

TD N=9

Problem 1 :

Assuming that the S&P 500 had a standard deviation of 18% over a 10-year period, a return of 10%, and the risk-free rate of 5%. Determine *the Sharpe ratios* for the following portfolio managers:

Manager	Annual Return	Portfolio Standard Deviation
Manager X	14%	0.11
Manager Y	17%	0.20
Manager Z	19%	0.27

Problem 2 :

Suppose that the 10-year annual return for the S&P 500 (market portfolio) is 10% while the average annual return on Treasury bills (a good proxy for the risk-free rate) is 5%. Assume the evaluation is of three distinct portfolio managers with the following 10-year results:

Managers	Average Annual Return	Beta
Manager A	10%	0.90
Manager B	14%	1.03
Manager C	15%	1.20

- What is the better portfolio according to *Treynor measure* ?

Problem 3 :

If we assume a risk-free rate of 5% and a market return of 10%, what is the *alpha* for the following funds?

Manager	Average Annual Return	Beta
Manager D	11%	0.90
Manager E	15%	1.10
Manager F	15%	1.20