
Problems

Easy Problems 1–4

(6-1) Portfolio Beta

Your investment club has only two stocks in its portfolio. \$20,000 is invested in a stock with a beta of 0.7, and \$35,000 is invested in a stock with a beta of 1.3. What is the portfolio's beta?

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(6-2) Required Rate of Return

AA Corporation's stock has a beta of 0.8. The risk-free rate is 4%, and the expected return on the market is 12%. What is the required rate of return on AA's stock?

(6-3) Required Rates of Return

Suppose that the risk-free rate is 5% and that the market risk premium is 7%. What is the required return on

- (1) the market,
- (2) a stock with a beta of 1.0, and
- (3) a stock with a beta of 1.7?

(6-4) Fama-French Three-Factor Model

An analyst gathered daily stock returns for February 1 through March 31, calculated the Fama-French factors for each day in the sample (SMB_t and HML_t), and estimated the Fama-French regression model shown in Equation 6-21. The estimated coefficients were $a_i = 0$, $b_i = 1.2$, $c_i = -0.4$, and $d_i = 1.3$. On April 1, the market return was 10%, the return on the SMB portfolio (r_{SMB}) was 3.2%, and the return on the HML portfolio (r_{HML}) was 4.8%. Using the estimated model, what was the stock's predicted return for April 1?

Easy Problems 1–10

(7-1) FCF Projections

Ogier Incorporated currently has \$800 million in sales, which are projected to grow by 10% in Year 1 and by 5% in Year 2. Its operating profitability ratio (OP) is 10%, and its capital requirement ratio (CR) is 80%.

- a. What are the projected sales in Years 1 and 2?

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- b. What are the projected amounts of net operating profit after taxes (NOPAT) for Years 1 and 2?

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- c. What are the projected amounts of total net operating capital (OpCap) for Years 1 and 2?

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- d. What is the projected FCF for Year 2?

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(7-2) Value of Operations: Constant FCF Growth

EMC Corporation's current free cash flow is \$400,000 and is expected to grow at a constant rate of 5%. The weighted average cost of capital is $WACC = 12\%$. Calculate EMC's estimated value of operations.