

Finance 510-B
Problem Set 3

Work on individually. Due via e-mail on Saturday, February 6, at 6:00 pm Tucson time.

Submit on a spreadsheet whose name includes your name.

Your answers must use the data that I sent you in a csv file after you submitted Problem Set 1.

All students' files are different.

Refer to the data file with your name to get the actual monthly log return data on your 9 stocks for the period January 2010 through December 2019. You received this file in an email from Prof. Lamoureux.

1. Under the assumption that the yield to maturity on the 30-year US Treasury bond is 2.2% and the equity premium is 4%, obtain the cost of equity capital for your 9 companies.
2. Conduct sensitivity analysis of these 9 costs of equity: –Do these jointly – a 3×3 matrix.
 - (a) as the beta is 2 standard errors less than the estimated beta, equal to the estimated beta, and 2 standard errors greater than the estimated beta.
 - (b) as the equity premium is 3%, 4%, or 5%.
3. For each of your 9 stocks show the total return variance and decompose this into its systematic and diversifiable components. What percentage of the total variance does each component account for?