

# Quiz 16 for Oct 24

Started: Oct 20 at 11:33pm

## Quiz Instructions

Complete this quiz by 11:00 a.m. U.S. Central Time on Monday October 24.

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### Question 1

1 pts

Portfolios can be allocated between  $n$  risky assets but no riskfree asset. In this environment, the relationship between a frontier portfolio's standard deviation of return and its expected return is

- ☒ a hyperbola.
- ☐ a parabola.
- ☐ a quadratic function.
- ☐ a linear function.



### Question 2

1 pts

If there are  $n$  risky assets that have an  $n \times n$  covariance matrix of returns equal to  $V$ , and  $\mathbf{1}$  is an  $n \times 1$  vector of 1's, then the minimum standard deviation of return that can be achieved by creating a portfolio of these assets is

- ☒

$$\frac{1}{\sqrt{\mathbf{1}'V^{-1}\mathbf{1}}}$$

☐  $\sqrt{\frac{\bar{R}'V^{-1}\mathbf{1}}{\mathbf{1}'V^{-1}\mathbf{1}}}$

☐  $\mathbf{1}'V^{-1}\mathbf{1}$

☐  $\frac{1}{\mathbf{1}'V^{-1}\mathbf{1}}$



### Question 3

1 pts

Consider the mean-variance efficient frontier with  $n$  risky assets. A risk averse individual has a target expected portfolio return of 1.06. This individual has access to two different frontier portfolios. Portfolio 1 has an expected return and standard deviation return equal to  $\bar{R}_{1p} = 1.04$  and  $\sigma_{1p} = 0.20$  while Portfolio 2 has an expected return and standard deviation of return equal to  $\bar{R}_{2p} = 1.10$  and  $\sigma_{2p} = 0.30$ . What proportion of the individual's portfolio should be invested in Portfolio 1?

State your answer to 2 decimal places, e.g., 0.54 .

0.67



#### Question 4

1 pts

A risk-averse individual has a desired portfolio standard deviation of 0.25. In an environment with a riskfree asset and multiple risky assets, the risk-free asset pays a return of 1.02 and the tangency portfolio of risky assets has an expected return of 1.10 and standard deviation of return of 0.30. What proportion of this individual's portfolio should be invested in the tangency portfolio?

State your answer to 3 decimal places, e.g., 0.312 .



#### Question 5

1 pts

Ask one or more questions or make one or more comments on the material covered in this class.

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how much risk do point B investor usually burden.

p



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