

Quiz B: 2/13/13

Name Key

Assume you are planning to invest 75% of your funds in Sony (SNE) and 25% of your funds in Coca-Cola (KO). Use the following returns to set up the calculations needed to determine

- a. the covariance between Sony and Coca-Cola
- b. the correlation between Sony and Coca-Cola

Year	SNE	KO
2012	-18%	13%
2011	-47%	11%
2010	3%	20%
2009	73%	31%

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

a. $\bar{R}_{SNE} = \frac{1}{4} (-18 - 47 + 3 + 73) = 5$ (10)

$\bar{R}_{KO} = \frac{1}{4} (13 + 11 + 20 + 31) = 14$ (5)

$COV_{SNE, KO} = \frac{1}{3} ((-18-5)(13-14) + (-47-5)(11-14) + (3-5)(20-14) + (73-5)(31-14))$ (14)

b. $CORR_{SNE, KO} = \frac{COV_{SNE, KO}}{SD_{SNE} \times SD_{KO}}$ (6)

$SD_{SNE} = \sqrt{\frac{1}{3} ((-18-5)^2 + (-47-5)^2 + (3-5)^2 + (73-5)^2)}$ (10)

$SD_{KO} = \sqrt{\frac{1}{3} ((13-14)^2 + (11-14)^2 + (20-14)^2 + (31-14)^2)}$ (5)