

Quiz B for 1:00 Class: 2/25/13

Name Key

Note: There are no points for solving this problem. All points are for setting up the equations, plugging in the relevant numbers, and stating what you want to solve for (if you are not simply solving the equation).

Given the following information calculate the beta and required return on MetLife (MET). Assume the risk-free rate is 2% and that the market risk-premium equals 5%.

Year	S&P500	Return on:	
		MET	NKE
2012	17%	8%	5%
2011	4%	-21%	28%
2010	22%	32%	31%
2009	33%	26%	44%

Wall Street Journal Questions are on the back of this page.

$$+3 \left(\beta_{MET} = \frac{COV_{MET, S\&P500}}{VAR_{S\&P500}} \right) \textcircled{3}$$

$$+3 \left(COV_{MET, S\&P500} = \frac{1}{3} \left((8 - \mu)(17 - s) + (-21 - \mu)(4 - s) + (32 - \mu)(22 - s) + (26 - \mu)(33 - s) \right) \right) \textcircled{13}$$

$$+2 \left(\mu = \bar{r}_{MET} = \frac{1}{4} (8 - 21 + 32 + 26) \right) \textcircled{8}$$

$$+2 \left(s = \bar{r}_{S\&P500} = \frac{1}{4} (17 + 4 + 22 + 33) \right) \textcircled{8}$$

$$+3 \left(VAR_{S\&P500} = \frac{1}{3} \left((17 - s)^2 + (4 - s)^2 + (22 - s)^2 + (33 - s)^2 \right) \right) \textcircled{9}$$

$$+3 \left(r = 2 + \beta_{MET} \times 5 \right) \textcircled{9}$$