

Finance 510-B
Problem Set 2

Work on individually. Due via e-mail on Saturday, January 30, 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 should receive this file in an email from Prof. Lamoureux.

1. Form an equally weighted portfolio of your 9 stocks, and estimate the portfolio's expected return and standard deviation under the assumption that the log returns are jointly normally distributed. Do this using sample estimates of the individual stock expected returns, variances, and pairwise covariances using Excel's vector and matrix operations. Contrast the portfolio standard deviation to what it would be if all of your stocks had pairwise correlations of 1.
2. Identify the portfolio weights, expected return, and variance for the minimum variance portfolio from your set of 9 stocks.