuters | Rating    | Price     | Price date/time       |
|-----------------------------------------------------|---------|-----------|-----------|-----------------------|
| CSX Corp. <sup>2,4a,5,8a,8b,9c,7,13,16,18c,22</sup> | CSX N   | Neutral 2 | US\$41 65 | 23 Mar 2007 19 35 EDT |
| Hub Group, Inc. <sup>16</sup>                       | HUBG O  | Not Rated | US\$31 32 | 23 Mar 2007 19 35 EDT |
| JB Hunt Transport <sup>4b,6b,7,16,18b</sup>         | JBHT O  | Buy 2     | US\$27 51 | 23 Mar 2007 19 35 EDT |
| Kansas City Southern <sup>16</sup>                  | KSU N   | Neutral 2 | US\$36 35 | 23 Mar 2007 19 35 EDT |
| Norfolk Southern <sup>4a,8a,8b,7,16,18a,22</sup>    | NSC N   | Buy 2     | US\$51 97 | 23 Mar 2007 19 35 EDT |

Source UBS EDT Eastern daylight time

- 2 UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months
- 4a Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity
- 4b Within the past three years, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity
- 5 UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company/entity within the next three months.
- 6a This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and investment banking services are being, or have been, provided
- 6b This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-investment banking securities-related services are being, or have been, provided
- 6c This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-securities services are being, or have been, provided
- 7 Within the past 12 months, UBS Securities LLC has received compensation for products and services other than investment banking services from this company/entity
- 13 UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company's common equity securities as of last month's end (or the prior month's end if this report is dated less than 10 days after the most recent month's end)
- 16 UBS Securities LLC makes a market in the securities and/or ADRs of this company
- 18a The U S equity strategist, a member of his team, or one of their household members has a long common stock position in Norfolk Southern Corp
- 18b The U S equity strategist, a member of his team, or one of their household members has a long common stock position in JB Hunt Transport
- 18c The U S equity strategist, a member of his team, or one of their household members has a long common stock position in CSX Corp
- 22 UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month's end (or the prior month's end if this report is dated less than 10 working days after the most recent month's end)

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report

Norfolk Southern Corp. (US\$)



Source UBS, as of 23 March 2007

Note On September 9, 2006, UBS adopted new percentage band criteria for its rating system (See 'UBS Investment Research' Global Equity Ratings Definitions and Allocations' table for details) Between October 13, 2003 and September 9, 2006 the percentage band criteria used in the rating system was 10% Prior to October 13, 2003, the UBS ratings and their definitions were Buy 1 Excess return potential >15%, smaller range around price target, Buy 2 Excess return potential >15%, larger range around price target, Neutral 1 Excess return potential between -15% and 15%, smaller range around price target, Neutral 2 Excess return potential between -15% and 15%, larger range around price target, Reduce 1 Excess return potential < -15%, smaller range around price target, Reduce 2 Excess return potential < -15%, larger range around price target Excess return is defined as the difference between the FSR and the one-year local market interest rate

## Global Disclaimer

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG (UBS). In certain countries UBS AG is referred to as UBS SA.

This report is for distribution only under such circumstances as may be permitted by applicable law. It has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. It is published solely for informational purposes and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning UBS AG, its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities markets or developments referred to in the report. The report should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS as a result of using different assumptions and criteria. The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information. UBS is under no obligation to update or keep current the information contained herein. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither UBS nor any of its affiliates, nor any of UBS' or any of its affiliates' directors, employees or agents accepts any liability for any loss or damage arising out of the use of all or any part of this report. Additional information will be made available upon request.

For financial instruments admitted to trading on an EU regulated market, UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC and/or UBS Capital Markets LP) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer, save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this research report.

**United Kingdom and the rest of Europe:** Except as otherwise specified herein, this material is communicated by UBS Limited, a subsidiary of UBS AG, to persons who are market counterparties or intermediate customers (as detailed in the FSA Rules) and is only available to such persons. The information contained herein does not apply to, and should not be relied upon by, private customers. UBS Limited is regulated by the FSA. France: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France SA. UBS Securities France SA is regulated by the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France SA has contributed to this report, the report is also deemed to have been prepared by UBS Securities France SA. Germany: Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). Spain: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). Russia: Prepared and distributed by the Moscow Representative Office of UBS Cyprus Moscow Limited. Switzerland: Distributed by UBS AG to persons who are institutional investors only. Italy: Prepared by UBS Limited and distributed by UBS Limited and UBS Italia S.m.p.A. UBS Italia S.m.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia S.m.p.A. has contributed to this report, the report is also deemed to have been prepared by UBS Italia S.m.p.A. South Africa: UBS South Africa (Pty) Limited (Registration No. 1995/011140/07) is a member of the JSE Limited, the South African Futures Exchange and the Bond Exchange of South Africa. UBS South Africa (Pty) Limited is an authorised Financial Services Provider. United States: Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG, or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a "non-US affiliate") to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc. and not through a non-US affiliate. Canada: Distributed by UBS Securities Canada Inc., a subsidiary of UBS AG and a member of the principal Canadian stock exchanges & CIPF. A statement of its financial condition and a list of its directors and senior officers will be provided upon request. Hong Kong: Distributed by UBS Securities Asia Limited. Singapore: Distributed by UBS Securities Pte Ltd or UBS AG, Singapore Branch. Japan: Distributed by UBS Securities Japan Ltd to institutional investors only. Australia: Distributed by UBS AG (Holder of Aus. alien Financial Services Licence No. 231087) and UBS Securities Austria Ltd (Holder of Australian Financial Services Licence No. 231098) only to "Wholesale" clients as defined by s781G of the Corporations Act 2001. New Zealand: Distributed by UBS New Zealand Ltd.

© 2007 UBS. All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect.



|

|

|

.

|

,

**a**

|

|

|

**Exhibit D**

***Rail Stock Watch*, dated April 5, 2007 (excerpt)**

# **Rail StockWatch**

**Issue Number 100      April 5, 2007**

**Edited and Published by Tom Murray**

**On the web: [tmrail.com](http://tmrail.com)**

*Copyright ©2007 Tom Murray*

*Rail StockWatch may not be reproduced, faxed or electronically retransmitted without permission of the publisher*

---

**News, statistics and commentary on railroads and other rail industry companies  
whose shares are traded on U.S. stock exchanges**

---

## **In this issue of Rail StockWatch**

### **Page**

|           |                                                                                 |
|-----------|---------------------------------------------------------------------------------|
| <b>2</b>  | <b><i>P/E Ratios (Based on Consensus Estimates of Fiscal 2007 Earnings)</i></b> |
| <b>2</b>  | <b><i>Analyst Ratings of Rail Industry Stocks</i></b>                           |
| <b>3</b>  | <b><i>North American Rail Carloadings</i></b>                                   |
| <b>3</b>  | <b><i>Fluidity Index</i></b>                                                    |
| <b>3</b>  | <b><i>Company News: Major North American Railroads</i></b>                      |
| <b>7</b>  | <b><i>Company News: Regional and International Railroad Companies</i></b>       |
| <b>8</b>  | <b><i>Company News: Freight Car Builders and Rail Supply Companies</i></b>      |
| <b>9</b>  | <b><i>Company News: Intermodal Marketing and Logistics Companies</i></b>        |
| <b>10</b> | <b><i>STB to Hold Hearings on Rail Capacity and Infrastructure</i></b>          |
| <b>11</b> | <b><i>Rail Industry Stock Performance</i></b>                                   |
| <b>12</b> | <b><i>Railroad Performance Metrics</i></b>                                      |

---

"Guiding down" has been the order of the day among railroads and allied companies as first-quarter earnings season approaches. Lower-than-expected volumes, weather issues and company-specific factors (such as the UTU strike at Canadian National) are all playing a role. If air needs to be let out of the tires, better to do it now and let a sense of lowered expectations settle over the investment community, rather than bury negative surprises in quarterly financial releases.

Even with the earnings warnings, railroad stocks gained 4.1% in March, handily beating the broader market. The same is true on a year-to-date basis, where railroad stocks show a gain of 9.0% versus virtually flat (S&P 500) and down by 0.9% (Dow Jones Industrials).

Some of the fuel behind March's gain came from LBO speculation, particularly around CSX, despite the fact that most analysts who follow the rails think an LBO of a large railroad is unlikely. In an April 5 note, analyst Salvatore Vitale of Calyon Securities says "Apart from the low returns we estimate a financial sponsor could achieve, several reasons would likely make a railroad an unpalatable LBO candidate: regulatory scrutiny, a unionized labor force (note CN strike in 1Q); and high maintenance capex requirements (typically about 70% of rail capex budgets). . The federal government is not likely to allow a private equity firm to reduce capex in conjunction with an LBO for fear of reducing safety standards and jeopardizing the nation's transportation infrastructure."

Still, the market as a whole has seen a lot of private equity activity recently, which usually involves an increase in a company's debt levels, and this has prompted some on Wall Street and in corporate America to ask, why can't a public company do the same thing? Exhibit A is a *Wall Street Journal* article on March 27 describing several companies that have increased their

debt-to-cap ratios. The result is an increase in interest expense, but assuming that the debt is used to buy back and retire shares, earnings per share go up, which should (other things being equal) boost the stock price. The article quoted one investment banker as saying, "The best candidates are typically firms in maturing industries with slower expansion profiles, and whose shares are trading at low earnings multiples." That sounds to us like a description of the railroad industry.

Since the first of the year, railroads have been getting more aggressive with their buyback programs, and some of them (notably BNI and CNI) have talked publicly about increasing their debt-to-cap ratios. The new conventional wisdom seems to be that a 45% debt-to-cap ratio is workable for a railroad, up from a more traditional 40% target. The underlying assumption is that railroads are becoming less cyclical, and no longer need the high ratio of earnings to fixed charges that they previously used to guard against a big downturn in the business cycle.

One interesting note on this topic came in a March 15 report by UBS analyst Rick Paterson, who polled his readers on "the current level of gearing among the six major Class I railroads." Of the responses, he said, "the vast majority (80%) think the rails are underleveraged, while 20% say 'optimally leveraged.' Not a single respondent thinks the sector has too much debt."

**Price/Earnings Ratios (Based on Consensus Estimates of Fiscal 2007 Earnings)**

| <u>Stock</u> | <u>Closing Price</u><br><u>4/5/07</u> | <u>Estimated</u><br><u>FY 2007</u><br><u>EPS</u> | <u>Price/</u><br><u>Earnings</u><br><u>Ratio</u> | <u>Stock</u> | <u>Closing Price</u><br><u>4/5/07</u> | <u>Estimated</u><br><u>FY 2007</u><br><u>EPS</u> | <u>Price/</u><br><u>Earnings</u><br><u>Ratio</u> |
|--------------|---------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------|---------------------------------------|--------------------------------------------------|--------------------------------------------------|
| ARII         | \$29.39                               | \$1.70                                           | 17.3                                             | HUBG         | \$29.68                               | \$1.37                                           | 21.7                                             |
| BNI          | 82.72                                 | 5.68                                             | 14.6                                             | KSU          | 35.65                                 | 1.41                                             | 25.3                                             |
| CNI          | 44.29                                 | 3.18                                             | 13.9                                             | NSC          | 50.98                                 | 3.91                                             | 13.0                                             |
| CP           | 55.76                                 | 3.82                                             | 14.6                                             | PACR         | 25.84                                 | 1.81                                             | 14.3                                             |
| CSX          | 40.96                                 | 2.53                                             | 16.2                                             | TRN          | 41.04                                 | 3.17                                             | 12.9                                             |
| FLA          | 63.36                                 | 1.63                                             | 38.9                                             | UNP          | 103.20                                | 6.76                                             | 15.3                                             |
| GBX          | 22.20                                 | 2.13                                             | 10.4                                             | WAB          | 33.87                                 | 2.11                                             | 16.1                                             |
| GMT          | 48.05                                 | 3.07                                             | 15.7                                             |              |                                       |                                                  |                                                  |
| GWR          | 26.77                                 | 1.51                                             | 17.7                                             |              |                                       |                                                  |                                                  |

**Note:** Earnings estimates are shown only when based on work of at least three analysts.

**Analyst Ratings of Rail Industry Stocks**

| <u>Stock</u> | <u>Date</u> | <u>Investment Firm</u> | <u>Action</u> | <u>From</u> | <u>To</u>         |
|--------------|-------------|------------------------|---------------|-------------|-------------------|
| CNI          | 3/20        | CIBC Wld Mkts          | Initiated     |             | Sector Outperform |
| CP           | 3/20        | CIBC Wld Mkts          | Initiated     |             | Sector Perform    |
| CSX          | 4/5         | Calyon Securities      | Downgrade     | Neutral     | Reduce            |
| GBX          | 4/4         | DA Davidson            | Downgrade     | Buy         | Neutral           |
| PACR         | 4/4         | BB&T Capital Mkts      | Upgrade       | Hold        | Buy               |
| PRPX         | 3/27        | Ferris Baker Watts     | Upgrade       | Neutral     | Buy               |

E

**Exhibit E**

**UBS Q-Series® report, *Time to Lever Up the Rails?*, dated May 3, 2007**

**UBS Investment Research**
**Q-Series®: North American Railroads**

3 May 2007

www.ubs.com/investmentresearch

**Fadi Chamoun, CFA**

Analyst

fadi.chamoun@ubs.com

+1-416-350 4855

**Rick Paterson**

Analyst

rick.paterson@ubs.com

+1-212-713 7944

**Tasneem Azim**

Associate Analyst

tasneem.azim@ubs.com

+1-416-814 3678

**Elizabeth Mielke**

Associate Analyst

elizabeth.mielke@ubs.com

+1-212-713 3683

**Stephanie Phillips, CA, CFA**

Associate Analyst

stephanie.phillips@ubs.com

+1-416-814 1440

## Time to Lever Up the Rails?

### ■ Overshooting

LBO speculation and "activist" hedge funds are a new phenomenon in the rail sector, and both are being fuelled by a growing perception the railroads are materially underlevered. Ironically, as the companies have recently succeeded restoring leverage ratios to historic levels following the mergers of the nineties, they now find the fundamentals have changed and they've gone too far.

### ■ What's the right capital structure?

Using a proprietary UBS model we estimate optimal sector leverage at 64% net debt/capital and 3.2x debt/EBITDA, compared to current ratios of 44% and 2.2x, respectively. This additional debt adds 5.4% to the sector's equity value from the debt tax shield and 11% from EPS accretion. We also argue this wouldn't require sacrificing investment grade ratings.

### ■ Will they or won't they?

We see a growing disconnect between stockholders and management on this issue but it's going to take time before CFOs start thinking materially differently. While it's a case of "baby steps" in the near term, this issue is real, gaining momentum, and we expect a material leveraging up of these companies over the longer term.

### ■ Investment conclusion: Buy CN and UP

All rails will benefit, specifically Burlington Northern (N2), Canadian National (B2), Union Pacific (B2) and Norfolk Southern (B2).

**Table 1: Summary of results – Value from spare debt capacity (SDC)**

| Company                 | Value of Debt Tax Shield from SDC | EPS Accretion using SDC for Share Buyback |
|-------------------------|-----------------------------------|-------------------------------------------|
| Canadian National       | 6.1%                              | 11.7%                                     |
| Norfolk Southern        | 5.5%                              | 10.8%                                     |
| Union Pacific           | 5.3%                              | 11.9%                                     |
| Burlington Northern     | 5.1%                              | 13.1%                                     |
| CSX                     | 4.9%                              | 8.5%                                      |
| Canadian Pacific        | 4.8%                              | 7.6%                                      |
| Market Weighted Average | 5.4%                              | 11.2%                                     |

Source: UBS estimates

This report has been prepared by UBS Securities Canada Inc

### ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 22

UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Customers of UBS in the United States can receive independent, third-party research on the company or companies covered in this report, at no cost to them, where such research is available. Customers can access this independent research at

| <b>Contents</b>                                                  | <b>page</b> |                                    |
|------------------------------------------------------------------|-------------|------------------------------------|
| <b>Investment Summary</b>                                        | <b>3</b>    | <b>Fadi Chamoun, CFA</b>           |
| — Background and History                                         | 3           | Analyst                            |
| — What's the Right Level of Leverage?                            | 3           | fadi.chamoun@ubs.com               |
| — Potential Benefits to Stockholders                             | 4           | +1-416-350 4855                    |
| — Will They or Won't They?                                       | 5           | <b>Rick Paterson</b>               |
| — Fundamental Disconnect                                         | 5           | Analyst                            |
| — Compatibility with Investment Thesis                           | 6           | rick.paterson@ubs.com              |
| <b>Are The Rails Underlevered?</b>                               | <b>7</b>    | +1-212-713 7944                    |
| — Structurally Improved Fundamentals Support Additional leverage | 8           | <b>Tasneem Azim</b>                |
| <b>Determining Spare Debt Capacity: A Statistical Model</b>      | <b>11</b>   | Associate Analyst                  |
| — The Results Are In                                             | 12          | tasneem.azim@ubs.com               |
| — Working the Debt                                               | 16          | +1-416-814 3678                    |
| <b>Conclusion: Untapped Leverage Provides Upside</b>             | <b>18</b>   | <b>Elizabeth Mielke</b>            |
| <b>Appendix</b>                                                  | <b>19</b>   | Associate Analyst                  |
|                                                                  |             | elizabeth.mielke@ubs.com           |
|                                                                  |             | +1-212-713 3683                    |
|                                                                  |             | <b>Stephanie Phillips, CA, CFA</b> |
|                                                                  |             | Associate Analyst                  |
|                                                                  |             | stephanie.phillips@ubs.com         |
|                                                                  |             | +1-416-814 1440                    |

# Investment Summary

## Background and History

The North American railroads are in their best financial shape in decades as the so called “rail renaissance” enters its fourth year in 2007. After decades of chronic overcapacity that was originally triggered by massive market share losses to trucks beginning in the 1950s, 2004 saw the perfect storm: an industrial recovery in the North American economy, a truck driver shortage, and explosive growth in demand for long haul rail transportation driven by the accelerating outsourcing shift to China. It’s our view that this step up in demand exhausted the last of the excess capacity in the rail system, capacity that had been whittled away by consolidation since deregulation in 1980. The result: demand exceeded supply for the first time in half a century and the rails achieved what had eluded them for so long – pricing power. Pricing has driven margins, ROIC, free cash flow, and allowed the rails to rapidly delever their balance sheets following the painful, and expensive, mergers of the late nineties.

Pricing power has allowed the rails to rapidly delever following the mergers of the late nineties

## Overshooting

We’ve known the rail CFOs for a few years now and it’s our view that most of them still think in terms of debt-to-capital ratios, with 40% (lease adjusted) being the consensus “target”. Forty percent is (very) comfortably investment grade and affords them the flexibility to weather a recession and the firepower to take on mergers and acquisition opportunities. However, this is the “historic” target and reflects a comfort level consistent with a different set of industry fundamentals. *Things have changed*. Pricing is more secular than cyclical, which means railroad revenues and earnings are less cyclical than they used to be, with Q1/07 being the perfect example. Another wave of mergers is not likely anytime soon (that’s a separate story) and healthier stock valuations provide a stronger currency for M&A, hence less dependence on the balance sheet.

Isn’t it ironic...

What we’ve detected over the last few months is that the CFOs are beginning to realize that – just as they’ve returned to their historic leverage goal – fundamentals have permanently changed and they’ve gone too far. They’ve overshot. After years of retiring debt we now expect them to be a net issuer of debt to achieve two ends:

We expect a debt issuance binge starting...now

- (1) Prevent the balance sheets from becoming further underlevered, and
- (2) Re-lever to attune the capital structure to the changed fundamentals

## What's the Right Level of Leverage?

The UBS Valuation and Accounting Team has developed a model to determine the maximum, optimum debt load, given a probability of default of no more than 0.01%. The results in Table 2 stand in stark contrast to current leverage levels in the industry. The model suggests an average industry net debt/capital ratio of 64% and debt/EBITDA of 3.2 times. The sector currently averages 44% and 2.2 times, respectively.

“Optimum” leverage is dramatically higher than current leverage

(For greater background on the model outlined above, please refer to the UBS Investment Research note, "*Q-Series Can Debt be an Asset?*" by David Bianco and Priya Hariyani published 12 December 2006 )

**Table 2: Debt ratios, before and after onboarding maximum debt**

| Company                      | EBITDA<br>(less<br>CAPEX/<br>Interest<br>(Current) | EBITDA<br>(less<br>CAPEX/<br>Interest<br>(Max) | Current<br>Debt/<br>EBITDA | Max.<br>Debt/<br>EBITDA | Current<br>Debt/<br>EBITDA<br>less CAPEX | Max<br>Debt/<br>EBITDA<br>less CAPEX | Current Net<br>Debt/<br>Total<br>Capital | Max Net<br>Debt/<br>Total<br>Capital |
|------------------------------|----------------------------------------------------|------------------------------------------------|----------------------------|-------------------------|------------------------------------------|--------------------------------------|------------------------------------------|--------------------------------------|
| Canadian National            | 6.7x                                               | 5.1x                                           | 1.5x                       | 2.8x                    | 2.5x                                     | 4.7x                                 | 35.8%                                    | 68.6%                                |
| Canadian Pacific             | 3.7x                                               | 3.3x                                           | 2.7x                       | 3.6x                    | 5.4x                                     | 7.3x                                 | 47.5%                                    | 64.1%                                |
| Burlington Northern Santa Fe | 4.0x                                               | 3.5x                                           | 2.3x                       | 3.2x                    | 4.3x                                     | 6.0x                                 | 55.4%                                    | 76.3%                                |
| CSX                          | 3.2x                                               | 3.2x                                           | 2.6x                       | 3.4x                    | 4.8x                                     | 6.5x                                 | 45.0%                                    | 60.2%                                |
| Norfolk Southern             | 4.5x                                               | 4.7x                                           | 2.0x                       | 2.9x                    | 3.0x                                     | 4.5x                                 | 41.4%                                    | 61.3%                                |
| Union Pacific                | 2.8x                                               | 2.8x                                           | 2.3x                       | 3.2x                    | 5.3x                                     | 7.4x                                 | 38.5%                                    | 54.4%                                |

Source: UBS estimates

\*Current = Under current net debt scenario

\*\*Max = Under maximum debt scenario

## Potential Benefits to Stockholders

What would this mean for the equity? Our analysis shows the Class I rails could add value to their equity holders by using debt strategically to reap the benefits of an increased tax shield, and through tactical use of the debt by embarking on a more aggressive program to repurchase undervalued equity. Table 3 shows the results, with column one highlighting the tax advantages and column two the total impact on EPS assuming increased debt is used to buy back stock.

**Significant upside in sector equity value**

Bottom line – The tax shield value from adding debt could boost the sector's market capitalization by 5.4% (market weighted) if the capital structure is optimized according to the UBS model. Tactical usage of debt to repurchase shares could generate an additional 11.2% upside from EPS accretion (assuming no change in PE multiples).

**Table 3: Summary of results – Value from spare debt capacity (SDC)**

| Company                 | Value of Debt Tax Shield<br>from SDC | EPS Accretion<br>using SDC for<br>Share Buyback |
|-------------------------|--------------------------------------|-------------------------------------------------|
| Canadian National       | 6.1%                                 | 11.7%                                           |
| Norfolk Southern        | 5.5%                                 | 10.8%                                           |
| Union Pacific           | 5.3%                                 | 11.8%                                           |
| Burlington Northern     | 5.1%                                 | 13.1%                                           |
| CSX                     | 4.9%                                 | 8.5%                                            |
| Canadian Pacific        | 4.8%                                 | 7.6%                                            |
| Market Weighted Average | 5.4%                                 | 11.2%                                           |

Source: UBS estimates

## Will They or Won't They?

It's important for investors to have a realistic grasp of the mentality of rail managements when it comes to leverage. The average senior executive has been there for 30 years and, in a profitability and ROIC context, the first 27 were terrible. What seems obvious to an institutional investor looking at this industry for the first time won't be to the typical rail CFO. It's going to take some time before the mindset changes, and we can say with near certainty that they won't be willing to sacrifice investment grade status anytime soon. This is partly a perception issue as these companies see themselves as important in both an industrial and historic context, which is incompatible with "junk".

**CFOs unwilling to sacrifice investment grade ratings**

### *But would they need to sacrifice investment grade to get there?*

Consider Table 4, which shows the current key leverage metrics for three of the rails and contrasts them with the worst year in recent history 1998. This was during the Union Pacific meltdown following the Southern Pacific acquisition, when CSX and Norfolk Southern had loaded themselves up with debt after overpaying for the Conrail acquisition. The metrics are dramatically worse than they are today, yet the debt ratings remained investment grade (barely). Now consider how fundamentals have improved since then, as we discussed earlier. The Class 1 Rails should be able to take on more debt without proportionately increasing risk. In other words, the rating agencies are no doubt going through the same thought process as the rest of the Street – things are different and the historical parameters need to be adjusted. While our optimal net debt/capital model suggests net debt/capital ratios higher than those seen in 1998, with the exception of Union Pacific, the suggested debt/EBITDA of 3.2 times is still materially healthier than levels seen in 1998, and interest coverage ratios are better at 3.8 times. We would also argue that net debt/capital is the least appropriate measure of leverage for the rails. Optimum leverage may indeed be consistent with investment grade.

**Optimum capital structure may be consistent with investment grade ratings**

**Table 4: Key Leverage Ratios, Then and Now**

| Leverage Ratio   | Union Pacific, 2006 | Union Pacific, 1998 | CSX, 2006 | CSX, 1998 | Norfolk Southern, 2006 | Norfolk Southern, 1998 |
|------------------|---------------------|---------------------|-----------|-----------|------------------------|------------------------|
| Net Debt/Capital | 28.0%               | 57.5%               | 36.1%     | 51.3%     | 37.1%                  | 56.1%                  |
| Debt/EBITDA      | 1.7x                | 11.3x               | 2.1x      | 3.8x      | 2.0x                   | 5.1x                   |
| EBITDA/Interest  | 8.6x                | 1.3x                | 7.2x      | 3.5x      | 6.9x                   | 2.9x                   |

Source: Company reports

## Fundamental Disconnect

On the sell side we have an interesting perspective as we sit between the companies and their stockholders, and what we're seeing at present is a fundamental disconnect between how the Class 1 Rails and a growing proportion of their owners are viewing the balance sheet. The rails are inclined to write it off as the usual scurrilous prodding from a few hedge funds intent on a quick buck, but we get the sense this issue is real and gaining momentum. Early on we stated that the mentality of the CFOs is beginning to shift from 40% target debt/cap to about 45%. Meanwhile, stockholders are beginning to think 60%— Hence the intense LBO speculation with the rationale being that if the rails won't lever up themselves, someone else will do it for them.

**Investors and stockholders are beginning to diverge on the balance sheet**

## Baby Steps

So what's going to happen? Our conclusions are twofold:

- **Near-term.** We think the rails will lever up to their new "comfort zone", which is about 5% to 10% debt/cap above where it is now. However, the timing and magnitude will not be satisfactory to many investors. Given the history of the industry and mentality of the senior executives, we think the rails will lever up slowly and methodically over the next three years by raising dividends faster than earnings growth and buying back more stock than free cash flow growth would exclusively allow. Debt issuances will make up the difference.
- **Longer term.** We think things have irreversibly changed and the goal posts have shifted. In 3-5 years we think the new norm will be leverage ratios beginning to shift closer to where our model suggests than where they are today.

## Compatibility with Investment Thesis

If our analysis plays out all of the Class 1 Rails will benefit. The upside to equity value suggested by our optimization model indicates the biggest potential gains for Burlington Northern, Canadian National, Union Pacific and Norfolk Southern. All three, except Burlington Northern, being Buy rated stocks at UBS.

**Buy Canadian National and Union Pacific**

**Table 5: UBS Ratings and targets for the Class 1 Rails**

| Company                    | Rating    | Price Target | Current Market Price | Potential Upside |
|----------------------------|-----------|--------------|----------------------|------------------|
| Canadian National (C\$)    | Buy 2     | \$70.00      | \$55.62              | 25.9%            |
| Norfolk Southern (US\$)    | Buy 2     | \$65.00      | \$52.65              | 23.5%            |
| Union Pacific (US\$)       | Buy 2     | \$130.00     | \$112.22             | 15.8%            |
| Canadian Pacific (C\$)     | Buy 2     | \$81.00      | \$70.01              | 15.7%            |
| Burlington Northern (US\$) | Neutral 2 | \$94.00      | \$86.57              | 8.6%             |
| CSX (US\$)                 | Neutral 2 | \$44.00      | \$43.37              | 1.5%             |

Source: UBS

## Are The Rails Underlevered?

Between 2000 and 2006 the Class 1 Rails have experienced significant improvements in their debt coverage and financial leverage ratios (Charts 1 through 4). We estimate that the average coverage ratio (market weighted) for the Class 1 Rails has almost doubled between 2000 and 2006, while the financial leverage ratios have fallen steadily over the same period. This is primarily the result of gradual improvements in profitability for the sector.

Chart 1: Net Debt to EBITDA & Net Debt to EBITDA less CAPEX

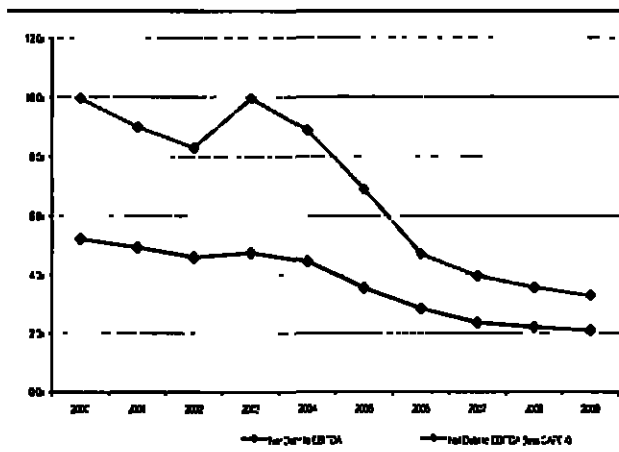


Chart 2: Net Debt to Total Cap & Net Debt to Enterprise Value

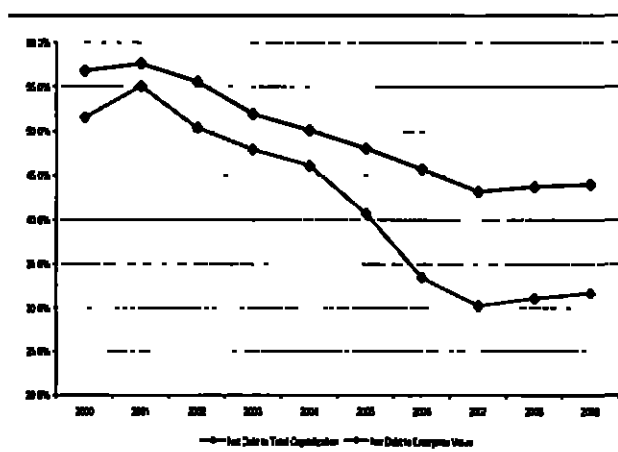


Chart 3: EBIT-to-Interest & EBITDA less CAPEX to Interest

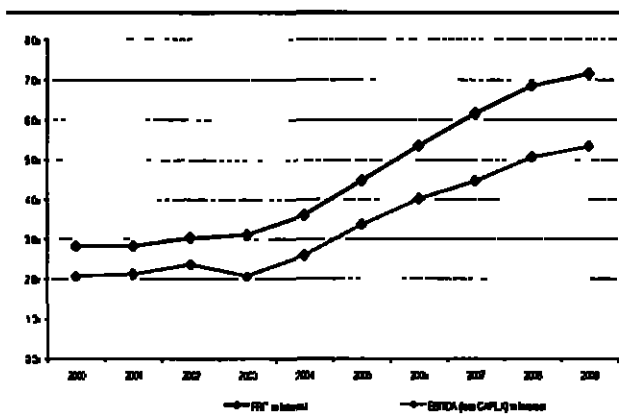
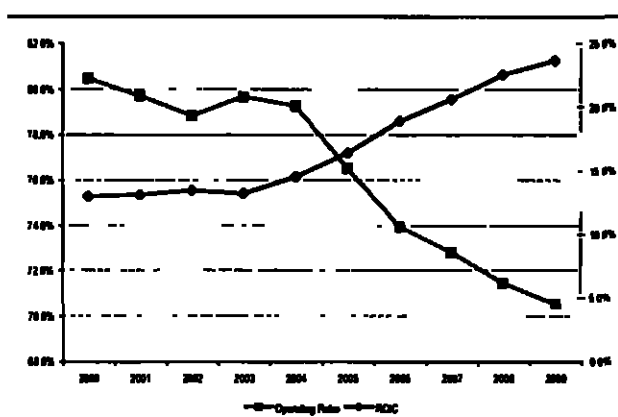


Chart 4: ROIC & Operating Ratio



Source: UBS estimates (all ratios are based on market weighted sector average)

Based on our forecasts through fiscal 2009, we are projecting further improvement in the debt coverage and financial leverage ratios for the Class 1 Rails. We project an average sector EBIT to Interest ratio of 7.2 times in 2009 up from 5.3 times at the end of 2006, an improvement of 36%. In our forecasts, we have assumed that free cash flow (after investments in efficiency and higher dividends) is used towards share buyback and dividend increases on a go forward basis and that the net debt (including operating leases) to capital remains relatively stable in the low 40% range. In the absence of further industry consolidation, we believe that the Class 1 Rails will continue to invest

in operational efficiency and utilize their cash resources to repurchase shares and increase their dividend payout ratios.

Table 6 below highlights the improving debt profile of the Class 1 Rails through our forecast period (Please see Appendix A for company specific ratios)

**Table 6: Market weighted average ratios, past and forecasted, for the Class 1 Rails**

| Market Weighted Average Ratios   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005  | 2006  | 2007  | 2008  | 2009  |
|----------------------------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| Retained Cash to Net Debt        | 23.3%  | 20.0%  | 20.1%  | 23.5%  | 26.4%  | 30.4% | 34.5% | 39.8% | 42.1% | 44.4% |
| Net Debt to EBITDA               | 5.2x   | 4.9x   | 4.6x   | 4.7x   | 4.5x   | 3.6x  | 2.8x  | 2.4x  | 2.2x  | 2.1x  |
| Net Debt to EBITDA (less CAPEX)  | 10.0x  | 9.0x   | 8.3x   | 10.0x  | 8.9x   | 6.9x  | 4.7x  | 4.0x  | 3.6x  | 3.3x  |
| EBIT to Interest                 | 2.8x   | 2.8x   | 3.0x   | 3.1x   | 3.6x   | 4.5x  | 5.3x  | 6.2x  | 6.9x  | 7.2x  |
| EBITDA to Interest               | 4.1x   | 4.1x   | 4.4x   | 4.5x   | 5.2x   | 6.1x  | 7.0x  | 8.1x  | 8.8x  | 9.2x  |
| EBITDA (less CAPEX) to Interest  | 2.1x   | 2.1x   | 2.4x   | 2.1x   | 2.6x   | 3.4x  | 4.0x  | 4.5x  | 5.1x  | 5.3x  |
| Operating Ratio                  | 80.5%  | 79.7%  | 78.9%  | 79.6%  | 79.2%  | 76.5% | 73.9% | 72.6% | 71.2% | 70.2% |
| Net Debt to BV of Equity         | 135.8% | 138.1% | 128.2% | 112.1% | 103.3% | 97.1% | 86.8% | 79.2% | 80.3% | 80.6% |
| Net Debt to Market Cap           | 104.0% | 114.2% | 96.7%  | 80.1%  | 63.6%  | 67.2% | 48.6% | 42.9% | 44.5% | 45.8% |
| Net Debt to Total Capitalization | 58.8%  | 57.6%  | 55.6%  | 52.0%  | 50.1%  | 48.0% | 45.8% | 42.9% | 43.4% | 43.7% |
| Net Debt to Enterprise Value     | 51.5%  | 55.1%  | 50.4%  | 47.9%  | 46.1%  | 40.7% | 33.5% | 30.2% | 31.0% | 31.6% |
| ROIC                             | 13.0%  | 13.2%  | 13.5%  | 13.2%  | 14.5%  | 16.4% | 18.9% | 20.6% | 22.4% | 23.5% |

Source: Company reports and UBS

## Structurally Improved Fundamentals Support Additional leverage

The reasons for the above outlined improvements in the debt coverage and financial leverage ratios are twofold

- **Cyclical** – Since the start of the current economic cycle in late 2001, the railroads have benefited from improved pricing, growing volumes and increased operational efficiency. This was possible due to numerous co-production agreements amongst the Class 1 Rails as well as new investments in productivity. Further, truck driver shortages coupled with rising fuel prices have translated into the Rails having an improved economic advantage over trucks.
- **Structural** – Following decades of price declines, loss of market share to highways, and loss of efficiency due to complex mergers, the railroads have entered this decade with a much better balance between demand and supply which has returned pricing power to them. Supply is expected to remain constrained by what we view to be weak returns on replacement costs and strong barriers to entry. It is this fundamental shift in pricing power that has provided the railroads with additional financial leverage capacity.

Given the strength of the rails' business models (i.e. low cost providers of transportation services in the supply chain, high barriers to entry, low substitution risk and pricing power), and their improved financial profile, we believe that there is an opportunity for significant value creation for equity holders through greater use of financial leverage.

We believe that there is an opportunity for significant value creation for equity holders through greater use of financial leverage.

We calculated and analyzed the key ratios that are used by the bond agency, Moody's, in assessing credit ratings (see Table 7). The results underscore the healthy, albeit underleveraged debt profiles of all of the Class 1 Rail suggesting significantly more debt can be assumed without compromising their investment grade status.

**Table 7: Core Debt Ratios; debt ratings and corresponding Moody's criteria**

| Canadian National Railway<br>Moody's Rating - A3 | Historical<br>Average | Forecasted<br>Average | Moody's                    |
|--------------------------------------------------|-----------------------|-----------------------|----------------------------|
| EBIT to Interest                                 | 5.7x                  | 10.0x                 | 5.2x                       |
| Net Debt to EBITDA                               | 2.6x                  | 1.5x                  | 3.0x                       |
| Retained Cash Flow-to-Debt                       | 35.1%                 | 55.0%                 | 25.0%                      |
| Net Debt to Total Capital (Book Value)           | 47.5%                 | 37.6%                 | ~40%-45%                   |
| Operating Ratio                                  | 67.1%                 | 60.2%                 | Below 80%                  |
| Canadian Pacific Railway                         |                       |                       |                            |
| Moody's Rating - Baa2                            |                       |                       |                            |
| EBIT to Interest                                 | 3.7x                  | 5.6x                  | 3.5x                       |
| Net Debt to EBITDA                               | 3.7x                  | 2.7x                  | ~2.5-3.0x                  |
| Retained Cash Flow-to-Debt                       | 20.1%                 | 31.9%                 | 23%                        |
| Net Debt to Total Capital (Book Value)           | 54.7%                 | 50.0%                 | ~40%-45%                   |
| Operating Ratio                                  | 77.6%                 | 73.2%                 | Below 80%                  |
| Burlington Northern Santa Fe                     |                       |                       |                            |
| Moody's Rating - Baa1                            |                       |                       |                            |
| EBIT to Interest                                 | 3.9x                  | 6.1x                  | 5.0x or greater            |
| Net Debt to EBITDA                               | 3.3x                  | 2.1x                  | 2.5x                       |
| Retained Cash Flow-to-Debt                       | 54.4%                 | 54.1%                 | 25%                        |
| Net Debt to Total Capital (Book Value)           | 79.3%                 | 76.1%                 | ~40%-45%                   |
| Operating Ratio                                  | 28.2%                 | 39.8%                 | 70%-75%                    |
| CSX                                              |                       |                       |                            |
| Moody's Rating - Baa2                            |                       |                       |                            |
| EBIT to Interest                                 | 2.1x                  | 4.6x                  | 3.0x or greater            |
| Net Debt to EBITDA                               | 5.9x                  | 2.4x                  | Less than 3.0x             |
| Retained Cash Flow-to-Debt                       | 60.5%                 | 44.7%                 | 25%                        |
| Net Debt to Total Capital (Book Value)           | 85.6%                 | 77.4%                 | ~40%-45%                   |
| Operating Ratio                                  | 16.8%                 | 34.5%                 | Below 80%                  |
| Norfolk Southern                                 |                       |                       |                            |
| Moody's Rating - Baa1                            |                       |                       |                            |
| EBIT to Interest                                 | 2.6x                  | 5.9x                  | 5.0x or greater            |
| Net Debt to EBITDA                               | 4.5x                  | 1.9x                  | Less than or equal to 3.0x |
| Retained Cash Flow-to-Debt                       | 52.1%                 | 40.4%                 | 25%                        |
| Net Debt to Total Capital (Book Value)           | 79.8%                 | 70.9%                 | ~40%-45%                   |
| Operating Ratio                                  | 20.0%                 | 39.1%                 | 70%-75%                    |
| Union Pacific                                    |                       |                       |                            |
| Moody's Rating - Baa2                            |                       |                       |                            |
| EBIT to Interest                                 | 2.7x                  | 5.4x                  | 4.0x                       |
| Net Debt to EBITDA                               | 3.9x                  | 2.1x                  | Less than 3.0x             |
| Retained Cash Flow-to-Debt                       | 51.7%                 | 38.2%                 | 20%                        |
| Net Debt to Total Capital (Book Value)           | 83.5%                 | 77.3%                 | ~40%-45%                   |
| Operating Ratio                                  | 24.1%                 | 38.1%                 | Below 80%                  |

Based on the trends shown, it is not surprising that all the Class 1 railroads have investment grade ratings; their Moody's ratings range from Baa2 to A3.

Source: UBS, Company reports, Moody's Investor Services

We believe that there are opportunity costs associated with underleveraged balance sheets. Essentially, the Class 1 Rails are forfeiting the opportunity to take advantage of their spare debt capacity and the resulting debt tax shield.

Further, we believe a comprehensive understanding of the potential spare debt capacity, the associated savings, and value creation possibilities of the Class 1 Rails could potentially translate into improved valuation.

In the ensuing discussion we will use a statistical model to demonstrate the significant potential spare debt capacity available to each Class 1 Rail. We quantify the value creation through increased spare debt capacity for each firm.

## Determining Spare Debt Capacity: A Statistical Model

Using a statistical model we attempt to quantify how much debt each Class 1 railroad could assume without compromising its investment grade rating in our view.

For the purposes of our analysis, we have assumed that the optimal debt level for a company is a function of the company's

**Optimal debt level is a function of operating risk and acceptable probability of default**

- **Operating risks** – This is characterized by any event that could change the enterprise value of a company. Since equity volatility is affected by business and financial risk, it tends to be greater than enterprise value volatility and therefore not a good proxy to operating risks born by a company. Also, debt capacity is a function only of asset volatility. Hence, we believe a better proxy for operating risk is asset or enterprise value volatility as it represents the volatility associated purely with the operating uncertainties of an entity, and unrelated to debt. Essentially it is the un-levered operating risk of an entity.
- **Acceptable probability of default** - The acceptable (or optimum) probability of default is largely a function of stakeholder relationships. That is, stakeholders (such as investors or/and customers) that are invested in an entity for the purposes of stability will be less willing to do business with financially unstable companies and are not likely to tolerate high default probabilities.

In order to determine the maximum level of debt a company can raise, for a given probability of default and asset volatility, we have used a statistical model based upon a normal distribution. This model is based on the following parameters:

**Statistical model assumptions: (1) Mean = EV of the firm; (2) Standard deviation = Asset Volatility; (3) Probability = Acceptable probability of default**

- **Mean = Enterprise Value of the firm:** A normal distribution assumes that there is an equal chance of a change in a company's value to the upside as to the downside, with a diminishing probability of larger moves occurring in either direction. Therefore, this model assumes that the company's current EV is the best possible estimate of its fair value. As such, the model places the company's current EV at the apex of the normal curve.
- **Standard Deviation = Asset Volatility:** The change in the company's current enterprise value due to changes in operating risk is represented by asset volatility. We estimate the operating risk as the de-levered five year share price volatility (STD). The formula to de-lever equity volatility is shown below and assumes constant debt values:

$$\text{Asset Volatility} = \text{Equity Volatility} / (1 + (1 - t) * (\text{Net-Debt} / \text{Market Cap}))$$

Hence, the asset volatility represents the standard deviation to be used in our statistical model.

- Probability = Acceptable probability of Default: In light of the reasoning provided earlier, and for the purposes of conservatism, we have assumed a very low acceptable probability of default of 0.01% in our model.

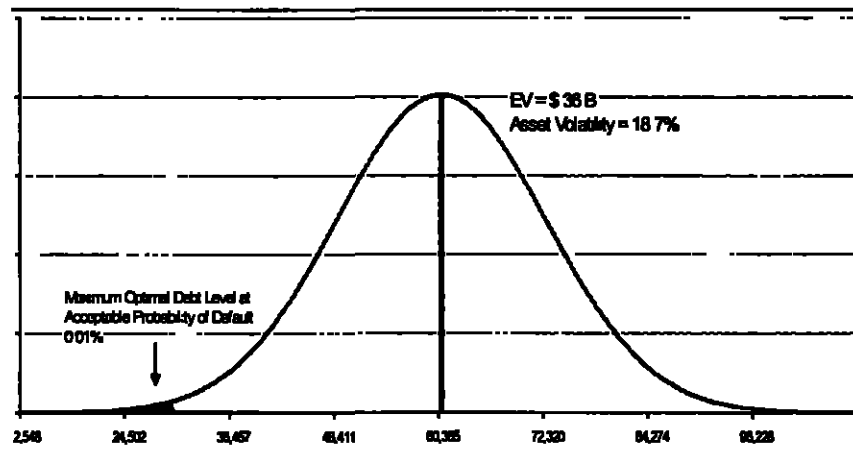
While a normal distribution is usually used to find the probability of an event occurring, we have already stipulated the risk of default that we are willing to accept. Therefore, essentially our model solves backwards for a maximum optimal debt level, at a given probability of default.

The value enhancement opportunities of greater debt usage have been quantified in the form of the increased debt tax shield yielded through increased spare debt capacity, in proportion to market capitalization:

- Value Creation from Additional Debt = Effective Tax Rate \* Spare Debt Capacity / Market Capitalization

Chart 5 below provides an illustration of the normal model we have used in the context of Union Pacific.

Chart 5: Normal Distribution – Union Pacific



Source: UBS

(For greater background on the model outlined above, please refer to the UBS Investment Research note, “Q-Series: Can Debt be an Asset?” by David Bianco and Priya Hariani published 12 December 2006.)

## The Results Are In...

The results are outlined in tables 9 to 12. As shown in table 9, Canadian National has the greatest net spare debt capacity relative to its enterprise value at 23.6%. Union Pacific follows closely in 2<sup>nd</sup> place with 19.2% net spare debt capacity to enterprise value. We estimate that Canadian National and Union Pacific offer the highest upside (9.7% and 9.4% respectively) to their current market capitalization as a result of higher usage of debt.

On the other hand, our model indicates that Norfolk Southern is over-levered and should actually reduce its level of debt while CSX has the lowest spare debt capacity after Norfolk Southern. We would caution that these results are

The value enhancement opportunities of higher leverage is quantified by increase in the debt tax shield

Canadian National has the greatest net spare debt capacity relative to its enterprise value at 24% followed by Union Pacific

specific to Norfolk and CSX due to their higher than average share price volatility (Essentially these are outliers in the group). We note that share price volatility for Norfolk Southern and CSX has decreased in recent years and the high volatility earlier in the decade may be attributed to the operational problems exhibited following the mergers of the late 1990s

To take this into account, we also ran the model under the assumption that the share price volatility across the group would be similar going forward. The results are shown in Tables 11 and 12 (Scenario 2).

By using the average share price volatility, the asset volatility spread amongst the Class 1 railroads is reduced. Therefore, the spread in the value created by the increased debt tax shields is also reduced. In this scenario, Canadian National and Norfolk Southern occupy the top spots with 6.1% and 5.4% of value created as a percentage of market capitalization. Union Pacific closely follows with 5.3%, Burlington Northern with 5.1%, CSX with 4.9%, and Canadian Pacific with 4.8%.

In both scenarios, Canadian National has the greatest spare debt capacity in proportion to its enterprise value. This should not come as a surprise given that Canadian National's current net debt to EV is the lowest amongst the group at 17.1% (helped by its strong cash flow generation capability). Canadian National also consistently ranks first in terms of its ability to create value from spare debt capacity.

CSX and Canadian Pacific have the lowest spare debt capacity (relative to the other Class 1 Rails) reflecting their higher than average leverage in the group. They, therefore, offer modestly less upside in terms of value creation from increased financial leverage.

Ultimately, in Scenario 2 the model indicates that at current levels of financial leverage, all the Class 1 Rails have the potential to create value through higher level of debt utilization without substantial addition of risk. As shown in Table 8, the risk profile of the railroads remains moderate in Scenario 2 even after incorporating the additional debt issued consistent with the results generated by our model. In the next section, we explore a potential tactical use of spare debt capacity to the benefit of equity holders.

We run the model using average share price volatility to neutralize higher than average share price volatility exhibited by NSC and CSX.

In Scenario 2 the model indicates all the Class 1 railroads have the potential to create value through higher leverage without substantial addition of risk.

**Table 8: Key debt ratios after utilizing all spare debt capacity**

| Company                      | Max Debt/EV | EBIT/Interest (Max Debt) | Max. Debt/EBITDA | Max Net Debt/Total Capital |
|------------------------------|-------------|--------------------------|------------------|----------------------------|
| Canadian National            | 32.0%       | 6.9x                     | 2.8x             | 66.8%                      |
| Canadian Pacific             | 39.1%       | 4.8x                     | 3.6x             | 64.1%                      |
| Burlington Northern Santa Fe | 37.7%       | 4.9x                     | 3.2x             | 76.3%                      |
| CSX                          | 38.6%       | 4.3x                     | 3.4x             | 60.2%                      |
| Norfolk Southern             | 36.3%       | 5.6x                     | 2.9x             | 61.3%                      |
| Union Pacific                | 37.0%       | 4.0x                     | 3.2x             | 54.4%                      |

Source: UBS estimates

Table 9: Scenario 1 – Maximum debt levels for the Class 1 Rails

| Company                      | Market Capitalization | Current Net Debt | Enterprise Value | Current Net Debt/ EV | Asset Volatility (% EV) | Effective Tax Rate | Acceptable Probability of Default | Maximum Debt Level (\$m) | Max Debt/ EV (x) | Net Spare Debt Capacity (% EV) | Net Spare Debt/ Share | Value from Spare Debt Capacity (% of Mkt Cap) |
|------------------------------|-----------------------|------------------|------------------|----------------------|-------------------------|--------------------|-----------------------------------|--------------------------|------------------|--------------------------------|-----------------------|-----------------------------------------------|
| Canadian National            | 28,499.69             | 5,887.69         | 134,387.38       | 17.1%                | 15.83%                  | 34%                | 0.01%                             | 14,018.24                | 40.8%            | 23.6%                          | \$15.23               | 9.7%                                          |
| Canadian Pacific             | 11,103.59             | 4,537.69         | 15,641.27        | 29.0%                | 15.22%                  | 34%                | 0.01%                             | 6,785.49                 | 43.4%            | 14.4%                          | \$14.11               | 6.9%                                          |
| Burlington Northern Santa Fe | 30,829.03             | 11,820.71        | 42,449.76        | 27.4%                | 16.74%                  | 38%                | 0.01%                             | 10,029.04                | 37.6%            | 10.4%                          | \$11.92               | 5.1%                                          |
| CSX                          | 18,959.50             | 7,677.22         | 26,636.72        | 28.8%                | 18.29%                  | 36%                | 0.01%                             | 8,515.79                 | 32.0%            | 3.1%                           | \$1.80                | 1.6%                                          |
| Norfolk Southern             | 20,810.86             | 6,969.68         | 27,780.54        | 25.1%                | 20.98%                  | 35%                | 0.01%                             | 8,103.85                 | 22.0%            | 3.1%                           | \$2.09                | 1.5%                                          |
| Union Pacific                | 30,434.17             | 10,790.51        | 41,224.69        | 26.2%                | 14.68%                  | 36%                | 0.01%                             | 16,719.16                | 45.4%            | 19.2%                          | \$28.15               | 9.4%                                          |

Source: Company reports and UBS estimates

Table 10: Scenario 1 – Debt ratios, before and after onboarding maximum debt

| Company                      | EBIT/ Interest (Current Debt) | EBIT/ Interest (Max Debt) | EBITDA (less CAPEX/ Interest (Current)) | EBITDA (less CAPEX/ Interest (Max)) | Current Debt/ EBITDA | Max Debt/ EBITDA | Current Debt/ EBITDA less CAPEX | Max Debt/ EBITDA less CAPEX | Current Debt/ BV | Max Debt/ BV | Current Net Debt/ Total Capital | Max Net Debt/ Total Capital |
|------------------------------|-------------------------------|---------------------------|-----------------------------------------|-------------------------------------|----------------------|------------------|---------------------------------|-----------------------------|------------------|--------------|---------------------------------|-----------------------------|
| Canadian National            | 5.5x                          | 4.3x                      | 3.7x                                    | 2.9x                                | 2.7x                 | 4.0x             | 2.5x                            | 6.0x                        | 20.7%            | 32.6%        | 27.35.8%                        | 85.2%                       |
| Canadian Pacific             | 5.5x                          | 4.3x                      | 3.7x                                    | 2.9x                                | 2.7x                 | 4.0x             | 5.4x                            | 8.1x                        | 40.9%            | 135.5%       | 47.5%                           | 71.1%                       |
| Burlington Northern Santa Fe | 5.5x                          | 4.3x                      | 4.0x                                    | 3.5x                                | 2.3x                 | 3.2x             | 4.3x                            | 6.0x                        | 37.7%            | 171.1%       | 55.4%                           | 76.4%                       |
| CSX                          | 4.3x                          | 5.2x                      | 3.2x                                    | 3.9x                                | 2.6x                 | 2.9x             | 4.8x                            | 5.4x                        | 40.5%            | 90.6%        | 45.0%                           | 49.9%                       |
| Norfolk Southern             | 5.4x                          | 9.3x                      | 2.45x                                   | 1.77x                               | 2.0x                 | 1.8x             | 3.0x                            | 2.7x                        | 33.5%            | 63.2%        | 41.4%                           | 37.1%                       |
| Union Pacific                | 4.7x                          | 3.2x                      | 2.8x                                    | 2.3x                                | 2.3x                 | 3.8x             | 5.3x                            | 9.1x                        | 35.5%            | 108.6%       | 38.5%                           | 66.8%                       |

Source: Company reports and UBS estimates

\*Current = Under current net debt scenario

\*\*Max = Under maximum debt scenario

Table 11: Scenario 2 – Maximum debt for the Class 1 Ralls assuming uniform (average) share price volatility

| Company                      | Market Capitalization | Current Net Debt | Enterprise Value | Current Net Debt/ EV | Asset Volatility (% EV) | Effective Tax Rate | Acceptable Probability of Default | Maximum Debt Level (\$m) | Max Debt/ EV (x) | Net Spare Debt Capacity (% EV) | Net Spare Debt/ Share | Value from Spare Debt Capacity (% of Mkt Cap) |
|------------------------------|-----------------------|------------------|------------------|----------------------|-------------------------|--------------------|-----------------------------------|--------------------------|------------------|--------------------------------|-----------------------|-----------------------------------------------|
| Canadian National            | 28,489.69             | 5,887.69         | 34,367.38        | 17.1%                | 18.2%                   | 34%                | 0.01%                             | 10,992.92                | 32.0%            | 14.8%                          | \$9.56                | 6.1%                                          |
| Canadian Pacific             | 11,103.59             | 4,537.68         | 15,641.27        | 29.0%                | 16.37                   | 34%                | 0.01%                             | 6,117.94                 | 39.1%            | 10.1%                          | \$9.92                | 4.8%                                          |
| Burlington Northern Santa Fe | 30,829.05             | 11,620.71        | 42,449.76        | 27.4%                | 16.75                   | 36%                | 0.01%                             | 16,010.82                | 37.7%            | 10.3%                          | \$11.87               | 5.1%                                          |
| CSX                          | 18,959.50             | 7,677.22         | 26,636.72        | 28.8%                | 16.51                   | 36%                | 0.01%                             | 10,282.59                | 38.6%            | 9.8%                           | \$5.59                | 4.9%                                          |
| Norfolk Southern             | 20,810.86             | 8,969.67         | 27,780.54        | 25.1%                | 17.12                   | 38%                | 0.01%                             | 10,084.70                | 36.3%            | 11.2%                          | \$7.54                | 5.4%                                          |
| Union Pacific                | 30,434.17             | 10,790.51        | 41,224.69        | 26.2%                | 16.94                   | 36%                | 0.01%                             | 15,248.90                | 37.0%            | 10.8%                          | \$16.39               | 5.3%                                          |

Source: Company reports and UBS estimates

Table 12: Scenario 2 – Debt ratios, before and after onboarding maximum debt

| Company                      | EBIT/ Interest (Current) | EBIT/ Interest (Max Debt) | EBITDA (less CAPEX/ Interest) (Current) | EBITDA (less CAPEX/ Interest) (Max) | Current Debt/ EBITDA | Max Debt/ EBITDA | Current Debt/ EBITDA less CAPEX | Max Debt/ EBITDA less CAPEX | Current Debt/ BV Equity | Max Debt/ BV Equity | Current Net Debt/ Total Capital | Max Net Debt/ Total Capital |
|------------------------------|--------------------------|---------------------------|-----------------------------------------|-------------------------------------|----------------------|------------------|---------------------------------|-----------------------------|-------------------------|---------------------|---------------------------------|-----------------------------|
| Canadian National            | 9.1x                     | 8.9x                      | 6.7x                                    | 5.1x                                | 1.5x                 | 2.6x             | 2.5x                            | 4.7x                        | 20.7%                   | 104.0%              | 35.8%                           | 68.8%                       |
| Canadian Pacific             | 5.5x                     | 4.8x                      | 3.7x                                    | 3.3x                                | 2.7x                 | 3.6x             | 5.4x                            | 7.3x                        | 40.9%                   | 122.2%              | 47.5%                           | 64.1%                       |
| Burlington Northern Santa Fe | 5.8x                     | 4.9x                      | 4.0x                                    | 3.5x                                | 2.3x                 | 3.2x             | 4.3x                            | 6.0x                        | 37.7%                   | 170.9%              | 55.4%                           | 76.3%                       |
| CSX                          | 4.3x                     | 4.3x                      | 3.2x                                    | 3.2x                                | 2.6x                 | 3.4x             | 4.8x                            | 6.5x                        | 40.5%                   | 109.4%              | 45.0%                           | 80.2%                       |
| Norfolk Southern             | 5.4x                     | 5.8x                      | 4.5x                                    | 4.7x                                | 2.0x                 | 2.5x             | 3.0x                            | 4.5x                        | 33.5%                   | 104.6%              | 41.4%                           | 61.3%                       |
| Union Pacific                | 4.7x                     | 4.0x                      | 2.8x                                    | 2.8x                                | 2.3x                 | 3.2x             | 5.3x                            | 7.4x                        | 35.5%                   | 88.5%               | 38.5%                           | 54.4%                       |

Source: Company reports and UBS estimates

\*Current = Under current net debt scenario

\*\*Max = Under maximum debt scenario

## Working the Debt

Debt issuance could yield additional value for equity holders in light of what we view to be undervalued share prices of the Class 1 Rails. By repurchasing their undervalued equity, management can essentially substitute one source of capital (inexpensive equity) with another (debt), and thereby take advantage of inefficient market pricing.

By repurchasing shares, management can essentially substitute inexpensive equity with debt, and thereby take advantage of inefficient market pricing.

Expansion prospects (via acquisitions or organic growth) in large size appear to be absent. This leaves repurchasing undervalued shares as the most likely and logical opportunity for using untapped financial leverage. Table 13 below, shows that there is significant potential upside for most of the Class 1 Rails.

**Table 13: UBS Ratings and targets for the Class 1 Rails**

| Company                    | Rating    | Price Target | Current Market Price | Potential Upside |
|----------------------------|-----------|--------------|----------------------|------------------|
| Canadian National (C\$)    | Buy 2     | \$70.00      | \$55.82              | 25.8%            |
| Norfolk Southern (US\$)    | Buy 2     | \$65.00      | \$52.65              | 23.5%            |
| Union Pacific (US\$)       | Buy 2     | \$130.00     | \$112.22             | 15.8%            |
| Canadian Pacific (C\$)     | Buy 2     | \$81.00      | \$70.01              | 15.7%            |
| Burlington Northern (US\$) | Neutral 2 | \$94.00      | \$86.57              | 8.6%             |
| CSX (US\$)                 | Neutral 2 | \$44.00      | \$43.37              | 1.5%             |

Source: UBS

All of the Class 1 Rails mentioned in our research are engaged in share buyback programs as shown in Table 14 below. More recently, it seems the mindset of the Class 1 Rails are changing as they are moving towards incrementally larger share repurchase programs. While our forecast presumes that the trend will continue going forward, we argue that the railroads could engage in more aggressive share repurchase programs. Canadian National seems an obvious candidate for such a move.

**Table 14: Current share buyback programs**

| Company             | Share Buyback Program                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------|
| Canadian National   | 5% of shares outstanding (28m share repurchase program)                                                  |
| Canadian Pacific    | 10% of shares outstanding in 2008 (15.5m share repurchase program in 2007/2008)                          |
| Norfolk Southern    | 75m shares through the end of 2010, 27.4m of these 75m shares repurchased as of 3/31/07                  |
| CSX                 | US\$2B, completion of \$1B in 2007 and the remainder in 2008, \$130.5m of this repurchased as of 3/31/07 |
| Union Pacific Corp  | 20m shares through the end of 2009, 2m of these 20m shares repurchased as of 3/31/07                     |
| Burlington Northern | 210 shares with no expiration date, 170m of these 210m shares repurchased as of 3/31/07                  |

Source: Company reports

In the following analysis, we assume that all the Class 1 Rails utilize their entire spare debt capacity to repurchase shares in 2007 (for demonstration purposes). While this is not likely, it is possible for firms to embark on extraordinary share

buyback programs (i.e. greater than 5% of their float) provided that they have filed with the necessary exchange(s)

We used our models to find out the corresponding EPS figures for the following scenarios

- No share buybacks
- Share buybacks as per our current estimates (no use of spare debt capacity)
- Maximum share buybacks using all of the spare debt capacity

The results of the EPS accretion analysis are shown below and indicate that for all the Class 1 Rails, there is potential for significant EPS accretion analysis through greater utilization of spare debt capacity

**Table 15: Aggressive share buyback and EPS accretion analysis**

|                     | Spare Debt<br>Capacity<br>(SDC) | Potential<br>Share<br>Buyback<br>with SDC<br>(mm) | EPS: No<br>Share<br>Buyback (1) | Current EPS;<br>UBSe<br>(2) | Total Share<br>buyback<br>using SDC<br>(mlns) | % of float | EPS After<br>Increased<br>Share<br>Buyback<br>(Using SDC) | (1) Accretion<br>from:<br>No Share<br>Buyback | (2) Accretion<br>from:<br>UBSe |
|---------------------|---------------------------------|---------------------------------------------------|---------------------------------|-----------------------------|-----------------------------------------------|------------|-----------------------------------------------------------|-----------------------------------------------|--------------------------------|
| Canadian National   | 5,105.23                        | 92                                                | \$ 3.68                         | \$ 3.79                     | 116                                           | 22%        | \$ 4.23                                                   | 14.9%                                         | 11.7%                          |
| Canadian Pacific    | 1,580.25                        | 23                                                | \$ 4.29                         | \$ 4.56                     | 29                                            | 18%        | \$ 4.90                                                   | 14.2%                                         | 7.6%                           |
| Burlington Northern | 4,390.10                        | 51                                                | \$ 5.59                         | \$ 6.44                     | 62                                            | 17%        | \$ 6.15                                                   | 10.0%                                         | 13.1%                          |
| CSX                 | 2,605.38                        | 60                                                | \$ 2.36                         | \$ 2.41                     | 85                                            | 18%        | \$ 2.62                                                   | 11.0%                                         | 8.5%                           |
| Norfolk Southern    | 3,202.83                        | 61                                                | \$ 3.80                         | \$ 3.83                     | 71                                            | 17%        | \$ 4.25                                                   | 11.8%                                         | 10.8%                          |
| Union Pacific       | 4,458.39                        | 40                                                | \$ 7.03                         | \$ 6.90                     | 43                                            | 16%        | \$ 7.72                                                   | 9.8%                                          | 11.9%                          |

Source: UBS estimates

## Conclusion: Untapped Leverage Provides Upside

Our analysis shows that the Class 1 Rails could add value to their equity holders by exploiting their spare debt capacity. Table 16 provides a brief summary of the potential returns assuming maximum debt as determined in our statistical model

Table 16: Summary of results – Value from spare debt capacity (SDC)

| Company                 | Value of Debt Tax Shield from SDC | EPS Accretion using SDC for Share Buyback |
|-------------------------|-----------------------------------|-------------------------------------------|
| Canadian National       | 6.1%                              | 11.7%                                     |
| Norfolk Southern        | 5.5%                              | 10.8%                                     |
| Union Pacific           | 5.3%                              | 11.8%                                     |
| Burlington Northern     | 5.1%                              | 13.1%                                     |
| CSX                     | 4.9%                              | 8.5%                                      |
| Canadian Pacific        | 4.8%                              | 7.6%                                      |
| Market Weighted Average | 5.4%                              | 11.2%                                     |

Source: UBS estimates

The improved profitability outlook of the Class 1 Rails and improved free cash flow afford management the opportunity to create value for shareholders through share buyback programs, or to invest in operational efficiency, or most likely, both. These opportunities are not fully exploited in our view.

Given the history of the industry and mentality of the senior executives, we think the rails will lever up slowly and methodically over the next three years to perhaps mid-to-high 40% on a net-debt-to-capital basis. They will do this by raising dividends faster than earnings growth and buying back more stock than free cash flow growth would exclusively allow. Debt issuances will make up the difference.

Thinking longer term, we think things have irreversibly changed and the goal posts have shifted. In 3-5 years we think the new norm will be leverage ratios beginning to shift closer to where our model suggests (~60%) than where they are today.

# Appendix

## Key Ratios by Railroad (As per current UBS models)

Table 18: Canadian National

| Canadian National                       | 2000  | 2001   | 2002  | 2003  | 2004  | 2005  | 2006  | 2007E | 2008E | 2009E |
|-----------------------------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Retained Cash Flow/Net Debt             | 34.8% | 26.3%  | 24.0% | 34.8% | 34.4% | 45.7% | 45.4% | 50.1% | 55.5% | 59.2% |
| Net Debt to EBITDA                      | 2.7x  | 3.4x   | 3.1x  | 2.8x  | 2.5x  | 2.0x  | 1.9x  | 1.5x  | 1.5x  | 1.5x  |
| Net Debt to EBITDA (less CAPEX)         | 4.9x  | 5.7x   | 5.0x  | 5.0x  | 4.1x  | 3.1x  | 2.9x  | 2.5x  | 2.4x  | 2.3x  |
| EBIT to Interest (net)                  | 4.5x  | 4.5x   | 4.4x  | 4.8x  | 6.1x  | 7.3x  | 8.4x  | 9.1x  | 10.4x | 10.3x |
| EBITDA to Interest                      | 5.9x  | 5.9x   | 5.7x  | 6.3x  | 7.8x  | 9.1x  | 10.1x | 11.3x | 12.7x | 12.6x |
| EBITDA (less CAPEX) to Interest         | 3.3x  | 3.5x   | 3.5x  | 3.5x  | 4.8x  | 5.8x  | 6.6x  | 6.7x  | 7.9x  | 7.9x  |
| Operating Ratio                         | 69.6% | 68.5%  | 69.4% | 69.8% | 66.9% | 63.8% | 61.8% | 61.7% | 59.9% | 59.1% |
| Net debt to Book Value of Equity        | 90.4% | 104.0% | 89.8% | 78.2% | 73.9% | 69.4% | 70.5% | 55.7% | 60.7% | 64.2% |
| Net debt to Market Capitalization       | 70.6% | 78.2%  | 56.9% | 47.2% | 45.7% | 34.1% | 29.4% | 20.7% | 22.7% | 24.0% |
| Net debt to Book Value of Total Capital | 47.5% | 51.0%  | 47.3% | 43.2% | 42.5% | 41.0% | 41.3% | 35.8% | 37.8% | 39.1% |
| Net debt to EV                          | 41.4% | 43.9%  | 36.3% | 32.1% | 31.4% | 25.4% | 22.7% | 17.1% | 18.5% | 19.3% |
| ROIC % (pre-tax)                        | 15.20 | 14.30  | 13.50 | 13.20 | 15.90 | 18.40 | 20.50 | 20.90 | 22.80 | 24.10 |
| ROE %                                   | 13.41 | 16.13  | 15.15 | 12.08 | 14.20 | 16.79 | 18.98 | 18.76 | 20.65 | 22.34 |

Source: Company reports and UBS estimates

Table 19: Canadian Pacific

| Canadian Pacific                        | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006  | 2007E | 2008E  | 2009E  |
|-----------------------------------------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|
| Retained Cash Flow/Net Debt             | 25.7%  | 18.9%  | 17.9%  | 8.8%   | 19.0%  | 23.6%  | 26.9% | 33.8% | 31.6%  | 30.3%  |
| Net Debt to EBITDA                      | 2.7x   | 3.9x   | 4.2x   | 4.6x   | 4.0x   | 3.5x   | 2.8x  | 2.7x  | 2.7x   | 2.6x   |
| Net Debt to EBITDA (less CAPEX)         | 5.3x   | 7.5x   | 7.8x   | 12.5x  | 9.1x   | 9.1x   | 5.7x  | 5.4x  | 5.0x   | 4.8x   |
| EBIT to Interest                        | 4.3x   | 3.5x   | 3.1x   | 2.9x   | 3.2x   | 4.2x   | 4.8x  | 5.5x  | 5.7x   | 5.8x   |
| EBITDA to Interest                      | 5.9x   | 4.9x   | 4.4x   | 4.5x   | 4.8x   | 6.0x   | 6.8x  | 7.6x  | 7.8x   | 7.9x   |
| EBITDA (less CAPEX) to Interest         | 2.9x   | 2.6x   | 2.4x   | 1.7x   | 2.1x   | 2.3x   | 3.4x  | 3.7x  | 4.2x   | 4.3x   |
| Operating Ratio                         | 76.9%  | 77.3%  | 76.6%  | 79.8%  | 79.8%  | 77.2%  | 75.4% | 74.4% | 73.1%  | 72.3%  |
| Net debt to Book Value of Equity        | 89.7%  | 155.8% | 150.1% | 141.6% | 119.0% | 116.0% | 93.2% | 90.6% | 103.2% | 106.8% |
| Net debt to Market Capitalization       | 103.0% | 103.0% | 101.7% | 100.2% | 90.0%  | 81.5%  | 55.9% | 56.1% | 61.8%  | 65.5%  |
| Net debt to Book Value of Total Capital | 47.3%  | 60.9%  | 60.0%  | 58.6%  | 54.3%  | 53.7%  | 48.2% | 47.5% | 50.8%  | 51.7%  |
| Net debt to EV                          | 40.7%  | 50.7%  | 50.4%  | 50.1%  | 47.4%  | 44.9%  | 35.9% | 35.9% | 38.2%  | 39.6%  |
| ROIC % (pre-tax)                        | 17.98  | 15.56  | 14.83  | 12.65  | 13.41  | 16.80  | 18.00 | 18.81 | 20.08  | 20.86  |
| ROE %                                   | 12.48  | 11.87  | 12.81  | 9.52   | 9.42   | 12.22  | 13.39 | 14.36 | 15.50  | 16.88  |

Source: Company reports and UBS estimates

Table 20: Burlington Northern Santa Fe

| Burlington Northern                     | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007E  | 2008E  | 2009E  |
|-----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Retained Cash Flow/Net Debt             | 28.8%  | 27.1%  | 24.8%  | 26.8%  | 29.0%  | 28.3%  | 32.6%  | 37.6%  | 39.8%  | 42.2%  |
| Net Debt to EBITDA                      | 3.1x   | 3.6x   | 4.0x   | 4.0x   | 3.1x   | 2.8x   | 2.5x   | 2.3x   | 2.1x   | 1.9x   |
| Net Debt to EBITDA (less CAPEX)         | 5.8x   | 7.8x   | 8.4x   | 12.1x  | 6.4x   | 4.8x   | 4.4x   | 4.3x   | 3.9x   | 3.5x   |
| EBIT to Interest (net)                  | 3.7x   | 3.1x   | 3.0x   | 3.0x   | 3.9x   | 5.0x   | 5.2x   | 5.6x   | 6.1x   | 6.6x   |
| EBITDA to Interest                      | 5.3x   | 4.6x   | 4.7x   | 4.7x   | 5.8x   | 6.9x   | 6.9x   | 7.5x   | 8.1x   | 8.6x   |
| EBITDA (less CAPEX) to Interest         | 2.8x   | 2.1x   | 2.2x   | 1.5x   | 2.8x   | 3.9x   | 3.9x   | 4.0x   | 4.4x   | 4.8x   |
| Operating Ratio                         | 76.9%  | 80.4%  | 81.6%  | 82.3%  | 80.3%  | 77.0%  | 76.7%  | 76.7%  | 76.1%  | 75.6%  |
| Net debt to Book Value of Equity        | 126.9% | 124.3% | 129.8% | 120.8% | 106.4% | 118.1% | 110.5% | 124.0% | 117.5% | 112.6% |
| Net debt to Market Capitalization       | 83.7%  | 95.6%  | 96.3%  | 99.7%  | 83.4%  | 67.2%  | 49.7%  | 49.6%  | 49.6%  | 49.5%  |
| Net debt to Book Value of Total Capital | 55.9%  | 55.4%  | 56.5%  | 54.7%  | 51.5%  | 54.1%  | 52.5%  | 55.4%  | 54.0%  | 53.0%  |
| Net debt to EV                          | 45.6%  | 48.9%  | 49.1%  | 49.9%  | 45.5%  | 40.2%  | 33.2%  | 33.2%  | 33.1%  | 33.1%  |
| ROIC % (pre-tax)                        | 16.20  | 13.41  | 12.11  | 11.93  | 15.28  | 20.84  | 22.88  | 24.59  | 28.36  | 30.67  |
| ROE %                                   | 13.02  | 10.63  | 9.63   | 9.32   | 12.12  | 16.75  | 18.55  | 19.70  | 22.90  | 24.29  |

Source: Company reports and UBS estimates

Table 21: CSX Corp

| CSX                                     | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007E | 2008E | 2009E |
|-----------------------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Retained Cash Flow/Net Debt             | 13.0%  | 13.4%  | 15.2%  | 12.1%  | 18.5%  | 17.1%  | 28.2%  | 33.1% | 34.2% | 36.2% |
| Net Debt to EBITDA                      | 8.0x   | 6.7x   | 6.5x   | 7.0x   | 5.9x   | 4.1x   | 3.2x   | 2.6x  | 2.4x  | 2.2x  |
| Net Debt to EBITDA (less CAPEX)         | 23.6x  | 15.7x  | 16.8x  | 20.7x  | 13.5x  | 7.9x   | 7.7x   | 4.8x  | 4.3x  | 3.8x  |
| EBIT to Interest (net)                  | 1.1x   | 1.5x   | 1.8x   | 1.7x   | 1.9x   | 2.7x   | 3.7x   | 4.3x  | 4.5x  | 4.9x  |
| EBITDA to Interest                      | 1.9x   | 2.4x   | 2.9x   | 2.8x   | 3.1x   | 4.1x   | 5.3x   | 6.1x  | 6.3x  | 6.7x  |
| EBITDA (less CAPEX) to Interest         | 0.6x   | 1.0x   | 1.1x   | 0.9x   | 1.4x   | 2.1x   | 2.2x   | 3.2x  | 3.5x  | 3.8x  |
| Operating Ratio                         | 90.2%  | 87.5%  | 86.3%  | 87.5%  | 86.4%  | 82.2%  | 79.4%  | 79.0% | 77.2% | 75.9% |
| Net debt to Book Value of Equity        | 183.7% | 178.0% | 181.9% | 174.8% | 159.3% | 120.1% | 101.9% | 81.7% | 81.7% | 79.7% |
| Net debt to Market Capitalization       | 157.8% | 177.3% | 158.0% | 164.0% | 158.3% | 115.6% | 77.2%  | 65.0% | 67.4% | 68.9% |
| Net debt to Book Value of Total Capital | 64.8%  | 64.0%  | 64.5%  | 63.6%  | 61.4%  | 54.6%  | 50.5%  | 45.0% | 45.0% | 44.3% |
| Net debt to EV                          | 61.2%  | 63.9%  | 61.2%  | 62.1%  | 61.3%  | 53.6%  | 43.6%  | 39.4% | 40.3% | 40.8% |
| ROIC % (pre-tax)                        | 11.87  | 13.92  | 14.35  | 12.05  | 10.81  | 12.33  | 15.43  | 15.61 | 17.13 | 18.39 |
| ROE %                                   | 3.35   | 5.46   | 7.45   | 6.49   | 7.03   | 10.33  | 12.18  | 11.95 | 13.25 | 14.46 |

Source: Company reports and UBS estimates

Table 22: Norfolk Southern

| Norfolk Southern                        | 2000   | 2001   | 2002   | 2003   | 2004   | 2005  | 2006  | 2007E | 2008E | 2009E |
|-----------------------------------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| Retained Cash Flow/Net Debt             | 17.4%  | 9.9%   | 11.4%  | 15.0%  | 23.0%  | 30.7% | 32.2% | 38.7% | 38.1% | 39.4% |
| Net Debt to EBITDA                      | 6.9x   | 5.7x   | 5.2x   | 4.9x   | 3.5x   | 2.7x  | 2.3x  | 2.0x  | 1.9x  | 1.8x  |
| Net Debt to EBITDA (less CAPEX)         | 12.7x  | 9.3x   | 8.6x   | 7.9x   | 6.1x   | 4.0x  | 3.5x  | 3.0x  | 2.9x  | 2.8x  |
| EBIT to Interest (net)                  | 1.3x   | 1.7x   | 2.0x   | 2.1x   | 3.1x   | 3.7x  | 4.6x  | 5.4x  | 5.9x  | 6.4x  |
| EBITDA to Interest                      | 2.1x   | 2.5x   | 2.9x   | 3.1x   | 4.2x   | 5.1x  | 6.0x  | 7.0x  | 7.5x  | 8.0x  |
| EBITDA (less CAPEX) to Interest         | 1.2x   | 1.5x   | 1.8x   | 1.9x   | 2.4x   | 3.4x  | 4.0x  | 4.5x  | 4.8x  | 5.2x  |
| Operating Ratio                         | 88.9%  | 83.7%  | 81.5%  | 81.9%  | 78.7%  | 75.2% | 72.8% | 72.0% | 70.9% | 69.8% |
| Net debt to Book Value of Equity        | 154.6% | 142.1% | 134.9% | 118.7% | 102.0% | 83.2% | 80.2% | 70.4% | 73.7% | 78.2% |
| Net debt to Market Capitalization       | 107.3% | 130.6% | 113.7% | 102.8% | 87.9%  | 60.4% | 44.3% | 39.0% | 40.5% | 41.7% |
| Net debt to Book Value of Total Capital | 60.7%  | 58.7%  | 57.4%  | 54.3%  | 49.9%  | 40.8% | 42.6% | 39.4% | 40.5% | 41.3% |
| Net debt to EV                          | 51.8%  | 56.6%  | 53.2%  | 50.7%  | 46.8%  | 37.7% | 30.7% | 28.1% | 28.8% | 29.4% |
| ROIC % (pre-tax)                        | 10.55  | 13.74  | 15.58  | 15.52  | 15.67  | 14.35 | 17.62 | 19.47 | 21.61 | 23.45 |
| ROE %                                   | 3.61   | 5.88   | 7.30   | 7.85   | 11.82  | 13.76 | 15.87 | 15.82 | 17.33 | 19.23 |

Source: Company reports and UBS estimates

Table 23: Union Pacific

| Union Pacific                           | 2000   | 2001   | 2002   | 2003  | 2004  | 2005  | 2006  | 2007E | 2008E | 2009E |
|-----------------------------------------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Retained Cash Flow/Net Debt             | 18.7%  | 18.5%  | 20.8%  | 25.7% | 24.5% | 28.1% | 32.7% | 35.4% | 38.4% | 40.4% |
| Net Debt to EBITDA                      | 4.3x   | 4.3x   | 3.8x   | 3.7x  | 4.5x  | 4.0x  | 2.7x  | 2.3x  | 2.0x  | 1.9x  |
| Net Debt to EBITDA (less CAPEX)         | 9.8x   | 9.3x   | 7.3x   | 8.2x  | 15.3x | 14.8x | 6.1x  | 5.3x  | 4.4x  | 3.9x  |
| EBIT to Interest (net)                  | 2.3x   | 2.4x   | 2.9x   | 2.9x  | 2.2x  | 2.5x  | 3.8x  | 4.7x  | 5.4x  | 6.0x  |
| EBITDA to Interest                      | 3.6x   | 3.8x   | 4.4x   | 4.3x  | 3.8x  | 4.1x  | 5.5x  | 6.5x  | 7.3x  | 7.9x  |
| EBITDA (less CAPEX) to Interest         | 1.6x   | 1.7x   | 2.3x   | 2.0x  | 1.1x  | 1.1x  | 2.5x  | 2.8x  | 3.4x  | 3.8x  |
| Operating Ratio                         | 83.0%  | 82.7%  | 81.4%  | 81.5% | 87.4% | 86.8% | 81.6% | 79.0% | 77.1% | 75.7% |
| Net debt to Book Value of Equity        | 155.6% | 146.0% | 125.5% | 95.6% | 93.9% | 86.4% | 73.4% | 62.6% | 61.4% | 61.1% |
| Net debt to Market Capitalization       | 115.6% | 117.7% | 93.3%  | 77.5% | 76.1% | 70.1% | 53.4% | 51.3% | 52.2% | 53.8% |
| Net debt to Book Value of Total Capital | 60.9%  | 59.3%  | 55.7%  | 48.9% | 48.4% | 46.4% | 42.3% | 38.5% | 38.1% | 37.9% |
| Net debt to EV                          | 83.0%  | 65.5%  | 57.7%  | 52.0% | 52.2% | 50.3% | 41.8% | 39.1% | 39.5% | 40.3% |
| ROIC % (pre-tax)                        | 11.57  | 11.54  | 12.55  | 11.26 | 8.09  | 9.30  | 14.33 | 15.83 | 17.28 | 18.74 |
| ROE %                                   | 10.87  | 10.59  | 11.20  | 9.18  | 6.06  | 6.89  | 10.97 | 11.52 | 12.74 | 13.96 |

Source: Company reports and UBS estimates

■ **Statement of Risk**

Risks to all railroad stocks mentioned in this report include economic (volume), financial (debt), event (M&A), and the impact of volatile fuel prices. There is also the risk of multiple compression as investors move away from the group at different stages of the business cycle.

■ **Analyst Certification**

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

## Required Disclosures

This report has been prepared by UBS Securities Canada Inc, an affiliate of UBS AG (UBS)

For information on the ways in which UBS manages conflicts and maintains independence of its research product, historical performance information, and certain additional disclosures concerning UBS research recommendations, please visit [www.ubs.com/disclosures](http://www.ubs.com/disclosures)

### UBS Investment Research: Global Equity Ratings Definitions and Allocations

| UBS rating       | Definition                                                            | UBS rating       | Definition                                                           | Rating category     | Coverage <sup>1</sup> | IB services <sup>2</sup> |
|------------------|-----------------------------------------------------------------------|------------------|----------------------------------------------------------------------|---------------------|-----------------------|--------------------------|
| <b>Buy 1</b>     | FSR is > 6% above the MRA, higher degree of predictability            | <b>Buy 2</b>     | FSR is > 6% above the MRA, lower degree of predictability            | <b>Buy</b>          | 47%                   | 37%                      |
| <b>Neutral 1</b> | FSR is between -6% and 6% of the MRA, higher degree of predictability | <b>Neutral 2</b> | FSR is between -6% and 6% of the MRA, lower degree of predictability | <b>Hold/Neutral</b> | 42%                   | 36%                      |
| <b>Reduce 1</b>  | FSR is > 6% below the MRA, higher degree of predictability            | <b>Reduce 2</b>  | FSR is > 6% below the MRA, lower degree of predictability            | <b>Sell</b>         | 12%                   | 28%                      |

1 Percentage of companies under coverage globally within this rating category

2 Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months

Source UBS Ratings allocations are as of 31 March 2007

### KEY DEFINITIONS

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium)

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

### EXCEPTIONS AND SPECIAL CASES

**US Closed-End Fund ratings and definitions are:** Buy: Higher stability of principal and higher stability of dividends, Neutral: Potential loss of principal, stability of dividend, Reduce: High potential for loss of principal and dividend risk.

**UK and European Investment Fund ratings and definitions are:** Buy: Positive on factors such as structure, management, performance record, discount, Neutral: Neutral on factors such as structure, management, performance record, discount, Reduce: Negative on factors such as structure, management, performance record, discount.

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned or Company Disclosure table in the relevant research piece.

**Companies mentioned**

| <b>Company Name</b>                                     | <b>Reuters</b> | <b>Rating</b> | <b>Price</b> | <b>Price date/time</b> |
|---------------------------------------------------------|----------------|---------------|--------------|------------------------|
| <b>Burlington Northern</b> <sup>16</sup>                | BNI N          | Neutral 2     | US\$87 93    | 02 May 2007 18 58 EDT  |
| <b>Canadian National</b> <sup>4a,16</sup>               | CNR TO         | Buy 2         | C\$55 90     | 02 May 2007 18 58 EDT  |
| <b>Canadian Pacific</b> <sup>16</sup>                   | CP TO          | Buy 2         | C\$70 22     | 02 May 2007 18 58 EDT  |
| <b>CSX Corp.</b> <sup>2,4b,5,6a,6b,7,13,16,18a,22</sup> | CSX N          | Neutral 2     | US\$43 94    | 02 May 2007 18 58 EDT  |
| <b>Norfolk Southern</b> <sup>4b,6c,8a,7,16,18b,22</sup> | NSC N          | Buy 2         | US\$52 34    | 02 May 2007 18 58 EDT  |
| <b>Union Pacific Corp.</b> <sup>16,22</sup>             | UNP N          | Buy 2         | US\$113 42   | 02 May 2007 18 58 EDT  |

Source UBS EDT Eastern daylight time

- 2 UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months
- 4a Within the past three years, UBS Securities Canada Inc or an affiliate has received compensation for investment banking services from this company/entity
- 4b Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity
- 5 UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company/entity within the next three months
- 6a This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-investment banking securities-related services are being, or have been, provided
- 6b This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-securities services are being, or have been, provided
- 6c This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and investment banking services are being, or have been, provided
- 7 Within the past 12 months, UBS Securities LLC has received compensation for products and services other than investment banking services from this company/entity
- 13 UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company's common equity securities as of last month's end (or the prior month's end if this report is dated less than 10 days after the most recent month's end)
- 16 UBS Securities LLC makes a market in the securities and/or ADRs of this company
- 18a The U S equity strategist, a member of his team, or one of their household members has a long common stock position in CSX Corp
- 18b The U S equity strategist, a member of his team, or one of their household members has a long common stock position in Norfolk Southern Corp
- 22 UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month's end (or the prior month's end if this report is dated less than 10 working days after the most recent month's end)

The analyst responsible for this report has reviewed the material operations of the issuer and/or met with senior management  
Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report

For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Securities LLC, 1285 Avenue of Americas, New York, NY 10019, USA, Attention Publishing Administration

## Global Disclaimer

This report has been prepared by UBS Securities Canada Inc or an affiliate thereof ("UBS"). In certain countries UBS AG is referred to as UBS SA.

This report is for distribution only under such circumstances as may be permitted by applicable law. It has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient and does not constitute a representation that any investment strategy is suitable or appropriate to a recipient's individual circumstances or otherwise constitute a personal recommendation. It is published solely for informational purposes, it does not constitute an advertisement and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments in any jurisdiction. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning UBS AG, its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities, markets or developments referred to in the report. The report should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS as a result of using different assumptions and criteria. Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analysis contained herein is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituents for the purpose of gathering, synthesizing and interpreting market information. UBS is under no obligation to update or keep current the information contained herein. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues, however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither UBS nor any of its affiliates, nor any of UBS' or any of its affiliates, directors, employees or agents accepts any liability for any loss or damage arising out of the use of all or any part of this report. Additional information will be made available upon request.

For financial instruments admitted to trading on an EU regulated market, UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC and/or UBS Capital Markets LP) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this research report.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is communicated by UBS Limited, a subsidiary of UBS AG, to persons who are market counterparties or intermediate customers (as detailed in the FSA Rules) and is only available to such persons. The information contained herein does not apply to, and should not be relied upon by, private customers. UBS Limited is authorised and regulated by the Financial Services Authority, France. Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France SA. UBS Securities France SA is regulated by the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France SA has contributed to the report, the report is also deemed to have been prepared by UBS Securities France SA. Germany: Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). Spain: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). Turkey: Prepared by UBS Menkul Değerler AS on behalf of and distributed by UBS Limited. Russia: Prepared and distributed by the Moscow Representative Office of UBS Cyprus Moscow Limited, Switzerland. Distributed by UBS AG to persons who are institutional investors only. Italy: Prepared by UBS Limited and distributed by UBS Limited and UBS Italia S.m.S.p.A. UBS Italia S.m.S.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia S.m.S.p.A. has contributed to this report, the report is also deemed to have been prepared by UBS Italia S.m.S.p.A. South Africa: UBS South Africa (Pty) Limited (Registration No. 1995/011140/07) is a member of the JSE Limited, the South African Futures Exchange and the Bond Exchange of South Africa. UBS South Africa (Pty) Limited is an authorised Financial Services Provider. Details of its postal and physical address and a list of its directors are available on request or may be accessed at <http://www.ubs.co.za>. United States: Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG, or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a "non-US affiliate"), to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. Canada: Distributed by UBS Securities Canada Inc., a subsidiary of UBS AG and a member of the principal Canadian stock exchanges & CIPF. A statement of its financial condition and a list of its directors and senior officers will be provided upon request. Hong Kong: Distributed by UBS Securities Asia Limited, Singapore. Distributed by UBS Securities Pte Ltd or UBS AG, Singapore Branch. Japan: Distributed by UBS Securities Japan Ltd to institutional investors only. Australia: Distributed by UBS AG (Holder of Australian Financial Services Licence No. 231087) and UBS Securities Australia Ltd (Holder of Australian Financial Services Licence No. 231098) only to "Wholesale" clients as defined by s761G of the Corporations Act 2001. New Zealand: Distributed by UBS New Zealand Ltd.

The disclosures contained in research reports produced by UBS Ltd shall be governed by and construed in accordance with English law.

© 2007 UBS. All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect.



F

**Exhibit F**

**UBS Investment Research, *Levering Up? It's a Start...*, dated May 8, 2007**

# UBS Investment Research

## CSX

### Levering Up? It's a Start...

#### ■ Announces bigger buyback, dividend, and capex

Before Tuesday's open, CSX announced: i) a 50% increase in its share repurchase program from \$2B to \$3B in stock (15% of its market cap) through the end of 2008, ii) a 25% increase in its quarterly dividend from \$0.12 to \$0.15/shr starting in Q3, and iii) increases in its planned capex through 2010 (\$1.5B in 2007, \$1.6B in each 2008 and 2009, and \$1.7B in 2010). CSX plans to complete this plan with higher anticipated cash flows and additional debt—albeit staying investment grade.

#### ■ Putting lazy balance sheets to work

Our Q-Series report from May 3 titled "Time to Lever Up the Rails?" concluded that current leverage across the sector is dramatically lower than "optimal", and all rails could create significant value for equity holders by leveraging up and using that spare debt capacity to repurchase shares. With improved industry fundamentals this may also be possible without sacrificing investment grade credit ratings.

#### ■ A good start, but only reflects the new "comfort zone"

Our report concludes that managements have realized fundamentals have changed and the new leverage "comfort zone" that is emerging is a debt/cap 5% higher than it used to be (i.e. from 40% to 45%) and they'll get there within three years through buybacks and dividend increases that exceed FCF and earnings growth. This is what CSX is doing, with debt/capital moving from 40% to 46% between 2006 and 2008, although debt/EBITDA remains low over the period (2.1 to 2.2). It's a start.

#### ■ Valuation

Our \$44 price target is based on a forward P/E multiple of 14.5x.

| Highlights (US\$m)        | 12/05        | 12/06    | 12/07E   | 12/08E    | 12/09E    |
|---------------------------|--------------|----------|----------|-----------|-----------|
| Revenues                  | 8,601.00     | 9,566.00 | 9,909.34 | 10,507.92 | 11,165.06 |
| EBIT (US\$)               | 1,533.00     | 1,970.00 | 2,083.17 | 2,387.22  | 2,677.90  |
| Net Income (US\$)         | 762.95       | 1,028.90 | 1,087.23 | 1,224.40  | 1,374.80  |
| EPS (US\$, US\$)          | 1.67         | 2.21     | 2.43     | 2.92      | 3.47      |
| Net DPS (US\$, US\$)      | 0.37         | 0.33     | 0.54     | 0.75      | 0.94      |
| Profitability & Valuation | 5-yr hist av | 12/06    | 12/07E   | 12/08E    | 12/09E    |
| EBIT margin %             | 14.0         | 20.6     | 21.0     | 22.7      | 24.0      |
| ROIC (EBIT) %             | 12.5         | 15.4     | 15.6     | 16.9      | 18.1      |
| EV/EBITDA (core) x        | 5.8          | 6.5      | 8.2      | 7.6       | 7.1       |
| PE (US\$) x               | 16.4         | 14.5     | 18.9     | 15.7      | 13.2      |
| Net dividend yield %      | 2.2          | 1.0      | 1.2      | 1.6       | 2.0       |

Source: Company accounts, Thomson Financial, UBS estimates. (US\$) valuations are stated before goodwill-related charges and other adjustments for abnormal and economic items at the analysts' judgement.

Valuations based on an average share price last year (E) based on a share price of US\$45.90 on 07 May 2007 10:30 EDT

**Rick Paterson**  
Analyst  
rick.paterson@ubs.com  
+1-212-713 7944

**Fadi Chamoun, CFA**  
Analyst  
fadi.chamoun@ubs.com  
+1-416-350 4855

**Elizabeth Mielke**  
Associate Analyst  
elizabeth.mielke@ubs.com  
+1-212-713 3683

## Global Equity Research

Americas

Railroads

Rating **Neutral 2**  
**Unchanged**

Price target **US\$44.00**  
**Unchanged**

Price **US\$45.90**

RIC CSX N BBG CSX US

8 May 2007

#### Trading data

|                         |                 |
|-------------------------|-----------------|
| 52-wk range             | US\$46.01-29.19 |
| Market cap.             | US\$20.1bn      |
| Shares o/s              | 437m (COM)      |
| Free float              | 99%             |
| Avg daily volume ('000) | 4,467           |
| Avg daily value (US\$m) | 182.5           |

#### Balance sheet data 12/07E

|                      |              |
|----------------------|--------------|
| Shareholders' equity | US\$8.82bn   |
| P/BV (US\$)          | 2.3x         |
| Net Cash (debt)      | (US\$5.86bn) |

#### Forecast returns

|                             |        |
|-----------------------------|--------|
| Forecast price appreciation | -4.1%  |
| Forecast dividend yield     | 1.5%   |
| Forecast stock return       | -2.6%  |
| Market return assumption    | 9.7%   |
| Forecast excess return      | -12.3% |

#### EPS (US\$, US\$)

|        | From | To   | Cons. | Actual |
|--------|------|------|-------|--------|
| Q1     | 0.50 | 0.50 | 0.50  | 0.53   |
| Q2E    | 0.64 | 0.65 | 0.66  | 0.58   |
| Q3E    | 0.64 | 0.65 | 0.65  | 0.54   |
| Q4E    | 0.64 | 0.64 | 0.69  | 0.57   |
| 12/07E | 2.41 | 2.43 | 2.48  |        |
| 12/08E | 2.92 | 2.92 | 2.92  |        |

#### Performance (US\$)



Source: UBS  
www.ubs.com/investmentresearch

This report has been prepared by UBS Securities LLC

ANALYST CERTIFICATION AND REQUIRED DISCLOSURES BEGIN ON PAGE 2.

UBS does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Customers of UBS in the United States can receive independent, third-party research on the company or

---

■ **CSX Corp.**

CSX is one of the largest U.S. freight railroads and operates along the eastern seaboard to the Midwest. Its main commodity exposures include coal, intermodal (predominantly containers plus some truck trailers hauled on rail flat cars), chemicals, and metals and minerals. The company is headquartered in Jacksonville, Florida.

■ **Statement of Risk**

Risks to CSX include economic (volumes and pricing), event (M&A), financial (debt), and volatile fuel prices. There is also the risk of valuation multiple compression as investors move away from the sector at different stages of the business cycle.

■ **Analyst Certification**

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

## Required Disclosures

This report has been prepared by UBS Securities LLC, an affiliate of UBS AG (UBS).

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information, and certain additional disclosures concerning UBS research recommendations, please visit [www.ubs.com/disclosures](http://www.ubs.com/disclosures)

### UBS Investment Research: Global Equity Ratings Definitions and Allocations

| UBS Rating | Definition                                                            | UBS Rating | Definition                                                           | Rating Category | Coverage <sup>1</sup> | IB Services <sup>2</sup> |
|------------|-----------------------------------------------------------------------|------------|----------------------------------------------------------------------|-----------------|-----------------------|--------------------------|
| Buy 1      | FSR is > 6% above the MRA, higher degree of predictability            | Buy 2      | FSR is > 6% above the MRA, lower degree of predictability            | Buy             | 47%                   | 37%                      |
| Neutral 1  | FSR is between -6% and 6% of the MRA, higher degree of predictability | Neutral 2  | FSR is between -6% and 6% of the MRA, lower degree of predictability | Neutral         | 42%                   | 36%                      |
| Reduce 1   | FSR is > 6% below the MRA, higher degree of predictability            | Reduce 2   | FSR is > 6% below the MRA, lower degree of predictability            | Sell            | 12%                   | 28%                      |

1 Percentage of companies under coverage globally within this rating category

2 Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months

Source UBS Ratings allocations are as of 31 March 2007

### KEY DEFINITIONS

**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium)

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

**Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation.

### EXCEPTIONS AND SPECIAL CASES

**US Closed-End Fund ratings and definitions are:** Buy Higher stability of principal and higher stability of dividends, Neutral Potential loss of principal, stability of dividend, Reduce High potential for loss of principal and dividend risk

**UK and European Investment Fund ratings and definitions are:** Buy Positive on factors such as structure, management, performance record, discount, Neutral Neutral on factors such as structure, management, performance record, discount, Reduce Negative on factors such as structure, management, performance record, discount

**Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Companies Mentioned or Company Disclosure table in the relevant research piece.

### Company Disclosures

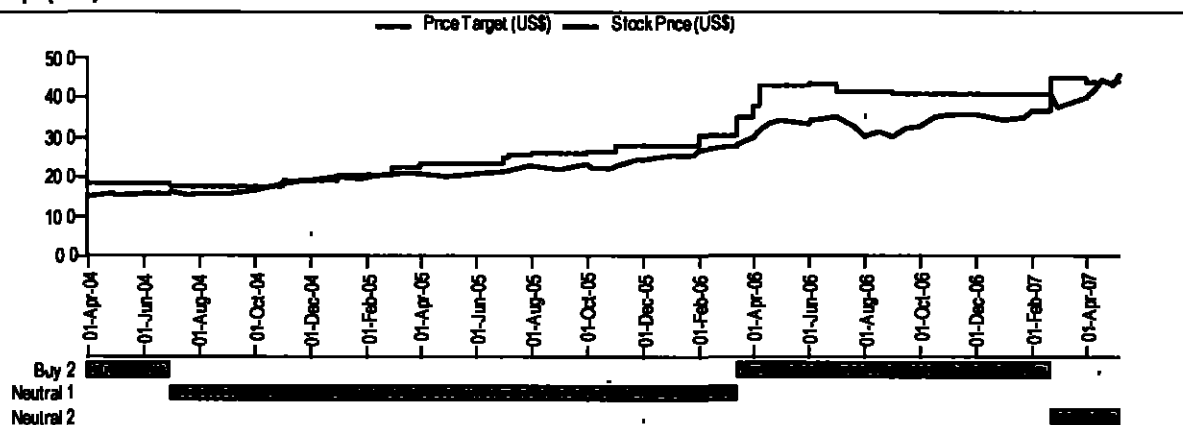
| Company Name                                            | Reuters | Rating    | Price     | Price date  |
|---------------------------------------------------------|---------|-----------|-----------|-------------|
| CSX Corp. <sup>2, 4, 5, 6a, 6b, 7, 13, 16, 18, 22</sup> | CSX N   | Neutral 2 | US\$45.90 | 07 May 2007 |

Source UBS All prices as of local market close

- 2 UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months
- 4 Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity
- 5 UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company/entity within the next three months
- 6a This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-investment banking securities-related services are being, or have been, provided
- 6b This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and non-securities services are being, or have been, provided
- 7 Within the past 12 months, UBS Securities LLC has received compensation for products and services other than investment banking services from this company/entity
- 13 UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company's common equity securities as of last month's end (or the prior month's end if this report is dated less than 10 days after the most recent month's end)
- 16 UBS Securities LLC makes a market in the securities and/or ADRs of this company
- 18 The U.S. equity strategist, a member of his team, or one of their household members has a long common stock position in CSX Corp
- 22 UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month's end (or the prior month's end if this report is dated less than 10 working days after the most recent month's end)

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report

#### CSX Corp. (US\$)



Source: UBS, as of 07 May 2007

**Note** On September 9, 2006, UBS adopted new percentage band criteria for its rating system (See 'UBS Investment Research Global Equity Ratings Definitions and Allocations' table for details). Between October 13, 2003 and September 9, 2006 the percentage band criteria used in the rating system was 10%. Prior to October 13, 2003, the UBS ratings and their definitions were: Buy 1 Excess return potential >15%, smaller range around price target; Buy 2 Excess return potential >15%, larger range around price target; Neutral 1 Excess return potential between -15% and 15%, smaller range around price target; Neutral 2 Excess return potential between -15% and 15%, larger range around price target; Reduce 1 Excess return potential < -15%, smaller range around price target; Reduce 2 Excess return potential < -15%, larger range around price target. Excess return is defined as the difference between the FSR and the one-year local market interest rate.

## Global Disclaimer

This report has been prepared by UBS Securities LLC or an affiliate thereof ("UBS") in certain countries UBS AG is referred to as UBS SA

This report is for distribution only under such circumstances as may be permitted by applicable law. It has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient and does not constitute a representation that any investment strategy is suitable or appropriate to a recipient's individual circumstances or otherwise constitute a personal recommendation. It is published solely for informational purposes. It does not constitute an advertisement and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments in any jurisdiction. No representation or warranty, either express or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein, except with respect to information concerning UBS AG, its subsidiaries and affiliates, nor is it intended to be a complete statement or summary of the securities, markets or developments referred to in the report. The report should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this report are subject to change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS as a result of using different assumptions and criteria. Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analyses contained herein are based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information. UBS is under no obligation to update or keep current the information contained herein. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates and other market conditions. Past performance is not necessarily indicative of future results. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument mentioned in this report. For investment advice, trade execution or other enquiries, clients should contact their local sales representative. Neither UBS nor any of its affiliates, nor any of UBS' or any of its affiliates, directors, employees or agents accepts any liability for any loss or damage arising out of the use of all or any part of this report. Additional information will be made available upon request.

For financial instruments admitted to trading on an EU regulated market, UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC and/or UBS Capital Markets LP) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this research report.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is communicated by UBS Limited, a subsidiary of UBS AG, to persons who are market counterparties or intermediate customers (as defined in the FSA Rules) and is only available to such persons. The information contained herein does not apply to, and should not be relied upon by, private customers. UBS Limited is authorised and regulated by the Financial Services Authority. France: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France SA. UBS Securities France S.A. is regulated by the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France S.A. has contributed to this report, the report is also deemed to have been prepared by UBS Securities France S.A. Germany: Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin). Spain: Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV. SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). Turkey: Prepared by UBS Menkul Değerler AS on behalf of and distributed by UBS Limited. Russia: Prepared and distributed by the Moscow Representative Office of UBS Cyprus Moscow Limited. Switzerland: Distributed by UBS AG to persons who are institutional investors only. Italy: Prepared by UBS Limited and distributed by UBS Limited and UBS Italia S.m.S.p.A. UBS Italia S.m.S.p.A. is regulated by the Bank of Italy and by the Commissione Nazionale per le Società e la Borsa (CONSOB). Where an analyst of UBS Italia S.m.S.p.A. has contributed to this report, the report is also deemed to have been prepared by UBS Italia S.m.S.p.A. South Africa: UBS South Africa (Pty) Limited (Registration No. 1996/011140/07) is a member of the JSE Limited, the South African Futures Exchange and the Bond Exchange of South Africa. UBS South Africa (Pty) Limited is an authorised Financial Services Provider. Details of its postal and physical address and a list of its directors are available on request or may be accessed at <http://www.ubs.co.za>. United States: Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG, or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a "non-US affiliate"), to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a report prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this report must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. Canada: Distributed by UBS Securities Canada Inc., a subsidiary of UBS AG and a member of the principal Canadian stock exchanges & CIPF. A statement of its financial condition and a list of its directors and senior officers will be provided upon request. Hong Kong: Distributed by UBS Securities Asia Limited. Singapore: Distributed by UBS Securities Pte Ltd or UBS AG, Singapore Branch. Japan: Distributed by UBS Securities Japan Ltd to institutional investors only. Australia: Distributed by UBS AG (Holder of Australian Financial Services Licence No. 231087) and UBS Securities Australia Ltd (Holder of Australian Financial Services Licence No. 231098) only to "Wholesale" clients as defined by s781G of the Corporations Act 2001. New Zealand: Distributed by UBS New Zealand Ltd.

The disclosures contained in research reports produced by UBS Ltd shall be governed by and construed in accordance with English law.

© 2007 UBS. All rights reserved. This report may not be reproduced or redistributed, in whole or in part, without the written permission of UBS and UBS accepts no liability whatsoever for the actions of third parties in this respect.



•

—

—

**G**

—

•

—

—

—

## **Exhibit G**

***Standard & Poor's STock Appreciation Ranking System (STARS):  
Methodology, Analysis, & Performance Attribution (June 2005)***

STANDARD  
& POOR'S

# Standard & Poor's STock Appreciation Ranking System (STARS):

Methodology, Analysis, & Performance Attribution

June 2005



## IV. STARS' Methodology

### Earnings Quality

Assessment of earnings quality plays an important role in the STARS process. In addition to extensive examination of a firm's operating history, equity analysts may employ proprietary measures of quality such as Standard & Poor's Earnings and Dividend Rankings, commonly known as Quality Ranks, and S&P Core Earnings. U.S. Quality Ranks have been provided by Standard & Poor's since 1956. They are based on a firm's long-term history of earnings and dividend growth. A long history of Quality Ranks is available, and several academic and practitioner studies have examined their informativeness and reliability (see the white paper Standard & Poor's Earnings and Dividend Ranking System, available on [www.standardandpoors.com](http://www.standardandpoors.com)). S&P Core Earnings is a newer proprietary methodology that assesses a company's underlying economic earnings power by measuring earnings attributable to ongoing operations. Under this methodology, a company's period earnings performance includes only those revenues generated by the enterprise's stipulated commercial activities, and those direct and indirect expenses that were realized in the generation of those revenues. Trends identified from the use of Standard & Poor's Quality Ranks and Standard & Poor's Core Earnings may be indicative of improving or deteriorating earnings quality.

### Top-Down & Technical Influences

Top-down influences on STARS include Standard & Poor's macroeconomic forecasts, relative sector strength analysis, and capital market expectations. The Standard & Poor's Equity Research Group's Global and Regional Research Directors meet regularly with the Chief Investment Strategist to review input provided by the S&P Investment Policy Committee (IPC). The IPC's mission is to "ensure that Standard & Poor's views are reached through a deliberative, consistent process that involves input from a diverse group of Standard & Poor's senior analytical personnel."<sup>2</sup> Among its responsibilities, the IPC is charged with providing top-down guidance and forecasts to Standard & Poor's equity analysts on the financial outlook for specific sectors. The committee is chaired by the Head of Investment Analysis and its members include Standard & Poor's Chief Economist, Head of Global Equity Research, and Head of Global Bond Research, among others. Combined investment experience among the 10 IPC professionals is approximately 210 years. Standard & Poor's Chief Technical Analyst is also a resource for equity analysts. Important technical considerations may include analysis of a stock's intermediate-term trend and its relationship to key moving averages. Comparison with other stocks in the same industry also may lend insight as to whether a move in price is related to the industry or to the individual security.

### Principal Valuation Methods

Financial statement analysis is a core practice of Standard & Poor's equity analysts and is integrated with intrinsic valuation techniques, principally via discounted cash flow (DCF) models that the analysts employ for each company covered. Assets, liabilities, and shareholder equity are evaluated to determine if the firm has sufficient resources to generate income and cash flow, as well as sufficient liquidity to ensure continuity as

<sup>2</sup> From *Standard & Poor's Investment Policy Committee Charter*



## **IV. STARS' Methodology**

a going concern. Analysts also consider cash flow trends that enable them to understand how a company is generating and allocating capital. In addition to intrinsic valuation techniques, Standard & Poor's analysts also employ relative valuation and/or sum-of-the-parts valuation. We address each below, and though our review will not be complete with respect to variations in inputs, techniques, and special considerations across industries, we will cover the principal means by which Standard & Poor's estimates value per common share of equity.

To facilitate the quality of its valuation estimates, Standard & Poor's has staffed its equity research team with experienced and qualified professionals. Over 80% hold MBAs, over 30% are CFA Charterholders, and several hold CPA designations. The average Standard & Poor's tenure is about 7 years for U.S. analysts and about 13 years for group heads and directors.

Standard & Poor's believes that, although equity markets are highly competitive, the value of a company's equity is not always equal to its price. These deviations offer opportunities to profit from under- or over-valuation. Standard & Poor's further believes that the value of a firm's equity will eventually be fully realized by other market participants and will therefore be reflected in the price of the firm's common stock. However, investors should note that there can be no assurance that this process will bear out consistently through time. Historically there have been long periods when under- or over-valuation of publicly traded equity shares persisted.

It is incumbent upon Standard & Poor's equity analysts to develop informed opinions of the competitive positioning of each company they cover. These assessments ultimately are reflected in the inputs to the valuation models discussed below. They encompass management strength, market trends, corporate governance policies, and product and pricing strategy. For example, serving unsaturated markets may lead to volume power, while operating in the presence of enduring competitive barriers to entry may promote pricing power. Resources for this work include participating in industry conferences, communicating with management teams and investment relations departments, and utilizing industry consultants, as well as following industry trade publications, journals, and news.

### **DCF Valuation**

As a tool in the process of value discovery, Standard & Poor's analysts create and maintain spreadsheet models of both historical and projected financial statement items. These projected income statements, balance sheets, and cash flow statements are integrated with intrinsic value models for each company. Intrinsic value models attempt to determine the present value of projected cash flows. Standard & Poor's principal method of intrinsic valuation is DCF modeling. Key inputs, explained below, include estimated cash flows, growth rates, and the discount rate. Like all intrinsic value techniques, DCF analysis is quite responsive to changes in inputs, so analysts employ sensitivity analysis to take into account a range of values and probabilities.



## IV. STARS' Methodology

### Cash Flows

The intrinsic value of any security is the present value of its expected future cash flows. Deriving intrinsic value is therefore a straightforward process when cash flows are known in advance with certainty, as is the case with non-callable, risk-free debt such as Treasury bonds. When future cash flows are not known with certainty, as is the case with corporate debt and equity, they must be estimated. Standard & Poor's generally defines free cash flow to the firm (FCFF) as net cash flow from operating activities minus capital expenditures plus interest expense and sale of property, plant, and equipment. This figure represents cash flows to all providers of capital, bondholders as well as common and preferred shareholders, after taking into account net capital investments required for the ongoing enterprise.

### Growth Rates

From the starting point of the most recent period's FCFF, the analyst estimates future growth rates to apply to those cash flows. Since DCF models are highly sensitive, providing quality growth rate estimates is a primary challenge. To accomplish this, it is each analyst's responsibility to gain insight into industry trends and individual company business drivers. For example, in capital-intensive industries, results may be driven primarily by cost structure, while for companies in emerging industries, future FCFF may depend on each company's product pipeline. Of course in the latter case, more estimation is required for valuation, which introduces additional uncertainty. Furthermore, the sustainability of cash flows is heavily influenced by the competitive landscape. Important issues for consideration include the firm's tax and regulatory environment, the level of market saturation, the presence of barriers to entry or exit, historical returns on equity and assets, and the strategic plan (high-margin or low-cost producer). The analyst's implicit goal is to assign probabilities to various outcomes based on these deliberations. From those probabilities flow growth rate assumptions for input into the DCF framework. A growing company will typically experience a temporary (perhaps several-year) period of above average growth. As the company and its markets mature, it will likely revert to a growth rate roughly equivalent to that of the overall economy. In the DCF model, this is referred to as the "terminal growth rate." From that point on, future FCFF may be valued as a perpetuity with a constant growth rate.

### Discount Rate

Another input to determining the present value of future FCFF is the discount rate. When valuing projected cash flows to the firm, the weighted average cost of capital (WACC) is typically used, although some practitioners prefer a risk free rate plus an equity risk premium. The main advantage of using WACC is that it takes the firm's cost of capital for common equity, preferred equity, and debt financing, as well as the capital structure of the balance sheet, into account. The cost of equity is typically derived from the Capital Asset Pricing Model (CAPM), which requires some estimate of the firm's equity market beta. Since the historical beta may bear little relevance for the future, analysts are granted the flexibility to modify their estimates to allow for what they view as realistic assumptions of relative share price volatility going forward. The CAPM cost of debt is typically the yield at which outstanding debt trades or the risk free rate plus an appropriate credit spread.



## IV. STARS' Methodology

### Combining the Inputs

Once future cash flows have been estimated, the discount rate is applied to arrive at the present value of the firm. The present values of debt and preferred stock are then deducted to obtain the present value of the firm's equity, its *intrinsic value*. If intrinsic value is well above current market capitalization, the stock would be deemed attractive from a DCF perspective. As noted above, DCF output is highly responsive to input. Because of compounding effects, small changes in growth estimates and discount rates have large effects on estimated value. Therefore, Standard & Poor's analysts create a matrix of varied input assumptions to develop an understanding of a range of possible outcomes.

### **Relative Valuation**

Some industries do not lend themselves well to DCF analysis. For example, the value of companies in emerging industries depends largely on new products and those that may still be in development. In fact, many of these companies may not have a history of generating any FCFF. The biotechnology industry is an example. Other industries may generate profit from net margins (spread between assets and liabilities), not operating activities. Banks and insurance companies are examples of this. In these situations other intrinsic value approaches may be applied, or analysts may also employ peer group analysis to measure a firm's value relative to its competitors. While the specific comparison metrics differ among industries, the principle remains that by comparing a firm to its peers on industry-relevant measures of performance, the analyst determines its relative under- or over-valuation.

### **Sum-of-the-Parts Valuation**

Sum-of-the-parts (SOP) valuation is typically utilized in special situations such as mergers and acquisitions, spinoffs, or analysis of conglomerates. SOP disaggregates a firm by its operating segments and derives a value for each. Each segment may be valued using DCF (if a segmented history of cash flows is available) or relative valuation (if good, stand-alone, comparables exist). Then the segment values are aggregated to estimate the overall value of the firm.

### **Target Price**

A stock's *target price per share* represents the price that a given security is expected to trade in the future, normally in 12 months. In their determination of target prices, analysts are expected to consider intrinsic, relative, and SOP valuations if appropriate given the particular case, as well as the likelihood of micro- or macro-economic events that may emerge as catalysts for changes in earnings or multiples. To assess the chances of micro events, analysts use their knowledge of the companies and industries they cover. For macro assessments, they rely on the kind of top-down guidance outlined above. Each stock's target price, in relation to its market price, determines Standard & Poor's recommendation for that particular security. For example, if a stock's target price is well above its current market price, it is a candidate for a 5-STARS (strong buy) recommendation.