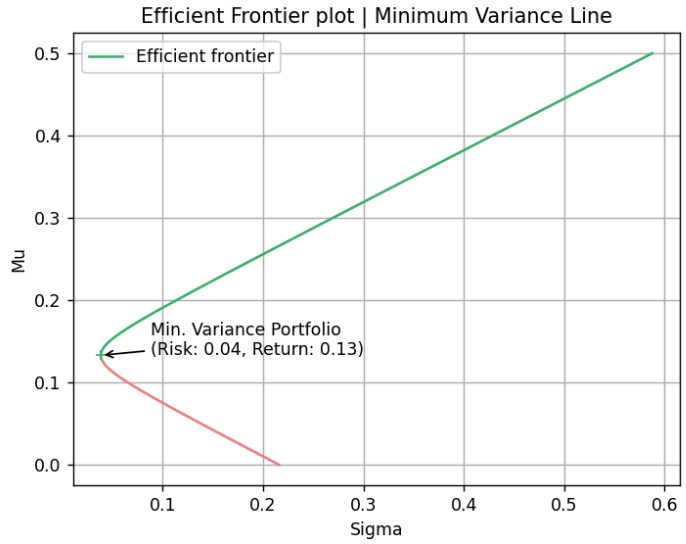
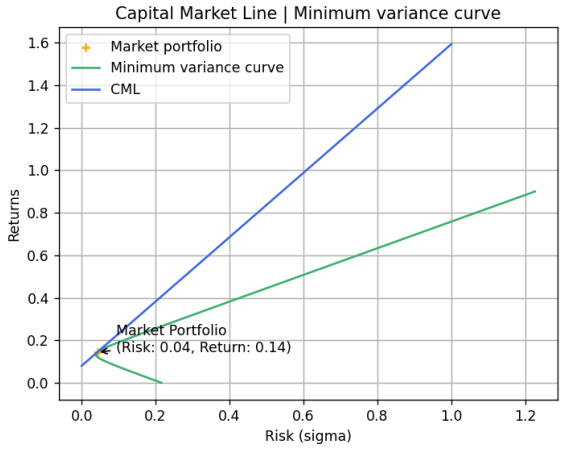
1)





Index	Weights	Return	Risk
1.	[1.59204245 -0.20442882 -0.38761363]	0.0500	0.019056
2.	[1.12602726 0.06261359 -0.18864085]	0.1000	0.004253
3.	[0.66001207 0.329656 0.01033192]	0.1500	0.002217
4.	[0.19399689 0.59669841 0.2093047]	0.2000	0.012948
5.	[-0.2720183 0.86374082 0.40827748]	0.2500	0.036446
6.	[-0.73803349 1.13078324 0.60725025]	0.3000	0.072711

7. [-1.20404868 1.39782565 0.80622303] 0.3500 0.121743
8. [-1.67006387 1.66486806 1.00519581] 0.4000 0.183541
9. [-2.13607905 1.93191047 1.20416858] 0.4500 0.258107
10. [-2.60209424 2.19895288 1.40314136] 0.5000 0.345440

Minimum return = 0.04
Weights = [1.6642748 -0.24582039 -0.41845441]

Maximum return = 0.22
Weights = [-0.02689431 0.72327652 0.3036178]

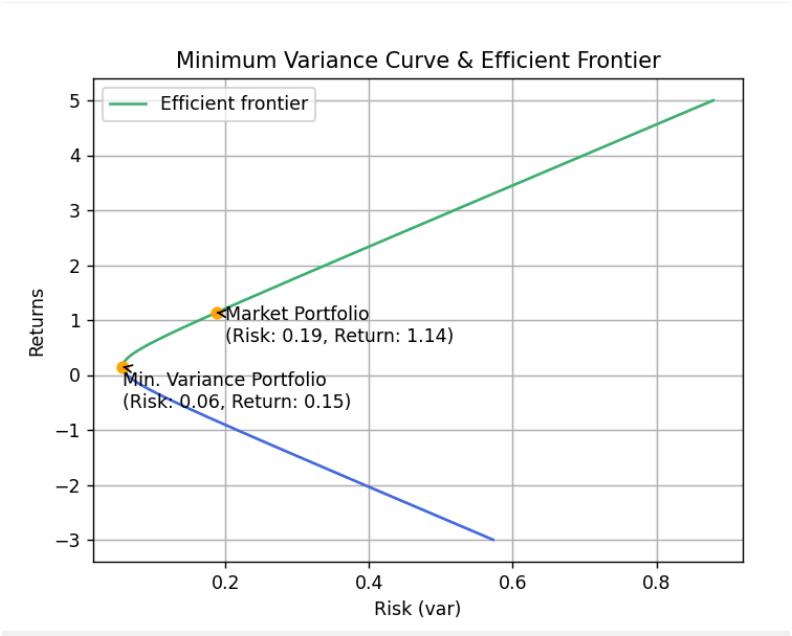
Minimum risk = 8.444584 %
Weights = [0.38010471 0.49005236 0.12984293]
Market Portfolio Weights = [0.71687587 0.29707113 -0.013947]
Market Return = 0.14
Market Risk = 4.220668 %

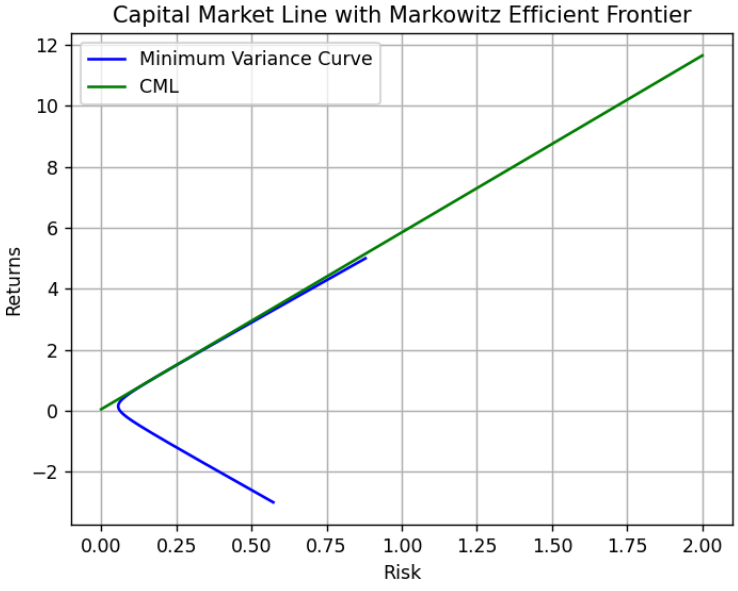
Equation of Capital Market Line is: y = 1.51 x + 0.08

Risk = 10.0 %
Risk-free weights = -1.3692933532314526
Risky Weights = [1.69848924 0.70384865 -0.03304454]
Returns =0.23

Risk = 25.0 %
Risk-free weights = -4.923233383078632
Risky Weights = [4.24622309 1.75962163 -0.08261134]
Returns =0.46

2)



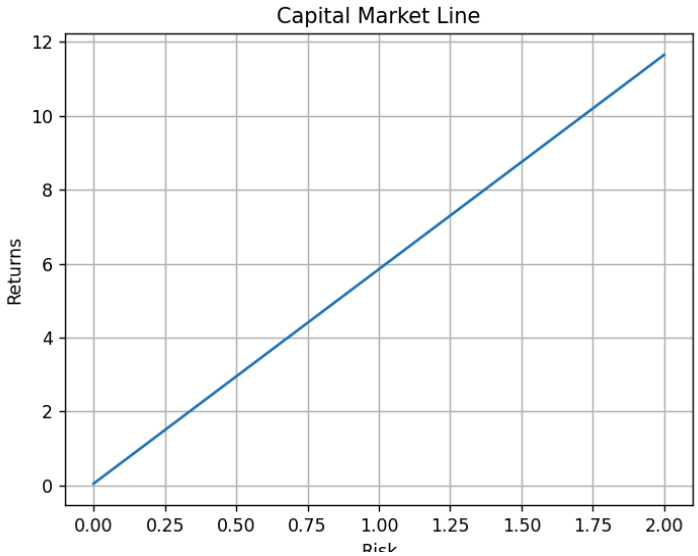


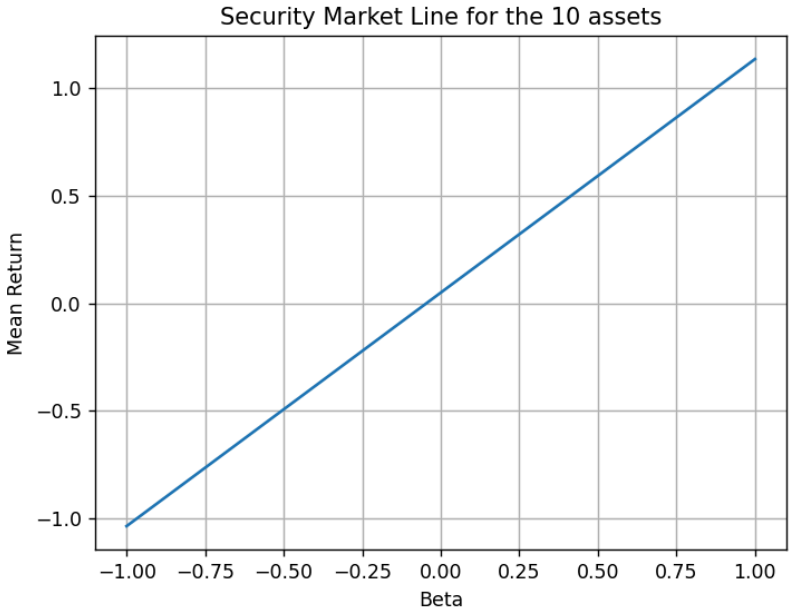
Market Portfolio Weights = [1.18462658 2.39004173 -0.92468538
0.88671349 -0.32311563 0.99078318
-0.81883693 -1.56080446 -0.36801596 -0.45670663]

Return = 1.1365219050720146

Risk = 18.73178224562616 %

Equation of Capital Market Line is:
y = 5.80 x + 0.05





Equation of Security Market Line is: mu = 1.09 beta + 0.05