EE431 Economics of Financial Market and Insitutions

Instructions: Do all questions.

Part1. Essay Questions.

1. Supoose a given bond's Macuaray's duration is equal to 5.40. The bond's coupon rate is equal to 3% and the bond's yield to maturity is equal to 5%. Calculate **the modified duration** of the bond and explain the meaning.

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2. Given 1-year zero coupon bond which pay 100 Baht at the end of the year, calculate the price of the zero coupon bond at each given YTM. Fill your answer in the table below.

YTM	1%	3%	5%
Price			

3. Consider a 9% coupon bond, 5 years to maturity, par value is 4,500. Your required rate of return from this bond is 5%. Yield to maturity is 4%. Will you buy the bond? Why?

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$$PVIF_{k\%,n} = \frac{1}{(1+k)^n}$$

	1%	2%	3%	4%	5%	6%
1	0.99010	0.98039	0.97087	0.96154	0.95238	0.94340
2	0.98030	0.96117	0.94260	0.92456	0.90703	0.89000
3	0.97059	0.94232	0.91514	0.88900	0.86384	0.83962
4	0.96098	0.92385	0.88849	0.85480	0.82270	0.79209
5	0.95147	0.90573	0.86261	0.82193	0.78353	0.74726

$$PVIFA_{k\%,n} = \sum_{t=1}^{n} \frac{1}{(1+k)^t}$$

	1%	2%	3%	4%	5%	6%
1	0.99010	0.98039	0.97087	0.96154	0.95238	0.94340
2	1.97040	1.94156	1.91347	1.88609	1.85941	1.83339
3	2.94099	2.88388	2.82861	2.77509	2.72325	2.67301
4	3.90197	3.80773	3.71710	3.62990	3.54595	3.46511
5	4.85343	4.71346	4.57971	4.45182	4.32948	4.21236

Part 2 : Multiple Choice Questions. Circle the best answer.

1. A 5-year corporate bond paying an annual coupon of 4% is sold at a price reflecting a yield-to-maturity of 6% per year. One year passes and the interest rates remain unchanged. Assuming a flat term structure and holding all other factors constant, the bond's price during this period will have

   (a) increased

   (b) decreased

   (c) remained constant

   (d) cannot be determined with the data given

2. A 5-year corporate bond paying an annual coupon of 8% is sold at a price reflecting a yield-to-maturity of 5% per year. One year passes and the interest rates remain unchanged. Assuming a flat term structure and holding all other factors constant, the bond's price during this period will have

   (a) increased

   (b) decreased

   (c) remained constant

   (d) cannot be determined with the data given

3. A 5-year corporate bond paying an annual coupon of 5% is sold at a price reflecting a yield-to-maturity of 5% per year. One year passes and the interest rates remain unchanged. Assuming a flat term structure and holding all other factors constant, the bond's price during this period will have

   (a) increased

   (b) decreased

   (c) remained constant

   (d) cannot be determined with the data given

4. What's the value to you of a $1,000 face-value bond with an 4% coupon rate when your required rate of return is 9 percent?

   (a) more than its face value

   (b) less than its face value

   (c) equal to its face value

   (d) cannot be determined with the data given

5. Suppose you can buy any fraction of a bond and you expect **the interest rate to go down** in the future. You are considering to buy one of these bonds, hold it for one year and then sell it out. Which bond you will buy in order to get the highest actual rate of returns?

   (a) Bond I, 30 years bond with 1,000 Baht face value, 10% annual coupon.

   (b) Bond II, 25 years bond with 1,000 Baht face value, 10% annual coupon.

   (c) Bond III, 20 years bond with 1,000 Baht face value, 10% annual coupon.

   (d) Bond IV, 10 years bond with 1,000 Baht face value, 10% annual coupon.