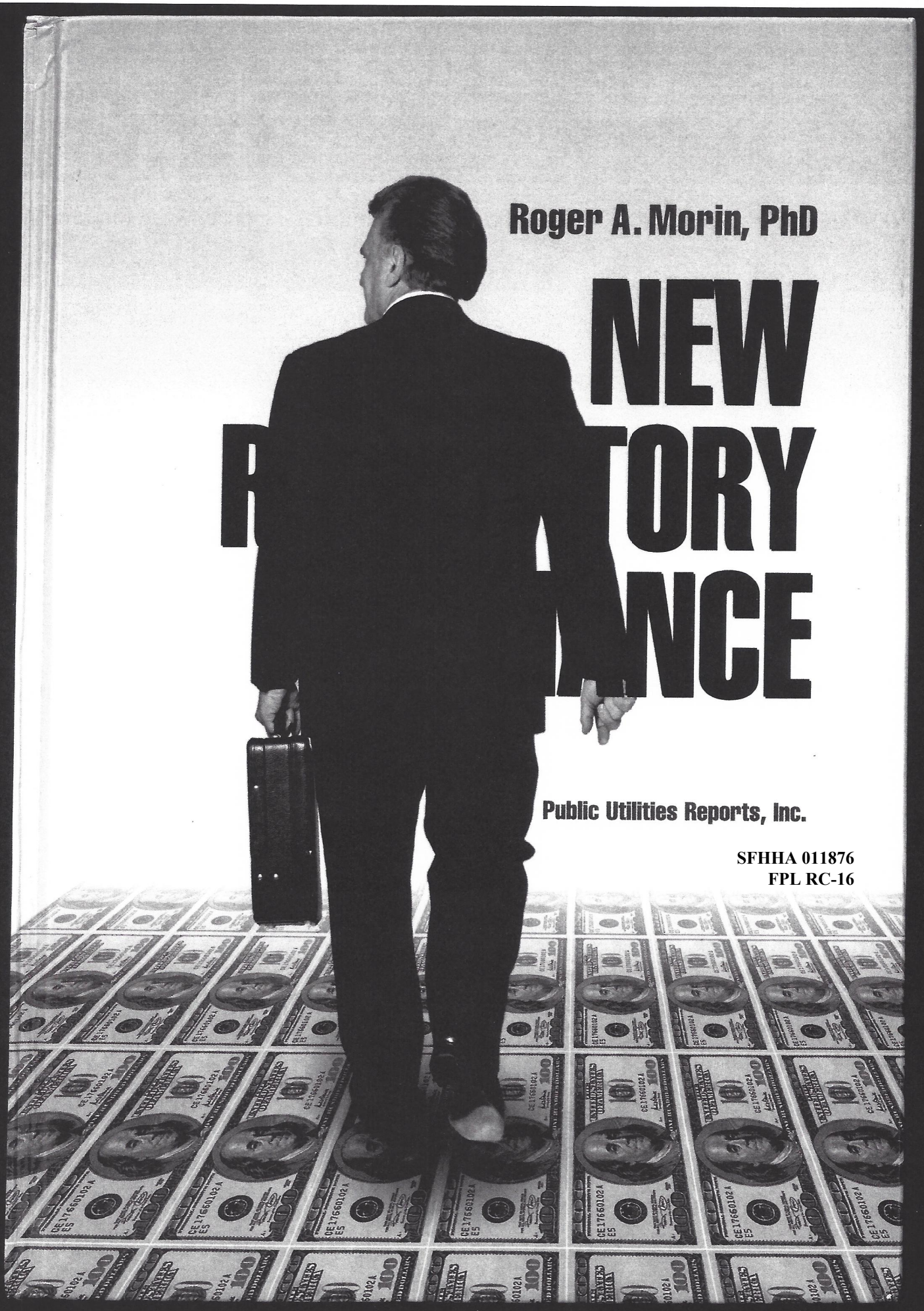

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TABLE 15-1
EFFECT OF MARKET-TO-BOOK RATIO ON MARKET RETURN

	Situation 1	Situation 2	Situation 3
1 Initial purchase price	$25.00	$50.00	$100.00
2 Initial book value	$50.00	$50.00	$50.00
3 **Initial M/B**	**0.50**	**1.00**	**2.00**
4 **DCF Return 10% = 5% + 5%**	**10.00%**	**10.00%**	**10.00%**
5 Dollar Return	$5.00	$5.00	$5.00
6 Dollar Dividends 5% Yield	$1.25	$2.50	$5.00
7 Dollar Growth 5% Growth	$3.75	$2.50	$0.00
8 **Market Return**	**20.00%**	**10.00%**	**5.00%**

But what if investors expect an increase in the price/earnings ratio from 12.5 to 13.5? Then, the growth in value is from $100 to $114.48, or 13.5 times next year's earnings of $8.48, for a total return of 18.5% (dividend yield of 4%, plus growth in value of 14.5%). The orthodox DCF model would indicate returns of 10%, whereas the investors' true expected return is 18.5%. Investor-expected returns are substantially understated whenever investors anticipate increases in relative market valuation, and conversely.

The third and perhaps most important reason for caution and skepticism is that application of the DCF model produces estimates of common equity cost that are consistent with investors' expected return only when stock price and book value are reasonably similar, that is, when the M/B is close to unity. As shown below, application of the standard DCF model to utility stocks understates the investor's expected return when the market-to-book (M/B) ratio of a given stock exceeds unity. This was particularly relevant in the capital market environment of the 1990s and 2000s where utility stocks were trading at M/B ratios well above unity and have been for nearly two decades. The converse is also true, that is, the DCF model overstates the investor's return when the stock's M/B ratio is less than unity. The reason for the distortion is that the DCF market return is applied to a book value rate base by the regulator, that is, a utility's earnings are limited to earnings on a book value rate base.

The simple numerical illustration shown in Table 15-1 demonstrates the impact of M/B ratios on the DCF market return. The example shows the result of applying a market value cost rate to book value rate base under three different M/B scenarios. The three columns correspond to three M/B situations: the stock trades below, equal to, and above book value, respectively. The latter situation is noteworthy and representative of the capital market environment of the last two decades. As shown in the third column, the DCF cost rate of 10%, made up of a 5% dividend yield and a 5% growth rate, is applied to