No. Ameren Missouri-Staff-029

Data Information Request
From Union Electric Company d/b/a Ameren Missouri
MPSC Case No. ER-2012-0166

Requested From: MPSC Staff - David Murray

Requested By: Tom Byrne

Date of Request: September 6, 2012

Information Requested:

Provide the page of the text book that discusses the Rule of Thumb which you discussed at your deposition on August 29,2012. Please provide all other sources that endorse the use of the Rule of Thumb.

Response:
Please see that attached document, which includes the page in which the risk premium is discussed along with other pages that provide the title, authors and copyright information on the textbook.

Response Provided By: ______________________________ Date:

ANALYSIS OF EQUITY INVESTMENTS: VALUATION

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correct?), and uncertainty about the true current value of the stock's beta or factor sensitivity or sensitivities. (When we obtain beta by conducting the needed regression of stock returns on an equity index's returns ourselves, we should check the t-statistic of beta and note the regression's R-squared as indicators of the usefulness of CAPM for explaining returns on the stock.)[20] Having an alternative to the CAPM and APT is useful. For companies with publicly traded debt, the **bond yield plus risk premium method** provides a quick estimate of the cost of equity.[21] The estimate is

$$\text{BYPRP cost of equity} = \text{YTM on the company's long-term debt} + \text{Risk premium} \quad \textbf{(2-7)}$$

The yield to maturity (YTM) on the company's long-term debt incorporates the time value of money and default risk, which is related to the business's profitability and leverage. The risk premium compensates for the additional risk of equity compared with debt (debt has a prior claim on the cash flows of the company). In U.S. markets, the typical risk premium added is 3–4 percent, based on experience.

EXAMPLE 2-5. The Cost of Equity of IBM from Two Perspectives.

You are valuing the stock of International Business Machines Corporation (NYSE: IBM) as of December 21, 2001, and you have gathered the following information:

20-year T-bond yield to maturity:	5.8%
IBM 8.375s of 2019 yield to maturity:	6.238%

The IBM bonds, you note, are investment grade (rated A1 by Standard & Poor's and A+ by Moody's Investors Service). The beta on IBM stock is 1.24.

1. Calculate the cost of equity using the CAPM. Assume that the equity risk premium is 5.7 percent.
2. Calculate the cost of equity using the bond yield plus risk premium approach, with a risk premium of 3 percent.
3. Suppose you found that IBM stock, which closed at 121.45 on December 21, 2001, was slightly undervalued based on a DCF valuation using the CAPM cost of equity from Question 1. Does the alternative estimate of the cost of equity from Question 2 support the conclusion based on Question 1?

Solution to 1. $E(R_i) = 0.058 + 0.057\beta_i = 0.058 + 0.057 \times 1.24 = 0.058 + 0.0706 = 0.1286$, or 12.9%.

Solution to 2. We add 3 percent to the IBM bond YTM: 6.238% + 3% = 9.238%, or 9.2%. Note that the difference between the IBM and T-bond YTM is 0.438 percent, or 44 basis points. This amount plus 3 percent is the total risk premium versus Treasury debt.

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[20] See DeFusco et al. (2001) for definitions of these terms and a discussion of issues surrounding estimating beta.

[21] Although simple, the method has been used in serious contexts. For example, the Board of Regents of the University of California in a retirement plan asset/liability study (July 2000) used the 20-year T-bond rate plus 3.3 percent as the single estimate of the equity risk premium.