

Spring 2012 Final

4:00 A

1) a. $S+P = C+PV(\text{ck})$
 $12.24 = 11.59 + .65 \neq .95 + \frac{11}{(1.00096)^{3/12}} = .95 + 10.997 = 11.947$

→ buy call, buy bond, short stock, sell put
 \$1

Trans	\$0	\$10	\$15
Buy call ⁺	-0.95 ⁻	0 ⁺	+4 ⁺
Buy bond ⁺	-10.997 ⁺	+11 ⁺	+11 ⁺
short stock ⁺	+11.59 ⁺	-10 ⁺	-15 ⁺
Sell put ⁺	+0.65 ⁺	-1 ⁺	0 ⁺
<u>Total</u>	<u>+0.293</u>	<u>0</u>	<u>0</u>

+4/+3

2) $\bar{R}_{pe} = \frac{1}{3}(-1+9+35)$; $\bar{R}_{xom} = \frac{1}{3}(0+33+4)$

$SD_{pe} = \sqrt{\frac{1}{2}((-1-\bar{R}_{pe})^2 + (9-\bar{R}_{pe})^2 + (35-\bar{R}_{pe})^2)}$

$SD_{xom} = \sqrt{\frac{1}{2}((0-\bar{R}_{xom})^2 + (33-\bar{R}_{xom})^2 + (4-\bar{R}_{xom})^2)}$

$Cov_{pe,xom} = \frac{1}{2}((-1-\bar{R}_{pe})(0-\bar{R}_{xom}) + (9-\bar{R}_{pe})(33-\bar{R}_{xom}) + (35-\bar{R}_{pe})(4-\bar{R}_{xom}))$

$SD_p = (.4)^2(SD_{pe})^2 + (.6)^2(SD_{xom})^2 + 2(.4)(.6)Cov_{pe,xom}$