

Session 2: Post Class Test

1. Why do we use samples of data rather than the entire population?
 - a. Because it is less expensive to collect data for a sample than the population
 - b. Because it takes less time to sample
 - c. Because some of the population may not be accessible or reachable
 - d. Because a large and unbiased sample can give you close to precise answers about the population
 - e. All of the above
2. You are trying to get a random sample of 500 companies out of 8000+ listed US companies. Which of the following approaches is likely to give you a random and unbiased sample?
 - a. Pick the 500 largest market cap companies in the market
 - b. Pick the 500 companies that have the highest trading volume
 - c. Pick 500 companies that have information available for at least ten years
 - d. Break the company into fifty industry groupings, and pick ten companies from each grouping
 - e. None of the above
3. You are surveying portfolio managers, with the intent of getting their expectations of what the market will do in the next year. You send out the survey to 1000 portfolio managers, working at large mutual fund groups, and receive 100 responses; the other 900 did not respond. What types of bias would you find in your sample?
4. You are looking at annual returns on a Latin American index for the last 25 years, and have estimated an average annual return of 12% and a standard deviation of 25% from this data. Assuming that this sample is representative of the population, estimate, with 95% confidence, the annual return for Latin American stocks.
5. The law of large numbers states that the sample mean will converge on the population mean, as sample size increases. For this to happen, which of the following assumptions has to hold (and explain what it means)?
 - a. The sample observations have to be independent and drawn from a normal distribution
 - b. The sample observations have to be dependent and drawn from a normal distribution
 - c. The sample observations have to be independent and drawn from identical distributions
 - d. The sample observations have to be dependent and drawn from identical distributions
 - e. None of the above