

Quiz A: 2/13/13

Name Key

Assume you are planning to invest 60% of your funds in Adobe Systems (ADBE) and 40% of your funds in Lowe's (LOW). Use the following returns to set up the calculations needed to determine

- the standard deviation of your portfolio if you invest all of your funds in Adobe
- the standard deviation of your portfolio if you invest all of your funds in Lowe's
- the covariance between Adobe and Lowe's
- the standard deviation of returns on your portfolio of 60% in Adobe and 40% in Lowe's

Year	ADBE	LOW
2012	22%	45%
2011	-6%	11%
2010	2%	17%
2009	67%	21%

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

$$+2 \quad a. \quad \bar{R}_{ADBE} = \frac{1}{4} (22 - 6 + 2 + 67) = A \quad (7)$$

$$+2 \quad SD_{ADBE} = \sqrt{\frac{1}{3} ((22 - A)^2 + (-6 - A)^2 + (2 - A)^2 + (67 - A)^2)} \quad (7)$$

$$+2 \quad b. \quad \bar{R}_{LOW} = \frac{1}{4} (45 + 11 + 17 + 21) = L \quad (7)$$

$$+2 \quad SD_{LOW} = \sqrt{\frac{1}{3} ((45 - L)^2 + (11 - L)^2 + (17 - L)^2 + (21 - L)^2)} \quad (7)$$

$$+5 \quad c. \quad COV_{ADBE, LOW} = \frac{1}{3} ((22 - A)(45 - L) + (-6 - A)(11 - L) + (2 - A)(17 - L) + (67 - A)(21 - L)) \quad (14)$$

$$+5 \quad d. \quad SD_p = \sqrt{(0.6)^2 SD_{ADBE}^2 + (0.4)^2 SD_{LOW}^2 + 2(0.6)(0.4) COV_{ADBE, LOW}} \quad (8)$$