1. Summary Statistics / Histograms for the Market Returns and the Risk Free Returns

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Mean | Median | Min | Max | S.D |
| Mkt.RF | 0.03 | 0.06 | -17.44 | 15.76 | 1.08 |
| RF | 0.01 | 0.01 | 0 | 0.06 | 0.01 |

Chart

Description automatically generated

1. The chart below tracks the growth of an initial investment of one dollar that was made Chart, line chart

   Description automatically generated
2. The following chart captures 10,000 Bootstrapped simulations of stock growth over 25 years. The initial investment was also One dollar. The data was grouped into years prior to the creation of the bootstrapped simulations. The red lines indicate the 5th and 95th percentiles.

Chart, line chart

Description automatically generated

1. The histogram chart of the CAGR values calculated using the end values of the 10,000 bootstrapped simulations. Combining our knowledge from the Bootstraps plus derived conclusions from the generated histogram of CAGR below, one would have a high confidence in a CAGR > 0.

Chart, histogram

Description automatically generated

1. To demonstrate the effectiveness of both strategies, #2 was repeated and the growth was plotted in ggplot in R. The green line represents a 100% investment into the Stock Market. The red line is the market strategy of 50% into the market and 50% risk – free. From the chart it can be concluded that utilizing the 50-50 strategy would lead to more growth of our initial investment of a Dollar.

Chart, line chart

Description automatically generated