

SURFACE TRANSPORTATION BOARD

Docket No. EP 664 (Sub-No. 4)

REVISIONS TO THE BOARD'S METHODOLOGY FOR DETERMINING THE RAILROAD
INDUSTRY'S COST OF CAPITAL

Digest:¹ In this decision, the Board grants the Association of American Railroads' motion for clarification and sets forth a revised Appendix A.

Decided: November 21, 2019

On September 30, 2019, the Board issued a notice of proposed rulemaking (NPRM) in this docket that proposed to incorporate an additional model, which the Board referred to as the "Step Multi-Stage Discounted Cash Flow Model" (Step MSDCF), to complement its use of the Morningstar/Ibbotson Multi-Stage Discounted Cash Flow Model (Morningstar/Ibbotson MSDCF) and the Capital Asset Pricing Model (CAPM) in determining the cost-of-equity component of the cost of capital. A corrected decision was served October 11, 2019.

On November 7, 2019, the Association of American Railroads (AAR) filed a motion for clarification of the NPRM. Specifically, AAR requested that the Board specify the algebraic formula that it proposes to use in the second stage of the proposed Step MSDCF model. According to AAR, the algebraic formula for Step MSDCF set forth in Appendix A of the NPRM differs from the algebraic formula used to produce the values reflected in both Appendix B of the NPRM and the corresponding workpapers.²

The Board will grant AAR's motion for clarification. Attached to this decision is a revised Appendix A that corrects the discrepancy that AAR identified. Appendix A now reflects the correct algebraic formula for Step MSDCF and corresponds to the algebraic formula used to produce the values reflected in both Appendix B and the workpapers. To allow commenters sufficient time to review the revised Appendix A, the Board will extend the comment deadline to January 15, 2020 and the reply comment deadline to February 18, 2020.

¹ The digest constitutes no part of the decision of the Board but has been prepared for the convenience of the reader. It may not be cited to or relied upon as precedent. See Policy Statement on Plain Language Digests in Decisions, EP 696 (STB served Sept. 2, 2010).

² On October 11, 2019, the Board made available workpapers showing the calculations for the values shown in Appendix B to assist commenters in their analyses of the proposed changes to the cost-of-capital methodology.

It is ordered:

1. AAR's motion for clarification is granted, as discussed above.
2. Comments in this proceeding are due by January 15, 2020. Reply comments are due by February 18, 2020.
3. This decision is effective on its service date.

By the Board, Board Members Begeman, Fuchs, and Oberman.

APPENDIX A

This appendix presents the algebraic formula for Step MSDCF.

The cost of equity for each firm (r_i) in the step MSDCF is the solution to the following equation:

$$MV_{i0} = \sum_{t=1}^5 \frac{CF_{i0}(1+g_{i1})^t}{(1+r_i)^t} + \sum_{t=6}^{10} \frac{CF_{i(t-1)}(1+Step_{ip})}{(1+r_i)^t} + \frac{IBEI_{i10}(1+g_3)}{(1+r_i)^{10}}$$

Where,

MV_{i0} = market value of firm i in year 0 (that is, the year for which the cost of equity is being estimated)

CF_{it} = average cash flow for firm i at the end of year t

g_{i1} = earnings growth rate for firm i in stage 1

g_3 = long-run expected nominal growth rate of the U.S. economy

$Step_{ip}$ = the earnings growth rate for firm i in step p where $p = (t-5)$

$$Step_{i1} = g_{i1} - [(g_{i1}-g_3)/6]$$

$$Step_{i2} = Step_{i1} - [(g_{i1}-g_3)/6]$$

$$Step_{i3} = Step_{i2} - [(g_{i1}-g_3)/6]$$

$$Step_{i4} = Step_{i3} - [(g_{i1}-g_3)/6]$$

$$Step_{i5} = Step_{i4} - [(g_{i1}-g_3)/6]$$

$IBEI_{it}$ = income before extraordinary items for firm i at the end of year t

$$IBEI_{i10} = IBEI_{i0} (1+g_{i1})^5 (1+Step_{i1}) (1+Step_{i2}) (1+Step_{i3}) (1+Step_{i4}) (1+Step_{i5})$$

$IBEI_{i0}$ is determined by the same process as CF_{i0}

The industry cost of equity (R) for the three-stage DCF model is computed as the market value weighted average of the individual firm cost of equity estimates:

$$R = \sum_{i=1}^N s_i r_i$$

Where, s_i is firm i 's share of the total industry market value and N is the number of firms in the industry composite, such that:

$$s_i = (MV_i) / \sum_{i=1}^N MV_i$$