**Project 10**

You are a finance professional who is managing stock portfolios and related investment strategies. This year, you are given a mandate to construct a portfolio of North American (US and Canada) stocks in the IT sector. There are some constraints for the portfolio:

1. Social media related platforms are not preferred by the investment fund.
2. Software, hardware, cloud business, online commerce businesses are to be the portfolio’s focus.
3. At least 25% of the portfolio’s value is to be allocated to cloud-focused companies.
4. Construct the portfolio in a way to minimize expected volatility.
5. A stock cannot be more than 7% of the overall portfolio.
6. Number of Stocks are not to exceed 30.
7. No short positions are allowed.
8. Prefer stocks with highest Net Profit Margin. Rebalance every 12 months.
9. What are the latest constituents of the portfolio? What are their weights?
10. What is the beta of your stock portfolio to the market benchmark?
11. Which names in the portfolio are 5 most volatile stocks?
12. What is the contribution of the 5 most volatile stocks to the 12-Month VaR of the portfolio?
13. How would your portfolio perform in the past 10 years? Present a back-test of your optimized portfolio.
14. How does the performance change if you use the PE Ration instead of Profit Margin?

Your manager says that the upside potential of the stock market looks limited in the coming 6 months. He suggests that a Covered-Call strategy may be beneficial to support the near-term performance of the portfolio.

1. Select 3 stocks sell OTM covered calls. Which stocks would you choose? Why?
2. How much premium can you earn with the help of Calls? What are the implied vol’s?
3. Show the payoff structure of the covered Calls Stategy?
4. How does your VaR change when you sell Calls?

Prepare a presentation to your manager about how the Calls would contribute to your risk and return profile of your portfolio. Do you think selling Calls is a good strategy? Why / why not?