

# Quiz 18 for Oct 31

Started: Oct 28 at 1:53am

## Quiz Instructions

Complete this quiz by 11:00 a.m. on Monday October 31.



### Question 1

1 pts

The return on the market portfolio is the only risk factor, and it has an excess expected return of 8.00%. Another extremely well-diversified portfolio has a beta of 0.8 and has an expected excess return of 7.00%. An asymptotic arbitrage would be to

- ☐ Borrow \$0.8X at the riskfree rate and use the proceeds to buy the diversified portfolio  
Short-sell \$X of the market portfolio and invest the proceeds at the riskfree rate.
- ☐ Borrow \$X at the riskfree rate and use the proceeds to buy the market portfolio  
Short-sell \$0.8X of the diversified portfolio and invest the proceeds at the riskfree rate.
- ☒ Borrow \$X at the riskfree rate and use the proceeds to buy the diversified portfolio  
Short-sell \$0.8X of the market portfolio and invest the proceeds at the riskfree rate.
- ☐ Borrow \$0.8X at the riskfree rate and use the proceeds to buy the market portfolio  
Short-sell \$X of the diversified portfolio and invest the proceeds at the riskfree rate.



### Question 2

1 pts

There are  $K$  risk factors and  $\bar{R}_k$  is the expected return on risk factor  $k$  and  $R_f$  is the riskfree return. If risky asset  $i$  has beta with risk factor  $k$  equal to  $\beta_{i,k}$ , then asset  $i$ 's risk premium,  $\bar{R}_i - R_f$ , equals

☐  $\sum_{k=1}^K \frac{\beta_{i,k}}{(\bar{R}_k - R_f)}$

☐  $\sum_{k=1}^K \beta_{i,k} \bar{R}_k$

☒  $\sum_{k=1}^K \beta_{i,k} (\bar{R}_k - R_f)$

☐  $R_f + \sum_{k=1}^K \beta_{i,k} \bar{R}_k$



### Question 3

1 pts

If a stock's return has a negative loading on *SMB* and a positive loading on *HML*, the stock is likely to be a

☐ small cap value stock.

- ☒ large cap value stock.
- ☐ large cap growth stock.
- ☐ small cap growth stock.



#### Question 4

1 pts

Risky stock  $i$  has loadings of  $\beta_i=1.1$ ,  $s_i = -0.2$ , and  $h_i = 0.3$ . If the expected excess returns on the market portfolio, the *SML* portfolio, and the *HML* portfolio equal their 1927-2019 historical averages, stock  $i$ 's expected excess return equals

State your answer as a percentage rate to 2 decimal places, e.g., 6.45 .

7.54



#### Question 5

1 pts

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

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Does alpha usually close to 0?

Does alpha usually close to 0:

p



6 words



Quiz saved at 3:11am

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