NEW REGULATORY FINANCE, MORIN

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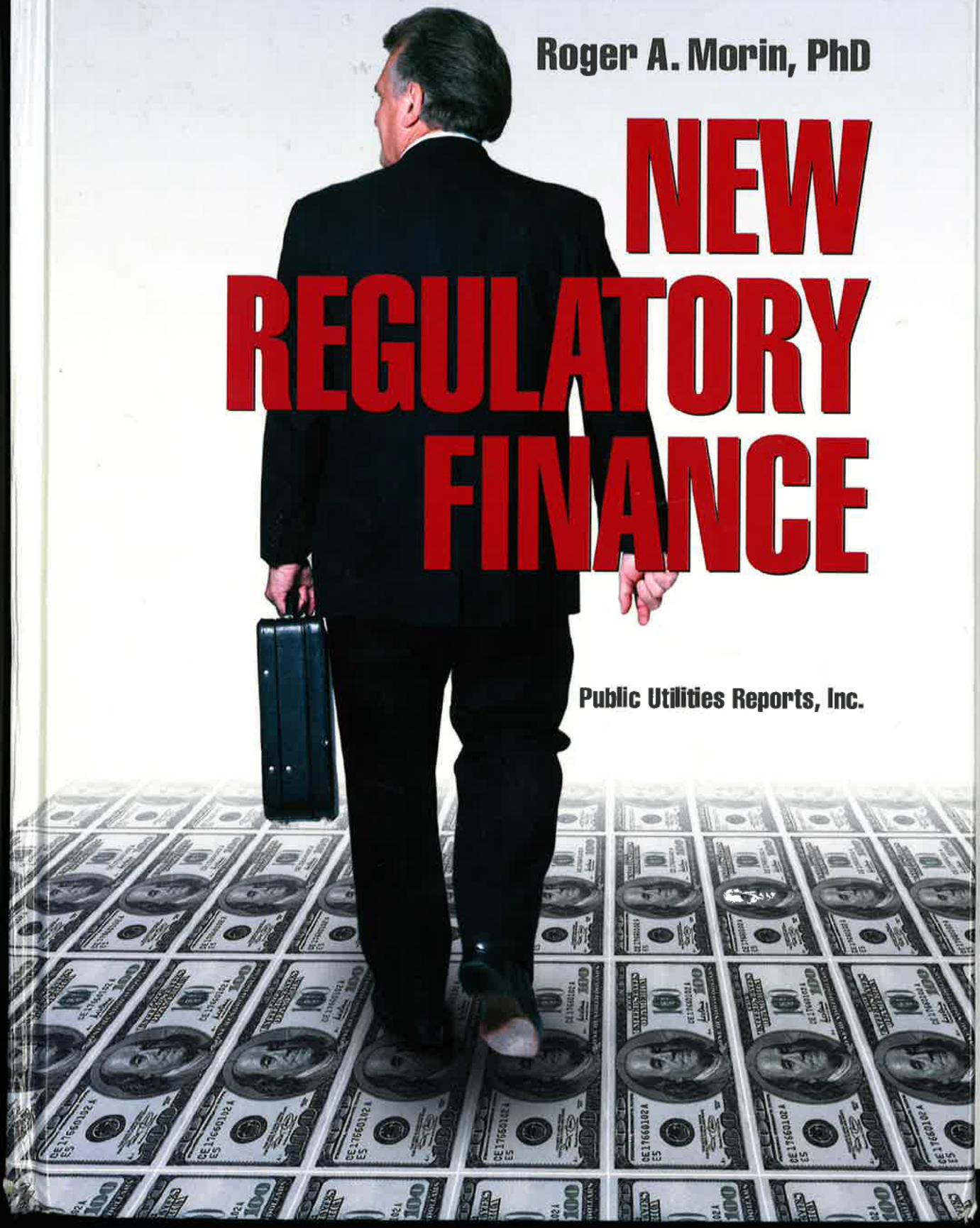
Public Utilities Reports, Inc.



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growth rate, caused in turn by an inadequate earnings level, or by a low dividend yield component. The reverse conditions may cause an upward-biased risk premium. The estimated risk premium may be illusory because of the inability to measure accurately the equity return on the company's stock.

If the risk premium is based on the company's own bond yields rather than on Treasury bond yields, distortions can occur due to characteristics of the company's bonds. For example, the spread between Treasury bond yields and corporate bond yields widens during volatile capital market periods because of call provision effects. If the company's bonds are callable after 5 years from the issue date, and if investors expect falling interest rates, the relative probability of recall on the corporate bonds is thus increased, and a greater yield premium is required from such bonds.

Another potential drawback of the approach is that rate of return analysts sometimes use the approach as a check on their DCF estimate. This is circular to the extent that the risk premium computation relies on the DCF estimate of equity return.

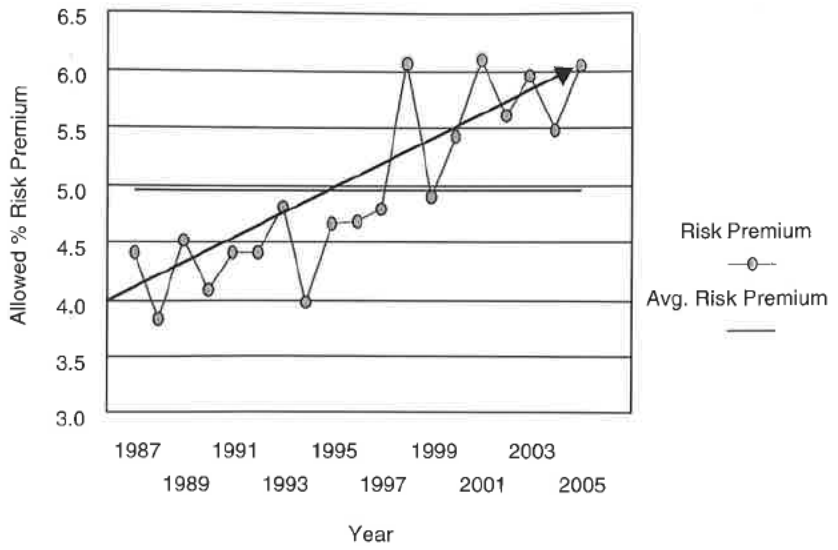
4.5 Allowed Risk Premiums

Another risk premium technique to estimate the cost of common equity consists of examining the risk premiums implied in the returns on equity allowed by regulatory commissions for utilities over some past period relative to the contemporaneous level of the long-term Treasury bond yield. Allowed equity returns are reported on a quarterly basis by Regulatory Research Associates. To illustrate, the graph of Figure 4-3 shows the year-by-year allowed risk premium over long-term Treasury yields for the 1987–2005 time period for the electric utility industry. The average allowed premium is 5.0% for the overall period, as shown by the horizontal line in Figure 4-3. An interesting feature of the graph is the escalating trend of the allowed risk premium in response to the lower interest rate levels of the last decade and rising competition and restructuring. Allowed risk premiums in more recent years have approached 6%.

A careful review of these common equity decisions relative to interest rate trends reveals a narrowing of the risk premium in times of rising interest rates, and a widening of the premium as interest rates fall. The following statistical relationship between the risk premium (RP) and interest rates (YIELD) emerges over the period:

$$RP = 8.2049 - \underset{(t\,=\,-8.4)}{0.4833}\ YIELD \qquad R^2 = 0.81$$

FIGURE 4-3
U.S. ELECTRIC UTILITIES
ALLOWED RISK PREMIUM 1987–2005

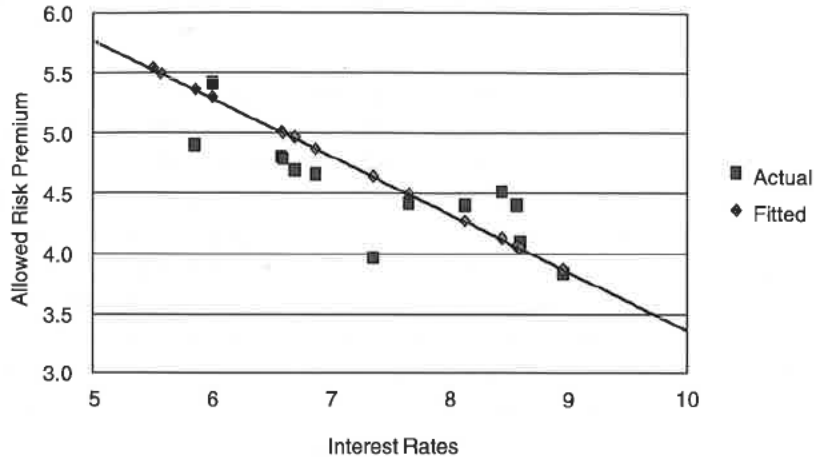


The relationship is highly statistically significant as indicated by the high R^2 and statistically significant t-value of the slope coefficient. Figure 4-4 shows the clear inverse relationship between the allowed risk premium and interest rates as revealed in past common equity decisions.

To obtain the cost of equity, the current long-term Treasury bond yield is inserted in the above equation. For example, if the current (or projected) long-term Treasury bond yield of 5.0% is substituted in the above equation, a risk premium estimate of 5.8% should be allowed for the average risk electric utility, implying a cost of equity of 10.8% for the average risk utility. To the extent that a given utility is riskier (less risky) than average, the allowed risk premium applicable to that utility is correspondingly higher (lower). A nearly identical pattern is revealed for natural gas utilities.

It is sometimes alleged that reliance on allowed risk premiums is circular. This is a dubious argument to the extent that allowed risk premiums are presumably based on objective market data (dividends, interest rates, beta, stock prices, etc.), and not strictly on the decisions of other regulators. The market return on equity for regulated firms is determined by competitive forces, unlike the book return on equity which instead reflects the past actions of regulatory commissions. It would indeed be circular to set a fair return based only on the past actions of other regulators, much like observing a series of duplicate images in multiple mirrors. But to the extent that regulators

FIGURE 4-4
ALLOWED RISK PREMIUM VS INTEREST RATES
1987–2005



set the allowed rate of return based on market-based methodologies rather than accounting-based methods or the allowed returns of other regulators, the circularity problem is mitigated. Allowed risk premiums are presumably based on the results of market-based methodologies presented to regulators in rate hearings and on the actions of objective unbiased investors in a competitive marketplace.

4.6 Negative Risk Premium

In periods of turbulent capital markets and volatile interest rates, some cost of capital experts testifying in regulatory proceedings advance the notion that utility debt securities become riskier than equity securities, and that the bond-stock risk premium becomes negative. This section reviews the arguments underlying this view.

The notion of a negative risk premium refers to the situation where the expected market return of common equity is less than that of the bonds of the same issuer. Expressed in another way, the debt securities having prior claims are more costly to the issuer than the securities having residual claims.

Such a view is not consistent with the basic precepts of finance, economics, and business law. By simple legal fact, common shareholders are residual claimants to a company's earnings and assets, while bondholders are priority claimants on corporate assets and earnings. The interest payments to bondholders take precedence and must be serviced first, before any distribution of