FIN5EQS EQUITY SECURITIES

Quiz 1 Solutions

1. You purchased a stock on 1 July 2010 for $27.50 and sold it on 1 July 2011 for $25.90. The stock paid the following dividends in 2010/11:

30 Jun 2010	$1.25	30 Jun 2011	$1.45
31 Dec 2010	$1.40	31 Dec 2011	$1.50

What was your realised holding period return?

$$HPR = \frac{25.90 - 27.50 + 1.40 + 1.45}{27.50}$$
$$= 0.0455 = 4.55\%$$

A. 4.55%

B. 4.83%

C. 9.09%

D. 16.18%

2. Consider the following equation:

$$E(R_i) = R_f + \beta_i \left[E(R_m) - R_f \right]$$

This formula will give you the:

A. Expected return

B. Required return

C. Holding period return

D. Alpha

3. If you are conducting a long-term valuation and inflation is expected to be high or unstable, which of the following would be an appropriate proxy for the real risk-free interest rate?

A. The expected nominal growth rate of the economy

B. The yield on an inflation-indexed Treasury Bond

C. The nominal yield on Treasury Bills less the expected inflation rate

D. The nominal yield on Commonwealth Government Securities plus the expected inflation rate

4. The Australian Treasury Bond rate is 5.5%, the current level of the ASX 200 is 4,300, the expected dividend yield is 3.5% and the sustainable growth rate is 7%. What is the implied market risk premium?

$$r_e = \frac{D_1}{P_0} + g = 0.035 + 0.07 = 0.105$$

$$\text{Market risk premium} = 0.105 - 0.055 = 0.05 = 5\%$$

A. 2.5%

B. 3.5%

C. 5%

D. 10.5%

5. Multifactor asset pricing models, such as the Fama-French model, assume that:

A. Returns are driven solely by unsystematic risk

B. Returns are driven by factors other than systematic risk

C. Returns are driven by factors other than market risk

D. Returns are driven by macroeconomic factors

You regress monthly returns on a stock against monthly market returns in an attempt to estimate the beta of the stock. The following is part of the output from the regression analysis.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	19.92%
R Square	9.95%
Adjusted R Square	9.08%
Standard Error	0.09
Observations	106

ANOVA

	df	*SS*
Regression	1	0.052710131
Residual	104	0.535914942
Total	105	0.588625073

	Coefficients	*Standard Error*
Intercept	0.53%	0.01
Beta	0.68	0.15

6. Based on this analysis, what proportion of the stock's risk comes from market risk factors?

A. 19.92%
B. 9.95%
C. 9.08%
D. 0.53%

7. If the monthly risk-free rate is 0.5%, based on this analysis, what is the stock's monthly excess return?

$$\alpha - R_f\left(1-\beta\right) = 0.53 - 0.5\left(1-0.68\right) = 0.37$$

A. 0.19%
B. 0.37%
C. 0.40%
D. 0.53%

8. Fletcher Building Ltd made an offer for Crane Group Ltd in December of 2011. Based on the information below estimate the levered beta of the combined groups should the takeover proceed.

Company	β	Debt	Equity	Value
Fletcher Building	0.67	$879m	$2,529m	$4,543
Crane	1.27	$281m	$783m	$918m

$$\beta_U = \beta_L \,/\left(1+D/E\right)$$

$$\beta_{U,F} = 0.67 \,/\left(1+\frac{879}{2529}\right) = 0.4972$$

$$\beta_{U,C} = 1.27 \,/\left(1+\frac{281}{783}\right) = 0.9346$$

$$\beta_{U,Firm} = 0.4972\left(\frac{4543}{4543+918}\right) + 0.9346\left(\frac{918}{4543+918}\right) = 0.5707$$

$$\beta_{L,Firm} = \beta_U\left(1+D/E\right) = 0.5707\left(1+\frac{879+281}{2529+783}\right) = 0.77$$

A. 0.57
B. 0.69
C. 0.77
D. 0.97