UCLA Anderson — **Fall 2018**
MGMTMFE 400 — **Prof. Mikhail Chernov**

Problems for Lecture 5

Download the Intel and Microsoft data (12/29/1989 - 9/28/2018) from Yahoo Finance. You can either download the data directly from the website or you can use the `quantmod` package to access the Yahoo Finance API from R.

1. Construct weekly simple total returns from the price data. Your returns should include dividends. Compute the mean and standard deviation of the returns. Next, annualize the mean and volatility.
2. Assume that the annualized risk-free rate is 1% and that your coefficient of risk aversion, A, is equal to 4. How will you allocate your capital between the risk-free asset and Intel? How about the risk-free asset and Microsoft?
3. If you could only choose to allocate between the risk-free asset and either Intel or Microsoft, which would you choose and why?
4. Construct the mean-variance frontier for the Intel-Microsoft combination. Indicate the minimum-variance portfolio and the efficient frontier (the efficient frontier is a set of expected returns - risks that you would want to consider investing in).