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February 16, 2007

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FOR ELECTRONIC FILING

The Honorable Vernon A. Williams
Secretary
Attn: STB Ex Parte No. 664
Surface Transportation Board
1925 K Street, N.W.
Washington, D.C. 20423

Re: Ex Parte No. 664, Methodology to be Employed in
Determining the Railroad Industry Cost of Capital

Dear Secretary Williams:

On behalf of the Western Coal Traffic League, enclosed is a copy of the exhibits used by Dr. James E. Hodder in his presentation at yesterday's public hearing in the above-captioned proceeding.

Please advise the undersigned if there are any questions concerning this matter.

Sincerely,



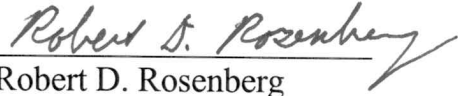
Robert D. Rosenberg
An Attorney for the
Western Coal Traffic League

RDR:rlh

cc: Service List

CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of February 2007, I have caused true and accurate copies of the foregoing letter and associated exhibits of the Western Coal Traffic League to be served upon all parties on the service list in this proceeding.


Robert D. Rosenberg

Surface Transportation Board

STB Ex Parte No. 664

Methodology to be Employed in Determining the
Railroad Industry's Cost of Capital

Presentation
of
Professor James E. Hodder

February 15, 2007

Dividend Capitalization Approach for Estimating a Cost of Equity

- Basic idea is to find the annual return from buying a stock today at price $P(0)$, collecting a stream of future dividends while the stock is owned, and selling the stock at some future date T for a price $P(T)$.
- A major issue is what to use for $P(T)$.
- A simplifying assumption is to have $P(T)$ equal the present value at time T of all subsequent dividends.
- In effect, $P(0)$ becomes the present value of all dividends from now to an infinite time in the future.

Dividend Capitalization Models

$$P(0) = \frac{D(1)}{1+K} + \frac{D(2)}{(1+K)^2} + \frac{D(3)}{(1+K)^3} + \frac{D(4)}{(1+K)^4} + \dots$$

$$P(0) = \sum_{t=1}^{\infty} \frac{D(0)(1+g)^t}{(1+K)^t}$$

$$P(0) = \frac{D(0)(1+g)}{K-g} \quad \Rightarrow \quad K = \frac{D(0)(1+g)}{P(0)} + g$$

Alternative Versions with Perpetual Constant Growth

ICC Pre -1982: $K = \frac{D(0)}{P(0)} + g$

ICC Post -1982 and STB: $K = \frac{D(0)(1+0.5g)}{P(0)} + g$

A Multi-phase DCF Approach

- During first T_A years, use growth rate g_A
- During a second phase from T_A until T_B years, use growth rate g_B
- After T_B years to infinite, use a “terminal” growth rate g_T

A Multi-phase DCF Equation

$$\begin{aligned} P(0) = & \frac{D(1)}{1+K} + \frac{D(1)(1+g_A)}{(1+K)^2} + \frac{D(1)(1+g_A)^2}{(1+K)^3} + \dots + \frac{D(T_A)}{(1+K)^{T_A}} \\ & + \frac{D(T_A)(1+g_B)}{(1+K)^{T_A+1}} + \frac{D(T_A)(1+g_B)^2}{(1+K)^{T_A+2}} + \dots + \frac{D(T_B)}{(1+K)^{T_B}} \\ & + \frac{D(T_B)(1+g_T)}{(K-g_T)(1+K)^{T_B}} \end{aligned}$$

Table 1
Cost of Equity Estimates using a Multi-phase DCF Model

Model Version	Growth Rate Years 1-5	Growth Rate Years 6 - 10	Growth Rate Years 11-20	Growth Rate After Year 20	Cost of Equity
0	13.66%	13.66%	13.66%	13.66%	15.18%
1	13.66%	13.66%	13.66%	6.00%	10.20%
2	13.66%	13.66%	9.83%	6.00%	9.40%
3	13.66%	13.66%	6.00%	6.00%	8.68%
4	13.66%	9.83%	9.83%	6.00%	8.97%
5	13.66%	9.83%	6.00%	6.00%	8.31%
6	13.66%	6.00%	6.00%	6.00%	7.98%

CAPM Approach

K = Risk Free Interest Rate + Risk Premium

$$K = R_F + \beta (ER_M - R_F)$$

R_F includes a "real" riskless return + expected inflation

β measures the security's risk

$(ER_M - R_F)$ is the "price of risk"

Multifactor Asset Pricing Model Approach

$K = \text{Risk Free Interest Rate} + \text{Risk Premium 1} +$
 $\text{Risk Premium 2} + \text{Risk Premium 3} + \dots$

$$K = R_F + \beta_1 (ER_1 - R_F) + \beta_2 (ER_2 - R_F) + \beta_3 (ER_3 - R_F)$$