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Finance Ch 6 Review Problems 1-4

1. Universal Corporate is planning to invest in a security that has several possible rates of return.

10% times -10 = -1

20% times 5 = 1

30% times 10 = 3

40% times 25 = 10

Total is 13%

Expected Rate of Return: 13%

Variance: 126.00

$$.10(-10-13)^2 + .20(5-13)^2 + .30(10-13)^2 + .40(25-13)^2 = 126$$

Standard Deviation: 11.22

The corporate can assume a return of 13 percent with 67 percent probability that this return would vary up or down by 11.22 percent.

2. Kaifu Corp:  $4 + 6 + 0 + 2 = 12\%$  divide by 4 months = 3%

Variance

$$(4\%-3\%)^2 + (6\%-3\%)^2 + (0\%-3\%)^2 + (2\%-3\%)^2 = .0020 / 3 = 0.00067$$

Standard Deviation:

$$(0.00067)^{1/2} = 2.58$$

3. Expected Returns:  $(.15)(6\%) + (.30)(9\%) + (.40)(10\%) + (.15)(15\%) = 19.85\%$

Variance: 6.4157

$$.15(6-9.85)^2 + .30(9-9.85)^2 + .40(10-9.85)^2 + .15(15-9.85)^2 = 6.6157$$

Standard Deviation:  $6.4157^{1/2} = 2.54\%$

4. Summerville Inc. is considering an investment in one of two common stocks.

Common Stock A		
Probability	Return	E(return)
0.3	11%	3.30%
0.4	15%	6.00%
0.4	19%	7.60%

Expected Return		<b>16.90%</b>
Standard deviation		<b>2.17%</b>
Risk Adjusted Return		<b>7.78%</b>

<b>Common Stock B</b>		
Probability	Return	E(return)
0.2	-5%	-1.00%
0.3	6%	1.80%
0.3	14%	4.20%
0.2	22%	4.40%
Expected return		<b>9.40%</b>
Standard Deviation		<b>2.53</b>
Risk Adjusted Return		<b>3.72</b>