

SURFACE TRANSPORTATION BOARD

DECISION

STB Ex Parte No. 679

ASSOCIATION OF AMERICAN RAILROADS – PETITION REGARDING
METHODOLOGY FOR DETERMINING RAILROAD REVENUE ADEQUACY

Decided: October 23, 2008

This decision denies the petition filed by the Association of American Railroads (AAR) asking the Board to institute a rulemaking proceeding to consider the use of a replacement cost methodology in the Board's annual railroad revenue adequacy determination.

BACKGROUND

Pursuant to 49 U.S.C. 10704(a)(3), the Board annually determines which of the Class I rail carriers¹ are earning adequate revenues. Adequate revenues are defined by 49 U.S.C. 10704(a)(2) as those “that are adequate, under honest, economical, and efficient management, to cover total operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business.” Such revenues should “provide a flow of net income plus depreciation adequate to support prudent capital outlays, assure the repayment of a reasonable level of debt, permit the raising of needed equity capital, and cover the effects of inflation,” 49 U.S.C. 10704(a)(2)(A), and “attract and retain capital in amounts adequate to provide a sound transportation system in the United States,” 49 U.S.C. 10704(a)(2)(B).

To make the annual revenue adequacy determination, the Board compares a carrier's return on net investment (ROI) with the rail industry's after-tax cost of capital for that year. If its ROI exceeded the cost of capital, the railroad is considered to have been revenue adequate for that year; if its ROI was less than the cost of capital, the railroad is considered to have been revenue inadequate.

ROI measures the relative success of a firm in generating income from its investments over a given period. For a railroad, ROI has traditionally been calculated by dividing net income from railroad operations by the depreciated original cost, or book value, of the railroad's assets. This is done by dividing net railway operating income (an after-tax, before-interest figure) by an investment base that consists of the firm's net investment in railroad property, plus working

¹ A Class I railroad is one with annual operating revenues of at least \$250 million, in 1991 dollars. 49 CFR 1201. Only Class I railroads are required to file the annual reports from which the Board determines whether the carriers are earning adequate revenues.

capital, less accumulated deferred income tax credits. Because accumulated deferred income tax credits are considered as a zero-cost source of capital, they are subtracted from the investment base.

The ROI is then compared with the railroad industry cost of capital. The cost of capital is the cost that firms must pay to obtain funds to purchase major assets such as machinery or buildings. For a railroad, the cost of capital has two major components: the cost of debt (the interest rate it must pay lenders in order to borrow funds) and the cost of equity (the rate of return stockholders must receive to continue to invest in the railroad's stock). By comparing ROI and cost of capital, the Board seeks to ensure that a rail carrier is able to continue to invest in its infrastructure and provide a reasonable return to its investors.

The idea of using a replacement cost methodology in the revenue adequacy determination has been addressed several times by our predecessor agency, the Interstate Commerce Commission (ICC). As the ICC observed in the early 1980s, in theory "replacement cost valuation can be preferable to original cost valuation," because "regular and continuing calculation of depreciation charges and inflation adjustments under the replacement cost method may better reflect the true economic costs associated with an investment. Further, the replacement cost method is preferable because it comes closer to the competitive result." Standards for Railroad Revenue Adequacy, 364 I.C.C. 803, 841 (1981). But shifting to a replacement-cost approach has proved impractical. The major obstacle has been estimating the current value of individual investments, because this valuation cannot be based on actual transactions. *Id.* at 841-42. For example, valuing a bridge in a carrier's system cannot be based on a recent sale of that bridge or the sale of comparable bridges. While carriers routinely sell or abandon some under-utilized line segments, they will rarely (if ever) sell a bridge in isolation. Yet, without such comparable sales, it is difficult to assign a value to any particular piece of the railroad network. Even if such sales were available, they would not necessarily establish the true current value of the asset. The true value of a railroad is in its network as a whole, not in its individual components. This explains why, after a multi-year analysis of the issue, the ICC concluded that "[w]hile current cost accounting is theoretically preferable to original cost valuation, it cannot be practically implemented in a manner that we can be confident would produce accurate and reliable results." Standards for Railroad Revenue Adequacy, 3 I.C.C.2d 261, 277 (1986).²

Two other federal agencies reached the same conclusion: that a replacement-cost approach was infeasible. In its final report, the Railroad Accounting Principles Board (RAPB)³

² The terms "current cost" and "replacement cost" are used interchangeably herein.

³ The RAPB was established by Congress to evaluate issues associated with rail costing and to propose principles to govern the estimation of such costs. *See* former 49 U.S.C. 11161-63 (1995). The RAPB set forth its costing principles in its report, Railroad Accounting Principles (Sept. 1987). Pursuant to the statute, the ICC gave great weight to the recommendations of the RAPB. *See* former 49 U.S.C. 11163 (1995); Railroad Cost Recovery Procedures – Productivity Adjustment, 5 I.C.C.2d 434, 440 (1989). While former sections 11161-63 are no longer in our governing statute, and the RAPB no longer exists, we continue to accord great weight to the recommendations of the RAPB.

concluded that, while “current market valuation is preferable to historical valuation from a theoretical economic viewpoint,” there are “serious practical problems” with such an approach. See Final Report of the RAPB, Vol II at 60-61 (1987) (RAPB Final Report). One practical concern identified by the RAPB is “the need to identify and revalue existing assets which will not be replaced.” Id. at 61. In a contemporaneous study, the United States General Accounting Office (GAO) also expressed concern that a current cost approach could overstate the value of the investment base, observing that “[t]he cost of reproducing a particular asset . . . may not be a good measure of the value of the asset.” See Railroad Revenues: Analysis of Alternative Methods to Measure Revenue Adequacy, GAO/RCED-87-15BR at 109 (Oct. 1986) (GAO Report). After conducting its own independent inquiry, GAO concluded that it was “not able to identify an adequate solution for the potential problems of overstating asset values under a current cost approach.” Id. at 110. It explained that no one could specify a satisfactory means of identifying assets that, over the long run, would not earn returns sufficient to justify replacement.

The Board therefore uses a historical-cost approach. Recently, in 2008, we revised our methodology for estimating the cost-of-equity component of the cost of capital for the railroad industry. See Methodology To Be Employed In Determining The Railroad Industry’s Cost Of Capital, STB Ex Parte No. 664 (STB served Jan. 17, 2008) (Cost Of Capital Methodology). In doing so, we rejected the AAR’s renewed call to replace historical costs with replacement cost investment in the annual revenue adequacy determination, because AAR had failed to address the known practical concerns with a replacement-cost approach.

AAR’S CURRENT PROPOSAL

By a petition filed on May 1, 2008, AAR proposed a methodology to calculate the replacement cost of rail-related assets for each of the nation’s major railroads. AAR asks the Board to institute a rulemaking proceeding to consider its proposal for use in the Board’s annual revenue adequacy determinations. BNSF Railway Company (BNSF) submitted comments on the same day in support of the petition.

AAR argues that the Board’s recently adopted simplified stand-alone cost procedures (Simplified-SAC) for use in medium-sized rail rate disputes can be adapted for use in revenue adequacy proceedings by applying the road property investment asset values that the Board would use in a Simplified-SAC case to the rail carrier’s entire system. See Simplified Standards for Rail Rate Cases, STB Ex Parte No. 646 (Sub-No. 1) (STB served Sept. 5, 2007) (Simplified Standards), pet. for review docketed, No. 07-1369, et al. (D.C. Cir. Sept. 18, 2007). Simplified Standards generally relies on the final decisions in previous rail rate cases in which the full stand-alone cost (Full-SAC) procedures were applied to estimate the costs associated with providing service over a specified portion of a carrier’s system (for the purpose of determining if a particular rate charged for service over that portion of the system results in a cross-subsidy of other parts of the carrier’s system). See Simplified Standards at 13-15, 38-48.

AAR states that its proposal would rely on Simplified-SAC procedures for the majority of a carrier’s total replacement costs.⁴ AAR proposes other methods to calculate certain asset

⁴ AAR Petition, Baranowski V.S. at 3.

categories that could not be derived from Simplified-SAC, such as equipment accounts and roadway machines.⁵ And for assets such as land for which it has not devised any method of calculating replacement cost, AAR would include book value as a proxy for replacement cost. BNSF's witness offers a replacement cost methodology for intermodal and automotive facilities, which the Board has not previously valued in Full-SAC cases.⁶

In short, AAR proposes that the Board annually estimate each Class I carrier's investment base by applying the averages and methods associated with Simplified-SAC to the carrier's entire network, with the exceptions of using book value for land and other costs not covered by Simplified-SAC. This estimate would purportedly show the cost to each carrier to replace its entire system. AAR suggests that the Board use this result, modified by a 20-year discounted cash flow (DCF) model, to estimate the level of revenues that would be adequate in any given year. Because this approach assumes the productive value of the assets to be identical in each year of their economic life, AAR states that this approach could be used to assess a carrier's revenue adequacy in any given year without having to recalculate the current replacement costs for used facilities and equipment.⁷ BNSF asserts that utilizing the DCF model with such simplifying assumptions would solve the practical problems previously identified by the ICC.⁸ And AAR argues that a replacement-cost approach must be adopted because the cost of capital is now derived using a Capital Asset Pricing Model (CAPM).

REPLY COMMENTS

The Edison Electric Institute (EEI) submitted a reply in opposition to AAR's petition. It argues that AAR's proposal is incompatible with the Board's cost-of-capital methodology, which uses a nominal, rather than real, cost of capital. EEI argues that there is no applicable precedent for using replacement costs to value existing regulated assets. EEI notes that no other regulator in the United States uses a replacement cost methodology and that the Supreme Court has held that the Constitution is satisfied if the assets devoted to the regulated business are valued on an historical-cost basis, rather than a replacement-cost or "fair value" basis, citing FPC v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944); see generally Verizon Commc'ns v. FCC, 535 U.S. 467, 481-489 (2002).

The Western Coal Traffic League (WCTL) also submitted a reply opposing AAR's petition. WCTL also argues that the AAR's proposal is incompatible with the use of a nominal cost of capital. WCTL observes that AAR's proposal would adopt a target rate of return that the railroads have never achieved, and, in many cases, can never be expected to earn. Moreover,

⁵ AAR Petition at 28-34.

⁶ BNSF Comments, Hoveland V.S. at 1-4.

⁷ AAR Petition, Klick & Kalt V.S. at 27.

⁸ BNSF Comment, Hamada V.S. at 3.

WCTL contends that the language of 49 U.S.C 10704(a)(2)⁹ is not only consistent with, but mandates, the use of historical costs. WCTL also contends that the AAR proposal conflicts with Generally Accepted Accounting Principles (GAAP) and thus would run afoul of 49 U.S.C. 11161, which directs the Board to conform its cost accounting rules to GAAP “[t]o the maximum extent practicable.” In addition, WCTL argues that AAR’s proposal suffers from several technical flaws. It claims a mismatch between assuming brand new assets for purposes of asset valuation and taking account of used assets for purpose of operating expenses, and that AAR’s approach fails to properly adjust depreciation expenses. Finally, WCTL questions the validity of using Simplified-SAC assumptions to value the entire national rail network and the reasonableness of the key underlying assumption that all of a railroad’s current assets will be replaced forever.

DISCUSSION AND CONCLUSIONS

Three different federal agencies have already carefully examined the issue of whether and how to use a replacement-cost approach in the revenue adequacy determination. In the 1980s, the ICC conducted an extensive rulemaking proceeding and concluded that three key practical difficulties preclude the use of a replacement-cost approach. The first is the need to estimate the current replacement costs of rail assets, such as bridges, tunnels, land, track, and grading. The second is the need to estimate the “real” cost of capital to avoid double-counting the effects of inflation. And third is the need to identify the rail assets that would not be replaced once they have been fully depreciated, as it would be inappropriate to provide a return on the replacement cost of assets the carriers will not in fact replace. GAO and the RAPB reviewed the same issue, agreed that using a replacement-cost approach instead of a historical-cost approach would be impractical, and echoed the ICC’s conclusion that there was no feasible way to identify and revalue those assets that would not be replaced. GAO Report at 110; RAPB Final Report at 61.

With this history in mind, AAR has a heavy burden of persuasion to show that its proposed approach overcomes these practical difficulties. We have limited resources and will not set out on a protracted reevaluation of our revenue adequacy approach unless AAR has provided a framework that appears to show sufficient promise to justify the considerable burden such a rulemaking would entail.

Having carefully reviewed AAR’s proposal, we conclude that it has not overcome the practical difficulties previously identified. Nor does it provide a sufficiently promising framework that could be developed in a rulemaking proceeding. Therefore, we will deny the petition to institute a proceeding.

The biggest obstacle to the use of a replacement-cost approach has always been the challenge of identifying and valuing those rail assets that the railroad will not replace in its

⁹ Section 10704(a)(2) directs the Board to maintain and revise as necessary standards and procedures for establishing revenue levels for rail carriers that are “adequate, under honest, economical, and efficient management, to cover total operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business.”

current configuration. This kind of inquiry entails a highly case-specific analysis of the lines in question and an analysis of the projected traffic flows into the future and the profitability of the traffic that would use those facilities. In individual rate proceedings, the analysis needed to identify and prune away unnecessary facilities has proved so difficult and expensive that the Board found it necessary to develop a vastly simplified process that captive shippers could use where the value of their disputes with the carrier could not justify the expense of that larger undertaking. See Simplified Standards at 13-16.

Here, AAR seeks to overcome this obstacle by simply assuming the problem away. The validity of AAR's use of a DCF model to derive the revenue requirements of a Class I carrier rests on the implicit assumption that the railroad industry would replace its entire current infrastructure. This assumption is implausible. While as a general matter the railroad industry has moved from one with significant excess capacity in the 1980s to one that is more capacity constrained, see Simplified Standards at 14, this does not mean that all assets in today's still massive rail network would be replaced. The bare fact that investment was once made does not necessarily mean that it would be profitable to undertake again. Yet AAR would apply its methodology to all assets. While it is appropriate to allow a complainant in a simplified rate case to assume that all assets used to serve its traffic will be replaced,¹⁰ AAR has provided no justification for the proposition that the rail industry should be earning a return on the replacement cost of its entire existing infrastructure.

Moreover, adopting an approach that provides a full return on the replacement cost of all rail assets—without any inquiry into whether all assets are still used and useful—would create the perverse incentive for railroads to maintain inefficient and obsolete facilities. As a carrier approached or reached revenue adequacy, it would have every incentive to hold onto track, bridges, or other facilities that are no longer used or useful because the regulatory framework would allow it to earn a full return on the full replacement costs of those assets. So, for example, if a railroad had a number of decrepit bridges at the end of light-density rail lines, AAR's approach would provide the carrier a full return on the replacement costs of the bridges, in effect expecting shippers to provide the railroad and its stockholders with a return on a rail asset that is of little or no continued use and will not be replaced. In contrast, our historical-cost approach permits a carrier a full return on such a bridge only when the bridge is actually replaced.

AAR argues that a replacement-cost approach must be adopted because we now use CAPM (rather than a single-stage DCF model) to estimate the railroad industry cost of capital. AAR argues that, because the cost of capital estimate using CAPM reflects a market-based rate of return, it must be compared to the market value of the railroad's assets. We disagree that our use of CAPM requires us to switch to a replacement-cost approach. While CAPM has become a

¹⁰ In a Simplified-SAC proceeding, the complainant can make an individualized showing that facilities on the route in question have fallen into disuse and should not be replicated in the analysis. Further, a shipper that believes that its rate is unreasonably high because of inefficiencies in the carrier's plant and operations has the option of bringing a Full-SAC complaint that can demonstrate those inefficiencies. Because such a showing is complex and expensive, it is not possible to do so in the expedited fashion contemplated by Simplified Standards.

generally accepted method for estimating the cost of equity, it is routinely applied to historical costs to calculate a company's return on investment.¹¹ Moreover, any method used to determine the cost of capital—whether we use a CAPM, a multi-stage DCF, a combination of the two,¹² or any other accepted model for estimating the cost of equity—will produce a “market-based” rate of return, as the basic inquiry is the return that equity holders require of the railroads. How we then value the investment base is independent of the particular method used to estimate the cost of capital, except that use of a replacement-cost approach would require an adjustment to the cost-of-capital estimate to exclude the inflation component.¹³

In sum, the railroad proponents have failed to overcome the practical difficulties associated with using a replacement-cost approach to perform the annual revenue adequacy determination. A replacement cost approach has only proven to be practical in the context of an individualized rate proceeding where the Board's SAC test is applied, because under the SAC procedure only used and useful assets are included in the investment base at replacement cost. Given the inability of the proponents to identify any feasible way to overcome these long-standing obstacles, continued use of depreciated original cost, not replacement cost, leads to the most accurate assessment of the financial health of the railroad industry. For these reasons, the petition will be denied.

This action will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

1. The petition to institute a rulemaking proceeding is denied.
2. This decision is effective on its date of service.

By the Board, Chairman Nottingham, Vice Chairman Mulvey, and Commissioner Buttrey.

Anne K. Quinlan
Acting Secretary

¹¹ We take official notice, for example, that Morningstar/Ibbotson applies its calculation of the rail industry's cost of capital to the railroads' book values.

¹² See Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital, STB Ex Parte No. 664 (Sub-No. 1) (STB served Aug. 11, 2008).

¹³ The adjustment would require application of a lower rate of return offset by a higher depreciation. In addition, accrued depreciation—which is subtracted from gross investment—would have to reflect the replacement cost basis.