

BAF504: Assignment 1

(Due: 6:00 PM. Mar. 29 (Friday), 2024)

You are a stock analyst and want to evaluate stocks. You may select any 3 stocks and get information from data source you prefer. You need a risk-free rate and market risk premium for this assignment. Choose appropriate risk-free rate such as 3-month T-bill rate or 1-month LIBOR and risk premium for the market portfolio. Use the constant growth dividend discount model. You may use any computer tool but do not hand in the data or the program code.

Data source:

Bloomberg (terminals on the 3rd floor)

Dataguide (available on campus)

<https://wrds-web.wharton.upenn.edu/wrds/> (login required)

<https://finance.yahoo.com/quote/AAPL/history/> (historical data, accounting data)

- a) What are the names of stocks you choose?
- b) Specify risk-free rate, risk premium and the data source.
- c) What are the required rates of return? Use the CAPM. You need to specify firm's beta and the expected rate of return of the market index portfolio.
- d) Calculate present value of growth opportunity (PVGO) for each stock.
- e) Find the intrinsic value (V_0) and 1-year value (V_1) for each stock.
- f) Find the expected rate of return for each stock, i.e., $(V_1 - P_0)/P_0$ where P_0 is the current market price.
- g) Based on the calculation above, which stock do you buy or sell? Explain briefly.