More from Fall 2007 tests

1. Suppose the macro forecasting unit of North Park Portfolios issues a forecast for a 16% market return. The forecast's standard deviation is 23%. The risk-free rate is 8%.

   At the same time the security analysis division submits to the portfolio manager the following forecast of annual return for the four securities that it covers:

Stock	α	β	$\sigma(e)$
A	1.6%	1.3	58%
B	-4.4%	1.8	71%
C	3.4%	0.7	60%
D	-4.0%	1.0	55%

   What is the overall performance of the risky portfolio using the Sharpe measure?

2. Consider portfolio construction using the single-index model. The alpha of an active portfolio is 2%. The expected return on the market index is 12%. The standard deviation of the return on the market portfolio is 2%. The nonsystematic standard deviation of the active portfolio is 1.4142%. The risk-free rate of return is 3%. The beta of the active portfolio is 1.15. What is the optimal proportion to invest in the active portfolio?

Answers:

1. 0.3662
2. 47.62%