

Portfolio Writeup

Group 2

October 6, 2019

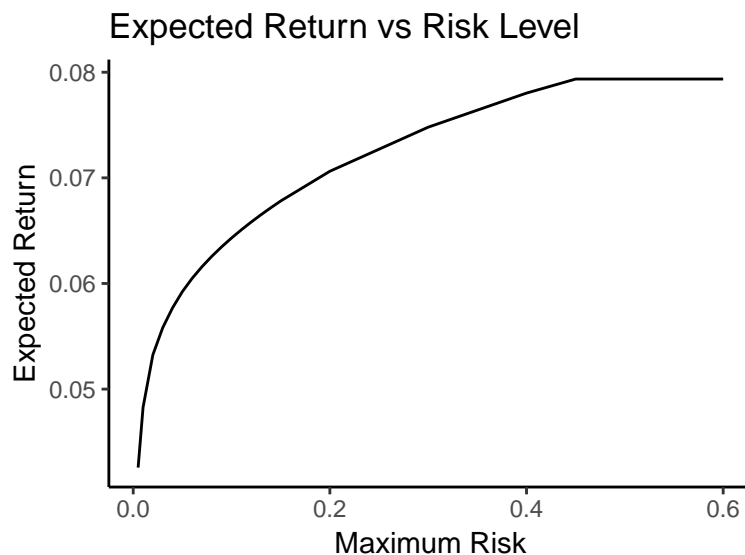
Group 2 Write-Up: Jacob Myer, Cheryl Ngo, and Keerti Sharma

```
#Connect to MySQL
db=RMySQL::dbConnect(RMySQL::MySQL(),dbname='nasdaq',username='root',password='root')

#Retrieve the portfolio table from nasdaq
results=dbSendQuery(db,"SELECT expRisk, expReturn FROM portfolio")
results=fetch(results,n=-1)
```

Efficient Frontier

```
ggplot(data=results, aes(x=expRisk,y=expReturn))+
  geom_line()+
  labs(x="Maximum Risk",y="Expected Return",title="Expected Return vs Risk Level") +
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank(),
  panel.background = element_blank(), axis.line = element_line(colour = "black"))
```



Based on the final curve, it matches the portfolio efficiency frontiers. The expected returns level off eventually because you can get a maximum return by investing in the riskiest stocks. As shown in the graph/plot above, with maximum expected return at 8%, the risk is 0.45. To be risk averse, it might be safe to be at a 0.05 risk limit with an almost 6% return. If we want to be riskier or risk averse, we can change the risks in the python code to get expected returns based on needs. This curve shows the riskier you are in investing in stocks, the more return you will receive.