

**SLOAN SCHOOL OF MANAGEMENT  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

Jonathan Lewellen  
15.414

Financial Management  
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**Assignment 5 – Due Monday, Aug. 11**

**Read ‘Cost of Capital at Ameritrade’ and answer the following questions.** The spreadsheet ‘Ameritrade’ on SloanSpace contains all of the data in Exhibits 1 – 6 of the case, as well as additional data for the Fama-French three-factor model.

1. What factors should Ameritrade management consider when evaluating the proposed strategy?
2. Calculate Ameritrade’s debt-to-value ratio using both the book value and market value of the firm’s equity. How does Ameritrade’s debt-to-value ratio compare to that of other discount brokerage and investment service companies in Exhibit 4? In general terms, how does leverage affect the riskiness of a firm’s equity?
3. Ameritrade has a short history of trading, so its beta cannot be computed precisely using its own historical data. Exhibit 4 provides some choices for comparable firms. Which of these firms do you think are appropriate to use as comparables to determine the beta of Ameritrade’s planned advertising and technology investments? Why?
4. Using the stock price and return data in Exhibits 5 and 6, estimate the CAPM beta and Fama-French factor sensitivities for the stocks of comparable firms.
5. Estimate the weighted-average cost of capital for Ameritrade’s proposed expansion. What riskfree rate do you use? Are the cost-of-capital estimates similar using the CAPM and Fama-French three-factor models?

**Guidelines**

- You may work on the case in groups of 3 or 4 students. Please hand-in one write-up per group. All members of the group should be prepared to discuss the case in class.
- State clearly any assumptions you make and provide enough information so that a reader can follow your analysis. I would expect the case write-up to be two to three pages plus supporting tables.
- The case is included in the course reading packet.