

The
PROCESS

OF

RATEMAKING

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that produced those earnings in the same period. In theory, the formula for representing an experienced or forecast RR/RB is quite simple:

$$\frac{\text{Earnings}}{\text{Property value}}$$

Experienced earnings and property values may be derived from financial statements for the relevant period.

Each earned, experienced, or, for that matter, forecast rate of return requires a computation of earnings over a period of time. Such a period of earnings, typically for one year, may be an average for a lesser or longer period. Since the return figure is not derivable solely from any balance sheet, a "snap shot" rate of return is a confusion in terms. Although investment at a point in time may be relevant, each rate of return requires some consideration of earnings over a period of time and not merely as aggregated or collected or retained to a point in time.

As noted above, property values may be read from an actual or forecast balance sheet. More than one balance sheet may be needed, particularly where the regulator seeks the average property value over a period of time; the regulator for example, in lieu of a special valuation, may rely on the average of the beginning and ending balance sheets for the period in question. In any event, not all the property shown on the balance sheet will be included; and there may or may not be an added allowance for "working capital."

Allowable return. In cost of service ratemaking, the allowable return is a component of the rate. An agency may prescribe the allowable rate of return either before or at the time it prescribes the rate. A finding that a return will enable a company to attract capital at reasonable cost and assure adequate service is the equivalent of finding a just and reasonable component of the rate.¹

Past excess earnings excluded. Under the rulings of the Supreme Court, past excess earnings cannot be used to sustain an otherwise inadequate rate for the future.² The regulated company is entitled to the opportunity to earn a fair return in the future period. The rule is related to the additional rule of *Arizona Grocery*,³ that an agency may not revisit an approved past rate, whether the rate in the past is now considered too high or too low. When the agency authorizes the filing of a rate, the filing has future legal effect.⁴ At the same time the agency gives no guaranty the company will realize the full amount of the revenues implied by the filing of the

¹ *Nader v. F.C.C.*, 520 F.2d 182, 204 (D.C.Cir. 1975). However, the additional holding of this court, that a rate is somehow "prescribed" when an agency merely decides the rate of return and allows a rate to go into effect without suspension, seems unsound. An agency finding is not tantamount to an order. See also p. 173 *supra*.

² *Galveston Electric Co. v. Galveston*, 258 U.S. 388, 395 (1922); *Board of Commissioners v. N.Y. Tel. Co.*, 271 U.S. 23, 31-32 (1926); and see other cases discussed at p. 292, *supra*.

³ *Arizona Grocery Co. v. Atchison, T. & S.F.R. Co.*, 284 U.S. 370 (1932).

⁴ Compare the definition of "rule" in the federal APA, 5 U.S.C. §551(4), which "includes the approval or prescription for the future of rates ... or practices bearing on any of the foregoing."

rate; the filing merely presents the regulated company with an opportunity to earn the return implicit in the filed rate.¹

Summary of methodology. The computation of the allowable or reasonable RR/RB figure is far different from the depiction of the earned or actual return. Here the regulator must construct both a reasonable rate of return as well as a reasonable rate base. Rather than seek the experienced earnings over a period of time for a numerator, the regulator will ask “what earnings rate is needed to attract capital”; and the answer to that question will be found in an analysis of the “cost of capital” for each variety of capital showing up on the regulated entity’s balance sheet(s) in the test year or over a number of years.

A study of the return requirement should encompass a number of years. The C.A.B., for example, early recognized the hazard of regulating rates in the short run. The airlines typically would have good years and bad ones. The board thought the industry was best served by a level of fares that reflected their “cyclical needs rather than the needs of any particular year.” Otherwise, they would be required to lower their fares in times of prosperity and raise them when traffic conditions were poor, neither of which would “make business sense.”²

The allowable return is not the investors’ “expected” return, but rather their “required” return. “The return required to induce an investor to purchase equity securities may not be the return the investor expects to realize.”³

At the same time, the regulator will derive an allowable rate base by identifying the properties that produce the service, valuing such properties (after deducting an allowance for past use of the property), and augmenting the property values typically by an allowance for “working capital,” if there is a capital cost associated with such funds.⁴

The resulting formula for the allowable RR/RB again may be summarized simply in an expression that in form is quite different from the earlier one for the experienced or forecast return. If we allow the letter “R” to represent the Allowable Rate of Return and the letter “B” to represent the Allowable Rate Base, the foregoing formula becomes “R × B.” The “R” in the above formula will be a percentage. The “B” will be in dollars. The result of the multiplication will be the dollars of return (or “cost of capital”) that the regulated company will be allowed to earn in addition to all other costs of its providing the regulated service.

The RR/RB calculation results in a dollar amount that can then be translated into units of revenue that the regulated company may charge the users of its service. The RR/RB is particularly suited to the regulation of companies that have significant

¹ See also p. 31, *supra*.

² GPFJ Order No. E-7376, Apr. 23, 1953, discussed further in Redford, Emmette S., *The Regulatory Process*, Univ. of Tex. Press, Austin, Tex., pp. 156-57 (1969). The board, however, in early 1958 accepted a downward “trend” in business conditions over but three months as evidence of airline inability to continue normal growth, and granted a fare increase. Redford, *supra*, at 222-23.

³ Re U.S. West Communications, Inc., 165 PUR4th 235, 282 (Utah PSC, 1995). For the consequent relevance of the market-to-book ratio, see p. 607, *infra*.

⁴ In companies that collect customer revenues prior to producing the service, there may be no capital cost associated with so-called working capital. See p. 829, *infra*.

Computation—in general. The standard method for reaching a fair rate of return involves, 1) an estimation of the capital attraction rates for each component of the regulated company's capital; and 2) a combination of the various costs of capital into

Formula for Combined Cost of Capital			
Capital Component (1)	Portion of Tot. Capital (2)	Cost (in Percent) (3)	Rate of Return (4)
1. Debt.....	% of total	Cap.attraction rate	Col. 2 × Col. 3
2. Equity.....	% of total	Cap.attraction rate	Col. 2 × Col. 3
3. Total.....	100.0%		Line 1 + Line 2

one overall rate of return in accordance with the percentage each component bears to the overall capitalization. The rate of return will equate to the combined cost of capital, as set forth in the table in the accompanying box.

Combined Airline Cost of Capital—1971			
Capital Component (1)	Portion of Tot. Capital (2)	Cost (Percent) (3)	Rate of Return (Col. 2 × Col. 3) (4)
1. Debt.....	.45	6.2%	2.79%
2. Equity.....	.55	16.75	9.21%
3. Total.....	100		12.00%

For example, in 1971 the C.A.B. found that a 12 percent rate of return would be reasonable for the larger (trunkline) airlines, which it constructed from the computation of the overall trunkline cost of capital shown in the box to the left.¹ The C.A.B.

relied on its 12 percent rate of return finding throughout the 1970s.

The basic premises of the cost of capital computation are that the regulated company should be allowed the opportunity to earn revenues, as the Supreme Court stated in *Hope*, “to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed.”²

Relation to opportunity cost. Each rate of return based on cost of capital is an “opportunity” cost in the sense that once the rate of return has been established, unless there are express statutory guarantees,³ the rate of return finding a) provides the regulated company but an opportunity to earn the established return;⁴ and b) the opportunity is equivalent to other opportunities for investing capital at a fair level. The regulator does not guaranty the return will in fact be earned, nor that the regulated company will attain any particular bond rating.⁵ Several consequences follow from this opportunity cost principle.

First, the regulator does not make a series of rate of return findings based on differing hypothetical facts to better ensure the regulated company will earn the fair rate of return. It makes but one ultimate rate of return finding based on all the facts then known at the time of its decision.

¹ C.A.B. Order No. 71-4-58, Apr. 9, 1971, *DPFI*, pp. 673, 675.

² 320 U.S. at 605.

³ For many years under the Civil Aeronautics Act of 1938, 52 Stat. 973, and later under the Federal Aviation Act of 1958, 72 Stat. 731, the C.A.B. computed the federal subsidy payable to the (generally smaller) airlines that showed past losses. Payments were made in the form of additional revenues for the carriage of mail (so-called “mail pay”).

⁴ For a more narrow use of the phrase “opportunity cost” to refer to the comparative earnings test, see p. 625, *infra*.

⁵ *Re Oklahoma Gas and Elec. Co.*, 150 PUR4th 33, 44 (Okla. CC, 1994).

Second, once the rate of return finding has been made, and the regulated company has attempted to earn such a return and failed, there is no second chance. Past losses are not allowable expenses for setting the next rate of return.¹

Comparative risk. In the *Hope* case, the Supreme Court stated that “the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.”² It is quite generally accepted that this test does not require either, 1) a judgmental comparison of the specific risks of the regulated enterprise vis-a-vis other regulated or unregulated enterprises; or 2) any analysis beyond the cost of capital of the regulated enterprise; that is if the rate of return allows the debt to be serviced and provides for cost of equity, the comparative risk requirement is fully satisfied.

The requirement of a comparison of risks originated as an independent supplementary doctrine to the *Smyth v. Ames*³ fair value rate base. Its purpose was apparently to serve as a rough check and guide through the morass of reproduction costing. The Supreme Court may also have inserted a reference to comparative risk in *Hope* to respond to Justice Douglas’ dissenting opinion in which he questioned the relevance of “investment” in the regulation of the natural gas industry. Justice Douglas’ position was that “investment and capacity to serve” as well as investment and profit to be realized, are irrelevant phenomena in this industry, “being more erratic and irregular and unpredictable in relation to investment than ... any other utility business.”⁴

As a guide to rate-making theory today, the restatement of comparative risk in the *Bluefield* case⁵ is usually preferred:

A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

Earlier the Supreme Court had said in another often-quoted passage,⁶

There is no particular rate of compensation which must in all cases and in all parts of the country be regarded as sufficient for capital invested in business enterprises. Such compensation must depend greatly upon circumstances and

¹ Discussed at p. 292, *supra*.

² 320 U.S. at 603.

³ 169 U.S. 466 (1898).

⁴ 320 U.S. at 647, 649.

⁵ *Bluefield Water Works & Improvement Co. v. PSC of the State of W.Va., et al.*, 262 U.S. 679, 692, 693 (1923). *Cf. Smyth v. Ames, op.cit.supra*, at 529 *et seq.*

⁶ *Willcox et al. v. Consolidated Gas Co.*, 212 U.S. 19, 48-49 (1909).