BEFORE THE

SURFACE TRANSPORTATION BOARD

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STB EX PARTE NO. 664

METHODOLOGY TO BE EMPLOYED IN DETERMINING
THE RAILROAD INDUSTRY'S COST OF CAPITAL

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PUBLIC HEARING COMMENTS OF THE

U.S. DEPARTMENT OF AGRICULTURE

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Washington, D.C. 20250

Date: February 15, 2007

AUTHORITY AND INTEREST

The Secretary of Agriculture is charged with the responsibility under the Agricultural Adjustment Act of 1938 and the Agricultural Marketing Act of 1946 to represent the interests of agricultural producers and shippers in improving transportation services and facilities by, among other things, initiating and participating in Surface Transportation Board (Board) proceedings involving rates, charges, tariffs, practices, and services.

INTRODUCTION

The Department of Agriculture (USDA) thanks the Board for holding this hearing to allow interested parties to present their views concerning the methodology used in calculating the railroad industry's cost of capital. USDA appreciates the willingness of the Board to take into consideration these views when determining the procedures to be employed in future annual cost of capital calculations. The outcome of this proceeding can have important ramifications for our nation's agricultural producers and shippers.

USDA recommends that the Board discontinue the use of its current discounted cash flow (DCF) method in favor of using a multi-stage DCF model to calculate the cost of capital. A capital asset pricing model (CAPM) should be used to verify the reasonableness of the cost of capital estimate that is obtained using the multi-stage DCF model. USDA also recommends that equity capital (used in cost of capital determinations) be calculated using net book values rather than stock prices. The Department's recommendations and further comments are detailed below.

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RAILROAD INDUSTRY CHANGES MERIT A CHANGE IN METHODOLOGY

Since passage of the Staggers Rail Act, the railroad industry has evolved from having excess rail capacity to having rail capacity constraints. The Act made it easier for railroads to abandon unprofitable and excess rail lines. At the same time, globalization resulted in increased imports and the rapid growth of intermodal movements. Increased reliance upon coal for generating electricity, as well as increased traffic in other commodities, also has resulted in increased rail traffic. Competition from the trucking industry has decreased due to increased fuel prices, a shortage of truck drivers, changes in trucking hours-of-service regulations, and highway congestion. In fact, traffic that normally would move by truck is now moving as intermodal traffic on railroads. Railroads have been able to increase rail rates as a result of constrained rail capacity and increased demand. Consequently, railroads are attaining or rapidly approaching revenue adequacy.

IMPORTANCE OF ACCURATE COST OF CAPITAL DETERMINATIONS

The Interstate Commerce Commission Termination Act (ICCTA) and the Staggers Rail Act require the Board to balance railroads' need for an adequate return on investment with protecting shippers from excessive rail rates.[1] As such, the methods used to determine railroad cost of capital should be fair to both railroads and shippers.

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[1] Rail Transportation Policy, ICC Termination Act of 1995, §10101.

Accurate portrayal of railroad cost of capital is important for two reasons. First, cost of capital determinations are used to assess railroad revenue adequacy. Revenue adequacy can become a key issue in rail rate disputes. If cost of capital determinations are not accurately portrayed, railroads may be considered revenue inadequate, when realistically, they may actually be revenue adequate. As a result, the Board, when having to make a decision on excessive rail rates, may not have an accurate picture of a railroad's financial position and could make a decision detrimental to the shipper appealing the rate.

Second, cost of capital calculations are entered into the Board's Uniform Rail Costing System (URCS). The URCS is used to estimate rail costs and to calculate revenue-to-variable cost ratios. The URCS assumes that railroad firms are entitled to a fair return on investment (cost of capital) and the fair return on investment is included in the railroads' costs. An overestimation of the cost of capital may overstate railroad total costs and result in a lower estimated revenue-to-variable cost ratio (R/VC)[2] than would actually be true. In such cases, an underestimated R/VC would have the potential to create an unfair advantage for railroads in rail rate disputes brought before the Board.

COMPARISON OF DCF AND CAPM MODELS

The DCF and CAPM approaches rely on market and industry performance, expectations, and variability; they diverge in respect to their basis in time. The DCF method is focused on expected growth in dividends. Uncertainty in the DCF method is

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[2] The Board has no regulatory authority to settle rail rate disputes in cases where R/VC is less than the regulatory floor of 180.

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inherent because projected growth can not be ascertained with absolute certainty. Hence, the DCF method is based heavily on future expectations while the CAPM method relies primarily on past/current market performance.

The Board currently uses a simple DCF formula, $K = D_0 (1+ 0.5 \ g) / P_0$, where K represents the cost of equity capital, D_0 represents the current dividend, g represents the assumed dividend growth rate, and P_0 represents the stock price. The stock price (which is the estimated present value of future dividends) and current dividends are easily obtained. The growth rate of dividends,[3] which is calculated based upon actual dividends and stock prices, is a 5-year earnings per share growth rate forecast and is assumed to continue at this growth rate into perpetuity. From this data, the Board infers the equity cost of capital.

A multi-stage DCF model could give a more accurate estimation of the dividend growth rate because it allows the Board to use a different dividend growth rate for each discreet period of time. For instance, the growth rate may be estimated at 10 percent for the first five years, but then converge to the estimated economic growth rate for the entire economy for all subsequent years. This would be an example of a 2-stage DCF model.

In contrast, a CAPM model, $K = R_{RF} + \beta \ (ER_M - R_{RF})$, is based upon the risk of a stock in relation to that of the individual firm and the entire stock market. K represents the cost of equity capital, R_{RF} represents the rate of return for a risk free investment, β represents the risk level of a firm or industry relative to that of the entire stock market, and ER_M represents the rate of return for the entire market. The CAPM model, unlike the

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[3] In finance and economic theory, stock prices are actually the sum of the discounted cash value from expected dividends and the discounted cash value due to expected growth in stock value.

DCF model, directly calculates the cost of equity capital. In addition, the CAPM model may also include other risk factors.

Each method, DCF and CAPM, has its own advantages and disadvantages because of differing assumptions. The estimated cost of equity capital, however, should not vary markedly between the two methods. By using CAPM to check the results obtained by using a multi-stage DCF model, the Board can re-examine the assumptions of the models should the results differ substantially and choose the model that provides the most realistic estimate of the cost of capital.

DRAWBACKS OF CURRENT COST OF CAPITAL METHOD

The Board's current DCF methodology may have major sources of circularity in that the Board's rulings on revenue adequacy may influence its cost of capital calculation. The first major source of circularity is the assumption that the growth rate of dividends will continue at a constant rate into perpetuity. Given the relatively recent and rapid growth in the railroad industry relative to that of the economy as a whole, the assumption that this rate of growth will continue into perpetuity is an error that greatly impacts the calculation of the industry's cost of capital and determination of revenue adequacy.

Consequently, even though railroads are achieving record levels of profitability, the cost of equity capital continues to increase, often resulting in the Board ruling that a railroad is revenue inadequate while railroad industry analysts believe otherwise. A ruling of revenue inadequacy allows the railroad to increase rail rates, resulting in higher estimates of industry earnings and higher stock prices. As a result of increased railroad

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stock prices, which are part of the DCF formula, the cost of equity capital and weighted average cost of capital are increased, starting the cycle over again.

The second source of circularity could be due to the Board's use of stock values rather than the net book value of assets (cost less depreciation) when calculating the cost of equity capital with the current DCF method. Railroad stock prices are influenced by the level of railroad profits and have risen rapidly as railroad profits have increased. As a result, railroad stock prices are now substantially higher than the net book value of assets and are much more volatile. Consequently, when the Board calculates the weighted average cost of capital, the proportion of equity to debt capital may be inflated as well as the weighted average cost of capital because equity capital is more expensive than debt capital. In contrast, net book value is not influenced by a railroad's profitability and is a much more stable value that is based upon the actual investment.

The methodology used in future cost of capital determinations should not allow the level of railroad profitability to influence the railroad's cost of capital. USDA is concerned that such drawbacks in the current DCF method may adversely affect the accuracy of the current cost of capital determination method employed by the Board. These drawbacks warrant the Board's adoption of a new methodology or methodologies.

USDA RECOMMENDATIONS

USDA recommends that the Board discontinue the use of its current discounted cash flow (DCF) method in favor of using a multi-stage DCF model to calculate the cost of capital. A capital asset pricing model (CAPM) should be used to verify the

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reasonableness of the cost of capital estimate that is obtained using the multi-stage DCF model. USDA also recommends that equity capital (used in cost of capital determinations) be calculated using net book values rather than stock prices.

CONCLUSION

USDA appreciates the efforts of the Board to seek comments and recommendations on its current methodologies. USDA hopes that its comments will aid the Board in reaching a decision that is fair to railroads and their customers. The outcome of this proceeding could have important ramifications for railroads and our nation's producers and shippers.

Respectively submitted,

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CERTIFICATE OF SERVICE

I, Brian M. McGregor, certify that on this 15th day of February, 2007, I caused a copy of

the foregoing document to be served by first-class mail, postage prepaid, on all parties of

record in STB Ex Parte No. 664.

Brian M. McGregor
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