Session 2A: Post Class Test

1. Stock market indices include subsets of stocks listed in the marketplace. Some indices equally weight all stocks that are in them, and some use weighting, where some stocks count more than others.
    a. If your objective is to develop an index that is representative of what investors in the market are earning on stocks, which approach would you use. (If weighted, what weights would you use?)
    b. What cautionary notes would you add about your index choice to those who want to extrapolate from its returns to the entire market?
2. The NASDAQ is one of the more heavily followed indices in the US equity markets, but its returns may not be representative of what US stocks for which of the following reasons.
    a. There are not enough stocks listed on the NASDAQ
    b. The NASDAQ is only one of many exchanges in the US
    c. The NASDAQ gets a disproportionate share of its value from technology companies
    d. There are other US indices, like the Dow 30 and the S&P 500, that have been around for a longer time.
    e. None of the above
3. You are looking at a research study that claims that larger market cap companies are better investments than smaller ones, and backs this up by classifying companies, <u>based upon their market capitalization today</u>, and then looking at the returns <u>that they earned over the last 20 years</u>. (Companies that do not have data for 20 years were removed from the sample).
    a. Explain the statistical reasons why you should be skeptical about its findings.
    b. How would you redo the study to test the hypothesis?
4. A research study, aimed at examining how stock prices react to CEO changes, looks at 50 companies where CEOs have changed, focusing in on how the stock prices of these companies move in the two days before, the day of and two days after the CEO change announcement. The sample was created by looking for news stories about CEO changes in the Wall Street Journal between 2018 and 2020.
    a. What are the questions about sampling that you have about this study?
    b. What would you do to follow up on your concerns?
5. Assume that you have been given annual returns on the S&P 500 for the last 50 years (1971-2020) and have computed the following: the average annual return was 12.18% and the standard deviation in annual returns was 19.49%.
    a. Estimate the expected annual return on the S&P 500, with 95% confidence, based upon this sample.
    b. What concern or concerns would you have in making this extrapolation?
    c. What would you do to alleviate or reduce these concerns?