BOOK: Portfolio Theory and Risk Management

Exercise 4.5

```
%runfile 'D:/MS Semester 2/Financial Mathematics/Python/Problem Sheet
3/Exercise_4_5.py' --wdir
Reloaded modules: MV_Functions

BOOK: Portfolio Theory and Risk Management
Exercise 4.5

Minimum Variance Portfolio, weights (in %)=
[[0. ]
 [0.5]
 [0.5]]
```

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Exercise 4.6

```
%runfile 'D:/MS Semester 2/Financial Mathematics/Python/Problem Sheet
3/Exercise_4_6.py' --wdir
Reloaded modules: MV_Functions

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Exercise 4.6

a=  [[-4.]
 [-2.]
 [ 6.]]

b=  [[ 1.2]
 [ 0.6]
 [-0.8]]

w= (in %) [[40.]
 [20.]
 [40.]]
```

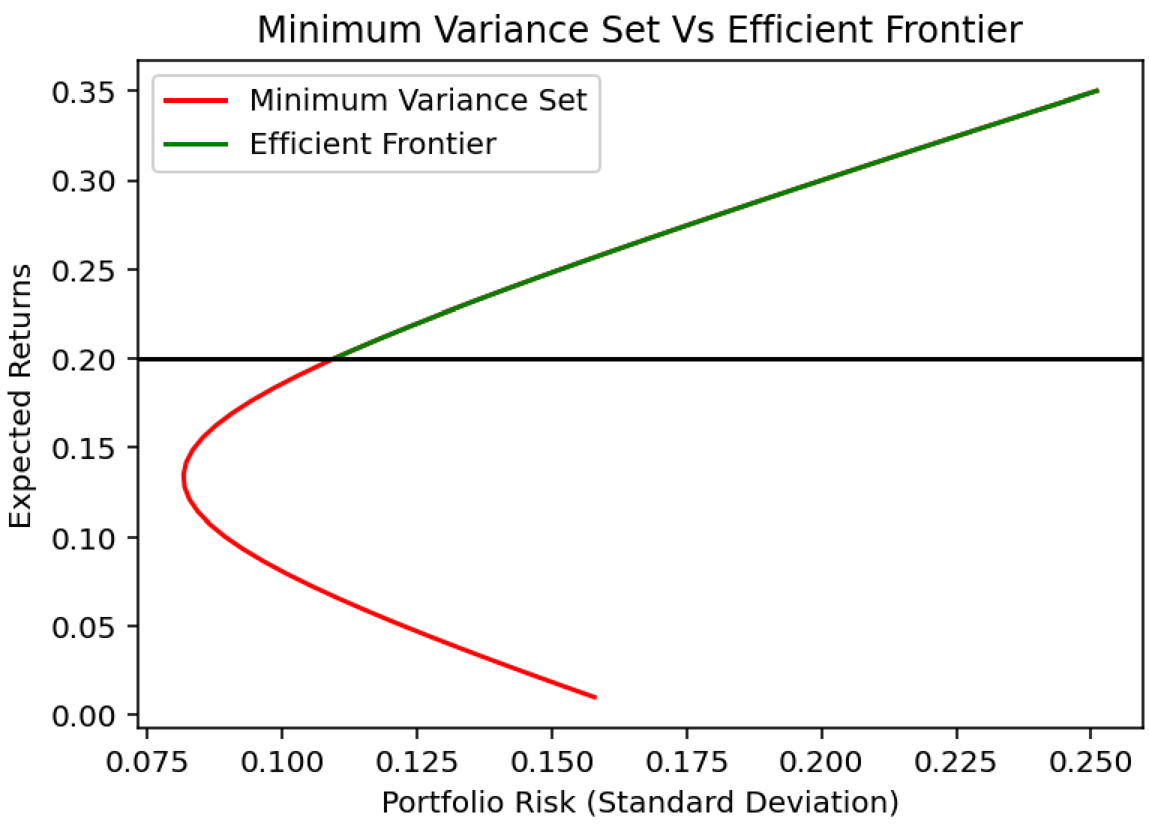

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Exercise 4.7

```
%runfile 'D:/MS Semester 2/Financial Mathematics/Python/Problem Sheet
3/Exercise_4_7.py' --wdir
Reloaded modules: MV_Functions

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Exercise 4.7

Variance of Returns of Portfolio 1:  [[0.008]]
Variance of Returns of Portfolio 2:  [[0.012]]
Covariance Between Returns of Portfolio 1 and Portfolio 2:  [[0.004]]

Plot Using Two Fund Theorem
```