

6. Jack wins the 6/49 lotteries and will receive \$20,000 every year for the rest of his life. As a result, he will work only 35 hours per week instead of 40 hours as he used to. Show the income effect and substitution effect on a diagram.

7. If the one-year to four-year bond rates are 3.0, 3.5, 4.0, and 5.0 percent, respectively, and the liquidity premiums for one-year to four-year bonds are 0.0, 0.2, 0.3, and 0.4 percent, respectively. Using the liquidity premium theory

- What is the market's forecast of the one-year bond rate three years from now.
- What is the two year forward rate at the end of the second year.

8. The demand and supply of labour for a particular occupation are estimated by the following equations:

$$W = 60 - 0.0001 L_d$$

$$W = 20 \text{ for } L_s \leq 200,000 \quad \text{and} \quad W = 10 + 0.0002 L_s \text{ for } L_s \geq 200,000$$

- Calculate the equilibrium wage and quantity of labour
 - Plot the demand and supply curves and illustrate the equilibrium wage and quantity of labour
 - What is the value for the economic rent of labour.
9. Suppose that Dan's utility function is given by, $U = 0.0001 I^2$ where I represents annual income. His current income is 59500. He is offered a chance to take a job that offers a 0.7 probability of earning \$85,000 and a 0.3 probability of earning \$34,000.
- calculate the expected income and utility from the new job
 - calculate the standard deviation
 - is this person a risk taker or risk averter? Explain
 - will he take the new job. Explain.

10. Use the following information to illustrate how each case shifts the curves in the exchange rate market. Show your directions in a diagram in each case; and how the exchange rate change in each case; which currency depreciate and which currency appreciate? From Canadian perspective

- President Trump institute a "Buy America" policy for infrastructure projects
- The US Federal Reserve increase interest rates while the Bank of Canada holds them constant
- An increase in CDN Disposable Income
- Canada Holds the Olympic Games.