EC3050 Investment Analysis
2011/2012
Tutorial 1

Please Note

- All questions to be attempted prior to tutorial.
- Attendence is compulsary.
- Solutions will not be posted on the web.

1. Draw two normal distributions, one for a high risk, high expected return asset and one for an asset with lower risk and lower return. Discuss how we can compare assets by looking at their distribution.

2. Consider Table 1

Table 1

Probability	A	B	C
0.25	0.10	0.15	-0.05
0.25	-0.05	0.00	0.10
0.25	0.20	0.25	-0.15
0.25	0.00	0.05	0.05

(a) Compute the expected return of each stock
(b) Compute the standard deviation of returns for each stock
(c) Compute the covariance of returns for each pair of stocks

3. Consider the following data for Stock A and B:

Table 2

	A	B
Average Return	28%	17%
Variance	0.12	0.07
Std Deviation	34.64%	26.46%
Covariance	0.0160	
Correlation Coefficient	0.1746	

(a) Calculate the expected return and standard deviation of an equally weighted portfolio of stock A and stock B?
(b) Calculate the expected return and standard deviation of a portfolio composed of 25% of Stock A and 75% Stock B

4. Consider Table 3.

Table 3

	A	B
Average Return	15%	25%
Std Deviation	33%	46%
Covariance	0.0865	
Correlation Coefficient	0.5698	

(a) Compute the expected return and standard deviation of a portfolio composed of 30% A and 70% B

(b) Compute the expected return and std deviation that are combinations of A and B. (Hint: The weight in A is w_A and the weight in B is w_B. Start at 0% and continue to 100% at 10% intervals. Use the formulas for expected return and standard deviation of a portfolio.)

(c) Find the Minimum Variance Portfolio

(d) Graph the Portfolio Frontier

(e) If the risk-free rate is 5%, graph the Capital Market Line.