

Introduction to Finance - II
Quiz on CAPM and cost of equity capital

Read the questions carefully. Don't make them harder than they are! Answer succinctly and precisely. Show all of your work.

1. Suppose that you have a spreadsheet with a column of 10 years worth of monthly returns on Lam Research, LRCX, and the S&P 500 in Excel. For example, you have 120 monthly returns on LRCX in Rows 3 through 122 in column C and the same-dated returns on the S&P 500 in column D, in your spreadsheet. How would you compute LRCX's beta? Use Excel to flesh out all of the necessary intermediate variables.
2. Suppose that you estimated that LRCX's beta is 1.45. The current yield to maturity on 30-year US Treasury bonds is 4%. You want to use 4.5% as the equity risk premium. What is LRCX's cost of equity capital under the CAPM?
3. You work as vice president for capital budgeting at Lam Research, and you hired a new assistant from Intel. She tells you that at Intel they use a cost of equity capital of 8.5%, and that Lam should use the same because the standard deviation of Lam's stock returns is slightly lower than that of Intel's stock. How do you explain to your assistant why she is wrong.
4. (In addition to the information above), Suppose that the market capitalization of Lam Research equity is \$25 billion, and Lam has \$2.5 billion in long-term debt. It has a BBB credit rating, and its credit spread is 300 basis points. Its effective marginal income tax rate is 23%. What is Lam's weighted average cost of capital?