

UNIVERSITY OF TEXAS AT AUSTIN

Quiz # 20

Multifactor models.

Please, provide your **final answers only** to the following problems:

Problem 20.1. You are given the following information about the return of a security, using a three-factor model:

Factor	Beta	Expected Return
T	0.10	25%
U	0.12	20%
V	0.15	10%

The annual effective risk-free rate of return is 4%.

Calculate the expected return of this security using the given three-factor model.

- (a) About 0.075
- (b) About 0.08
- (c) About 0.085
- (d) About 0.09
- (e) None of the above.

Problem 20.2. You are given the following information about the return of a security, using a three-factor model:

Factor	Beta	Expected Return
T	0.12	12%
U	0.16	15%
V	0.20	10%

The expected return of this security using the given three-factor model is equal to 0.08. What is the annual effective risk-free rate of return?

- (a) About 0.375
- (b) About 0.415
- (c) About 0.485
- (d) About 0.595
- (e) None of the above.

Problem 20.3. You are given the following information about the return of a security, using a three-factor model:

Factor	Beta	Expected Return
T	0.12	16%
U	0.15	18%
V	0.18	20%

The effective risk-free interest rate is 0.04. What is the risk premium of the security?

- (a) About 0.0442
- (b) About 0.0642
- (c) About 0.0842
- (d) About 0.1042
- (e) None of the above.