Business Finance

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Homework #4

1. Complete the table below.

Investment	Original Cost or Invested $	Selling Price of Investment	Distributions Received $	Dollar Profit	Percent Return
CD	$500.00	$540.00	$0.00		
Stock	$23.00	$34.00	$2.00		
Bond	$1,040.00	$980.00	$80.00		
Bike	$400.00	$220.00	$0.00		

2. Bohenick Classic Automobiles restores and rebuilds old classic cars. The company purchased and restored a classic 1957 Thunderbird convertible six years ago for $8,500. Today at auction, the car sold for $50,000. What are the holding period return and the annual return on this investment?

3. Below are the returns of the long-term US government bonds. Calculate the average and the standard deviation of returns.

Year	Return
1990	7.13%
1991	18.39%
1992	7.79%
1993	15.48%
1994	–7.18%
1995	31.67%

1996	–0.81%
1997	15.08%
1998	13.52%
1999	–8.74%

4. Hull Consultants, a famous think tank in the Midwest, has provided probability estimates for the four potential economic states for the coming year. The probability of a boom economy is 10%, the probability of a stable growth economy is 15%, the probability of a stagnant economy is 50%, and the probability of a recession is 25%. Estimate the expected returns on the following individual investments for the coming year.

INVESTMENT	Forecasted Returns for Each Economy			
	Boom	Stable Growth	Stagnant	Recession
Stock	25%	12%	4%	-12%
Corporate Bond	9%	7%	5%	3%
Government Bond	8%	6%	4%	2%

5. Using the data from the previous problem, calculate the variance and standard deviation of the three investments, stock, corporate bond, and government bond. If the estimates for both the probabilities of the economy and the returns in each state of the economy are correct, which investment would you choose, considering both risk and return? Why?

6. You have the option to buy the stock XYZ. Its systematic risk measured by its beta is equal to 1.5. If risk free rate is 4% and the expected return on the market is 7%, how much return you should require to invest in XYZ?

7. Again assume XYZ from the previous problem. Your own analysis shows that XYZ's expected return is 9.5%. Is XYZ overvalued, undervalued or fairly valued?