

## SAMPLE FINAL RESULTS

- 1a) True
- 1b) False
- 1c) False
- 1d) False
- 1e) False
- 1f) True
- 1g) True
- 1h) False
- 2) 19 years after subscribing (Assumption: The first \$750 fee membership fee payment is made after one year (that is in  $t = 1$ , not  $t = 0$ ). Moreover, it is \$750 in  $t = 1$  (not  $750 \times 1.05 = \$787.5$  in  $t = 1$ ))
- 3a)  $r_1 = 2.59\%$ ,  $r_2 = 5.28\%$ ,  $r_3 = 6.04\%$
- 3b)  $f_{12} = 8.04\%$ ,  $f_{13} = 7.81\%$ ,  $f_{23} = 7.58\%$
- 3c) \$105.58
- 4a)  $r_Q = 5.375\%$ ,  $r_R = 12.875\%$ ,  $r_S = 0.5\%$
- 4b)  $Q = \$43.18$ ;  $R = \$66.45$ ;  $S = \$20.90$
- 5a) \$47.08
- 5b) \$10.24
- 6a)  $r_{3-month} = 7.97\%$ ;  $r_{9-month} = 6.54\%$
- 6b) Sell your December 2007 production at the price of \$706.42/oz and your June 2008 production at \$726.70/oz
- 6c) 2.68% (annualized), using  $r_f = 7.97\%$  (from part a)
- 7a) Year 0 = -50.00; Year 1 = 12.05; Year 2 = 10.82; Year 3 = 9.70; Year 4 = 8.70; Year 5 = 7.79
- 7b) Discounting the cash flows above at 10% cost of capital, the NPV is negative. Do not engage in the project.
- 8a) Assuming S&P 500 is good proxy to market,  $\alpha_T = -0.127\%$ ;  $\alpha_U = 0.35\%$
- 8b)  $r_T = 1.027\%$ ;  $r_U = 1.05\%$
- 8c) Invest all your money in the S&P500
- 9a)  $E[r_p] = 11.5\%$ ;  $Stdev = 26.08\%$
- 9b) 0.282 ( $r_f = 4\%$ )
- 9c) 17.1%
- 10a) \$2.76
- 10b) \$3.80
- 10c) \$0 - \$97.2 (if not discounting), \$0 - \$96.96 (if discounting)
- 10d) Butterfly spread

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