The investment team is presented with the following premise from the client group:

* A meaningful percentage of stock market trading now comes from quant hedge funds.
* If you add to that passive, HFT and others who are not buying on fundamentals, that’s 85% of the market.
* And all markets – stocks, bonds, commodities – are less liquid since banks and brokers have stepped away, post crisis-era regulations.
* All this exacerbates the speed and magnitude of market moves. Trends both build and break down quickly because of the “machines” and “algos”.
* Therefore, compared to history, market volatility is now more often caused by the evolving structure and participants rather than by fundamentals.

In response, the director of research asks you to conduct analysis to quantify whether large market moves seem to be happening more regularly and with greater speed than in the past. For the first cut, he asks you to focus on just S&P data, as a proxy for overall market.

You have been given S&P prices in the attached excel. Please use this data to conduct your analysis and put together a deck to present your analysis to the team. The presentation would be 15 minutes long followed by a 15-minute question and answer session.

In addition to the presentation, please send any code that you may have written to conduct your analysis.