What is the fixed-cost expenditure for a firm with a DOL of 4.5 that generates pretax profits of $1 million and has $600,000 in depreciation expense?

$2.9 *million = fixed costs*

If a share of stock provided a 14.0% nominal rate of return over the previous year while the real rate of return was 6.0%, then the inflation rate was:

*7.55% = inflation rate*

What is the break-even level of revenues for a firm with $6 million in sales, variable costs of $3.9 million, fixed costs of $1.2 million, and depreciation of $1 million?

*Variable costs* =  = 65%

*Break-even level of revenues* =(depreciation+fixed costs)/(1-variable costs/sales)== $6,285,714

What is the effect on break-even level of revenues for each dollar of increase in fixed costs plus depreciation for a firm with 70% variable costs?

*Break-even level of revenue* = 

= 

= $3.33

What percentage change in sales occurs if profits increase by 3% when the firm's degree of operating leverage is 4.5?

% *change in sales* = 0.67%

What is the NPV of a project that costs $100,000, provides $23,000 in cash flows annually for six years, requires a $5,000 increase in net working capital, and depreciates the asset straight line over six years while ignoring the half-year convention? The discount rate is 14%.

Net Present Value = -13,282.71

A video rental store will cost $650,000 to open. Assuming annual sales of $1 million, variable costs of 35%, fixed costs of $300,000, depreciation of $100,000, and a tax rate of 35%, calculate the NPV of the project over a 10-year horizon (no inflation or salvage value assumed) with a 12% cost of capital. Conduct a sensitivity analysis by allowing investment, sales, variable costs, and fixed costs to vary by plus/minus 10% from their original estimates. Which variable appears to affect profitability the most?

|  |
| --- |
|  |
| NPV= $833,175 |

Calculate the nominal and real returns for the following corporate bond investment: Purchased for $840 one year ago, 4% coupon rate, sold for $894. The inflation rate was 5.0% during the year. Would you consider this an appropriate investment if Treasury bills had yielded 6.0% over the same period?

*Nominal yield =* *11.19%*

*Real yield = 5.90%*

What is the expected return on a portfolio that will decline in value by 13% in a recession, will increase by 16% in normal times, and will increase by 23% during boom times if each scenario has equal likelihood?

*Expected return = 8.67%*

A common stock is held for two years, during which time it receives an annual dividend of $10. The stock was sold for $100 and generated an average annual return of 16%. What price was paid for the stock?

*P = $90.91*

Calculate the nominal and real returns for the following corporate bond investment: Purchased for $840 one year ago, 4% coupon rate, sold for $894. The inflation rate was 5.0% during the year. Would you consider this an appropriate investment if Treasury bills had yielded 6.0% over the same period?

*Nominal yield =10.42%*

*Real yield = 5.17%*

What is the expected yield on the market portfolio at a time when Treasury bills yield 6% and a stock with a beta of 1.4 is expected to yield 18%?

*Rm* =14.57%

A portfolio of three stocks with total market value of $1,000,000 currently has a beta of 1.4. In light of an expected market downturn, you wish to reduce the portfolio beta to no more than 1.0. Two stocks are likely candidates for sale, one with a beta of 1.8 and a market value of $200,000 and the other with a beta of 1.5 and a market value of $250,000. Assuming that you could find one appropriate stock to replace these two, what should be its beta?

*B1 =* 1.2091

*B2*=.744

What would you estimate to be the required rate of return for equity investors if a stock sells for $40 and will pay a $4.40 dividend that is expected to grow at a constant rate of 5%?

Answer: requity = 16%

What is the weighted-average cost of capital for a firm with the following sources of funds and corresponding required rates of return: $5 million common stock at 16%, $500,000 preferred stock at 10%, and $3 million debt at 9%. All amounts are listed at market values and the firm's tax rate is 35%.

Answer: 12.07%

A proposed capital project will cost $20 million and generate $4 million annually in after-tax cash flows for 10 years. The cost of capital for a project of this risk level is 12.2%. Should the project be accepted? Why or why not?

NPV = $2.417 million