Unit 6 - Week 4: Modern Portfolio Theory (Part 2)

Assignment 4

The due date for submitting this assignment has passed. As per our course policy, you have not been allowed to submit this assignment.

1. Consider two portfolios V1 and V2 lying on the minimum variance line (MV), with the respective weights \( a_1 \) and \( a_2 \). A new portfolio \( V_3 \) is created with 60% of wealth being invested in \( V_1 \) and 40% of wealth being invested in \( V_2 \), has weight \( a_3 \). Then the value of \( a_3 \) equals?

2. \( \text{No, the answer is incorrect.} \)

Assignment Answer: 0.621

1 point

2. Consider two portfolios V1 and V2 lying on the minimum variance line (MV), with the respective returns being \( r_{1,0} = 0.05 \) and \( r_{2,0} = 0.03 \). Let a new portfolio \( V_3 \) be created out of the portfolios V1 and V2 such that the portfolio V3 has the MV line and has the expected return of 0.04. If portfolio V3, the percentage of wealth invested in V1 equals?

3. \( \text{No, the answer is incorrect.} \)

Assignment Answer: 0.75

1 point

5. In the CAPM framework, assume that the market returns and risk (as given by standard deviation of returns) are 7.5% and 12%, respectively. The risk-free rate is 4%. If you are willing to accept a risk of 20% on a managed portfolio, then the expected return (as percentage) on this portfolio equals?

4. \( \text{No, the answer is incorrect.} \)

Assignment Answer: 16.0

1 point

5. In the CAPM framework, consider a portfolio \( V \) comprising of two portfolios \( V_1 \) and \( V_2 \), with the respective weights being \( a_1 = 0.5 \) and \( a_2 = 0.5 \). The expected return of the portfolios are \( \beta_{1,0} = 2 \) and \( \beta_{2,0} = 3 \). Then the beta of the portfolio \( V \) equals?

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: 2.5

1 point

5. Consider a portfolio whose risk (as given by standard deviation of return) is 10%. The expected return and risk (as given by standard deviation of returns) are 8% and 12%, respectively, with the risk-free rate being 5%. The excess return over the risk-free rate (in terms of percentage) for the portfolio equals?

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: 2.5

1 point

6. State whether the following statement is TRUE or FALSE. If \( \beta > \beta_0 \) hold (\( \beta_0 \) - the actual beta), then the asset \( V \) is underpriced?

7. TRUE

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: TRUE

1 point

6. State whether the following statement is TRUE or FALSE. The expected risk of a stock security cannot be decreased.

8. TRUE

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: TRUE

1 point

6. If the Treynor ratio of the market portfolio is \( T_{MS} \), with the expected market returns being \( r_{M} \) and the risk-free rate being \( r_{f} \), then the value of \( T_{MS} \) equals:

9. \( \text{No, the answer is incorrect.} \)

Assignment Answer: \( \frac{r_{M} - r_{f}}{\sqrt{V}} \)

1 point

6. Consider two assets \( A_1 \) and \( A_2 \) with the respective expected returns being \( r_{1,0} = 0.05 \) and \( r_{2,0} = 0.10 \), and the respective risks being \( \sigma_{1,0} = 0.15 \) and \( \sigma_{2,0} = 0.20 \). Let \( \sigma \) be the Sharpe ratio of \( A_1 \) and \( A_2 \), respectively. If \( \sigma < \sigma_{1,0} \) and \( \sigma > \sigma_{2,0} \), then the value of \( \sigma \) equals?

10. \( \text{No, the answer is incorrect.} \)

Assignment Answer: Incorrect

1 point

6. Write the correct option (that is, write A or B or C among the three options).

11. A)

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: C

1 point

6. Write the correct option (that is, write A or B or C among the three options).

12. A)

6. \( \text{No, the answer is incorrect.} \)

Assignment Answer: B

1 point