Fair Value

Historical Cost Rate of Return and Fair Value Rate Base

In spite of what some people believe, it is not proper to apply an historical cost rate of return to a fair value rate base. To fully explain why a utility's original cost rate of return and fair value rate base should not be used together, it is helpful first to review some of the theoretical concepts underlying value and return.

Economists recognize that value and return are interrelated concepts, which cannot be viewed independently. The interrelationships between value and return, however, are often somewhat complex. For example, consideration of the current (replacement) costs of building can greatly affect the return to be received by owners of buildings. On the other hand, the value of such a building will be determined largely by the return which can be obtained from its use. Thus, replacement cost influences returns, and returns influence economic or market value.

For instance, if the building's design, location, and other factors are desirable enough to allow relatively high rents to be charged, and thus a high return to be earned, then the building's value will be relatively high. In contrast, if the return which can be received from the building is relatively low, due to low rents or high expenses, then the value of the building will be relatively low. In general, the economic or market value of investment property is determined largely by the return which can be expected on that property, the riskiness associated with that expected return, and the level of return demanded by investors and available elsewhere in the economy.

Accordingly, for a given level of riskiness, an investment yielding relatively high returns will have a high economic or market value, while an investment yielding relatively low returns will have lower returns. These general interrelationships between value and return apply throughout the economy. However, the relationships are rarely simple in actual practice, so that careful analysis is often required to understand how these general principles are working in specific situations.

In examining the interrelationships between value and return, it is also important to realize that the pattern of growth in the annual return from an investment will affect the present value of that investment. Further, it should be realized that growth in the value of an investment is actually a component of the total return achieved by the investor. Indeed, for many so-called growth stocks which pay little or no dividends, virtually the entire return received by the investor results from growth in the market value of the stock (capital gains).

Similarly, the present value of an investment is determined by both the current return and the expected pattern of growth in that return. Thus, real estate investors during a period of inflation will often purchase property with extremely low or negative current returns, because they anticipate substantial growth in these returns.

Accordingly, in an inflationary period investors might construct a new office building, despite the fact that the rent payments during the first few years will actually be less than the direct expenses (interest, utilities, taxes, etc.) if rents are expected to increase. If investors are expecting rental rates to increase in the future, they would ascertain the pattern of returns over the life of the building, and may be willing to accept extremely low or negative returns during the early years, because they anticipate relatively high earnings in later years.

Before looking at the question of value and return in the context of utility regulation, it may be useful to summarize the points just discussed. The key point is that value and return are interrelated, and cannot correctly be treated as independent. one component of the total return received by investors is growth in value; hence, if the value of the investment will grow relatively rapidly, the nominal return required by investors will be correspondingly lower, leaving the total required return at a normal rate.

In utility regulation, the interrelationship between the appropriate value of a utility investment and the appropriate return on that value has been, at times, the cause of considerable confusion and controversy. In most regulatory jurisdictions, however, the controversy over value and return has waned to the point of insignificance.

Most theorists agree that the primary objective of regulation was, and still is, to produce results in the utility sectors of the economy which parallel those that would be obtained under conditions of competition. The results of maximum efficiency and equity, existent under competition, have long been a primary justification of America's free enterprise or market-directed economy. Most economists recognize that competition does not predominate in our economy; yet most accept the results of competition as an ideal toward which we should strive. It is only natural that in the utility sector of the economy, where government controls the market results, the standard established for regulation has traditionally been the results which would be achieved under competition.

Using this competitive standard, rate levels should be set so as to provide a well-managed utility the opportunity to recover all of its necessary costs, including a fair return on the capital employed. Further, while under this standard, the utility may recover less than its full costs or more than its full costs in the short run, over a long period of time the utility's total costs should generally be equated with total revenues. When rates are adopted in accordance with this objective, the result will be an equitable and efficient balance between the interests of the utility and its investors, and the interests of the utility's customers. Such a balance occurs naturally in the world of competition, and is clearly a desirable goal for regulation in the public interest.

Consequently, it becomes clear that the general economic goal of regulation is to provide an opportunity for an efficiently managed utility to recover its full costs, including a fair return on its capital.

Fair Rate of Return

In most jurisdictions it is now generally agreed that the fair rate of return is that percentage figure which, when applied to the rate base, will yield in dollars the net operating income which the utility should have the opportunity to earn. Further, with only minor exceptions, it is generally agreed that the resulting dollar figure for net operating income should be equal to the utility's cost of capital stated in dollars. That is to say, the dollar amount which results from multiplying the rate of return by the rate base should be sufficient to pay the jurisdictional portion of the utility's interest costs, to pay preferred stock dividends, and to provide a reasonable return on common equity.

A Fair Rate of Return and the Utility's Cost of Capital

While these two terms are often used interchangeably, I distinguish between them, because they are not necessarily identical. There are two reasons for making this distinction. First, a regulatory commission may wish to allow a rate of return which

differs from the cost of capital, on the basis of its findings as to the quality of management or quality of service of a particular company. Second, the cost of capital will differ from the fair rate of return if the definition of rate base is not comparable to the definition of total capital used in calculating the cost of capital. When viewed in this way, with the utility's cost of capital as a f ocal point, it is apparent that the fair rate of return is a percentage f igure which will vary, depending upon the method used in calculating the rate base. If an original cost rate base is used, the fair rate of return will generally be equal to a composite, or weighted average, of the utility's cost of debt, preferred stock, and equity, with each of these cost rates being calculated on the basis of original cost. Conversely, if the utility is to be given an opportunity to earn the same dollar cost of capital from a fair value rate base, the appropriate fair return will differ from that which would be applied to an original cost rate base.

Consider, for example, the utility's interest cost. If the book value of the utility's investment is $1,000, and 50% of this was provided by debt with an embedded interest cost of 8%, then the utility's interest costs amount to $40 per year. Regardless of whether an original cost or fair value approach is used in calculating the rate base, the utility should logically be provided with $40 per year to recover its interest expense, no more and no less.

If an original cost evaluation method is used, the rate base will be valued at $1,000, and the half of the rate base which was provided by debt funds would be valued at $500. Accordingly, the fair rate of return to apply to this portion of the rate base would be 8%. Applying this 8% fair return to the $500 value of the rate base results in an income requirement of $40, which is the amount necessary to pay the interest. However, if a fair value rate base is used, and the value of the rate base is determined to be $1,400, the value of the half of the rate base provided by debt would be $700. Hence, A fair return would not be 8%. Rather, the fair return would be 5.71%. ($40 divided by $700 equals 5.71%.) Put another way, there is nothing fair about applying an 8% rate of return to.a fair value rate base, when this 8% figure is based upon the book value of the Company's debt and the property purchased with those debt funds. The appropriate return on a fair value rate base must logically be less than the original (book) cost of capital.