

1. Recall the Lab 04 assignment with the data part (Problem 3). In a similar way, do the following: Collect the data of basic BSE (SENSEX) and NSE (NIFTY) index (daily) values (from their respective official websites/other sources) for the period from January 1, 2019 to December 31, 2023 (i.e., five years of data). Now, for the same period, collect the stock price data for 10 stocks that are included in the index and 10 stocks that are not included in the index, for each of the index. That is, you will have data for 20 stocks from BSE and 20 stocks from NSE. Remember that, depending on the source, you may have to work on the downloaded data to get a clean data (accounting for dividends, splits, etc.).

Consider the SENSEX and 20 stocks from BSE as one group and rest (i.e., NIFTY and 20 stocks from NSE) as another group. Keep the data in two separate Excel files and name them as “**bsedata1**” and “**nsedata1**”. Obtain data on stocks yourself (and do not copy from others). We will use these data in future assignments too.

2. Now, consider the data obtained as above. Repeat what you have done in Lab 04, with the index as market portfolio (for both the indices). From the CAPM formula (SML), draw inference about each of the stocks, taking the riskfree rate to be 5% (if required, you may change this value). Compare the betas of securities (by taking the actual data and computing from your data for each index).