

Nanyang Business School

BU8201 Business Finance

Tutorial 3: Financial Markets and Institutions and Interest Rates

(Common Questions)

1) True or False

- a) Futures markets are markets in which physical assets such as wheat, autos etc. are immediately traded.
- b) If Thomas buys stocks of Singtel from a seller through the Singapore Stock Exchange, it would be considered a secondary market transaction.
- c) Short-term debts and common stock are examples of money market instruments.

2) Maturity risk premium. An investor in Treasury securities expects inflation to be 2.5% in Year 1, 3.2% in Year 2, and 3.6% each year thereafter. Assume that the real risk-free rate is 2.75% and that this rate will remain constant. Three-year Treasury securities yield 6.25%, while 5-year Treasury securities yield 6.80%. What is the difference in the maturity risk premium (MRP_5) on the two securities; that is, what is $MRP_5 - MRP_3$?

3) Suppose a CFO is seeking to borrow money for longer than 1 year. He looks at the US Treasury yield curve and it is upward-sloping. Would it make sense for him to borrow short-term and renew the loan or borrow long-term? Explain.

4) What effect would each of the following events likely have on the level of nominal interest rates?

- a) Households dramatically increase their savings rate.
- b) Corporations increase their demand for funds following an increase in investment opportunities.
- c) The government runs a larger-than-expected budget deficit.
- d) There is an increase in expected inflation.
- e) The economy falls into a recession.

5) **Yield curves.** Suppose the inflation rate is expected to be 7 percent next year, 5 percent the following year, and 3 percent thereafter. Assume that the real risk-free rate, r^* , will remain at 2 percent and that maturity risk premiums on Treasury securities rise from zero on very short-term bonds (those that mature in a few days) to 0.2 percent for 1-year securities. Furthermore, maturity risk premiums increase 0.2 percent for each year to maturity, up to a limit of 1.0 percent on 5-year or longer-term T-bonds.

a) Calculate the interest rate on 1-, 2-, 3-, 4-, 5-, 10-, and 20-year Treasury securities, and plot the yield curve.

b) Now suppose Exxon Mobil, an AAA-rated company, had bonds with the same maturities as the Treasury bonds. As an approximation, plot an Exxon Mobil yield curve on the same graph with the Treasury bond yield curve. (Hint: Think about the default risk premium on ExxonMobil's long-term versus its short-term bonds.)

c) Now plot the approximate yield curve of Exelon Corp., a risky nuclear utility.