Chapter 7

Answers to the Review Quizzes

Page 166 (page 568 in *Economics*)

1. Distinguish between physical capital and financial capital and give two examples of each.

   Physical capital is the actual tools, instruments, machines, buildings and other items that have been produced in the past and are presently used to produce goods and services. Financial capital is the funds that businesses use to acquire their physical capital. Examples of physical capital are the pizza ovens owned by Pizza Hut and the buildings in which the Pizza Huts are located. Examples of financial capital are the bonds issued by Pizza Hut to buy pizza ovens and the loans Pizza Hut has made to fund their purchases of new buildings.

2. What is the distinction between gross investment and net investment?

   Gross investment is the total amount spent on new capital; net investment is the change in the capital stock. Net investment equals gross investment minus depreciation.

3. What are the three main types of markets for financial capital?

   The main types of markets for financial capital are the loan markets, the bond markets, and the stock markets.

4. Explain the connection between the price of a financial asset and its interest rate.

   There is an inverse relationship between the price of a financial asset and its interest rate. When the price of a financial asset rises, its interest rate falls. Similarly, when the interest rate on an asset falls, the price of the asset rises.

Page 171 (page 573 in *Economics*)

1. What is the market for loanable funds?

   The market for loanable funds is the market in which households, firms, governments, banks, and other financial institutions borrow and lend. It is the aggregate of all the individual financial markets and includes loan markets, bond markets, and stock markets. The real interest rate is determined in this market.

2. Why is the real interest rate the opportunity cost of loanable funds?

   The real interest rate is the opportunity cost of loanable funds because the real interest rate measures what is forgone by using the funds. If the funds are loaned, then the real interest rate is received. If the funds are borrowed, then the real interest is paid for the funds. The real interest rate forgone when funds are used either to buy consumption goods and services or to invest in new capital goods is the opportunity cost of not saving or not lending those funds.

3. How do firms make investment decisions?

    To determine the quantity of investment, firms compare the expected profit rate from an investment to the real interest rate. The expected profit from an investment is the benefit from the investment. The real interest rate is the opportunity cost of investment. If the expected profit from an investment exceeds the cost of the real interest rate, then firms make the investment. If the expected profit from an investment is less than the cost of the real interest rate, then firms do not make the investment.

4. What determines the demand for loanable funds and what makes it change?

    The demand for loanable funds depends on the real interest rate and expected profit. If the real interest rate falls and nothing else changes, the quantity of loanable funds demanded increases. Conversely, if the real interest rate rises and everything else remains the same, the quantity of loanable funds demanded decreases. Movements along the loanable funds demand curve illustrate these events. If the expected profit increases and nothing else changes, the demand for loanable funds increases and the demand for loanable funds curve shifts rightward. If the expected profit decreases and everything else remains the same, the demand for loanable funds decreases and the demand for loanable funds curve shifts leftward.

5. How do households make saving decisions?

    A household's saving depends on five factors: the real interest rate, the household's disposable income, the household's expected future income, wealth, and default risk. A household increases its saving if the real interest rate increases, its disposable income increases, its expected future income decreases, its wealth decreases, or if default risk decreases.

6. What determines the supply of loanable funds and what makes it change?

    The supply of loanable funds depends on the real interest rate, disposable income, expected future income, wealth, and default risk. An increase in the real interest rate increases the quantity of loanable funds supplied; a decrease in the real interest rate decreases the quantity of loanable funds supplied. An increase in disposable income increases the supply of loanable funds; a decrease in disposable income decreases the supply of loanable funds. An increase in wealth decreases the supply of loanable funds; a decrease in wealth increases the supply of loanable funds. An increase in expected future income decreases the supply of loanable funds; a decrease in expected future income increases the supply of loanable funds. Finally, an increase in default risk decreases the supply of loanable funds; a decrease in default risk increases the supply of loanable funds.

7. How do changes in the demand for and supply of loanable funds change the real interest rate and quantity of loanable funds?

   The real interest rate is determined by the supply of loanable funds and the demand for loanable funds. The equilibrium real interest rate is the real interest rate at which the quantity of loanable funds supplied equals the quantity of loanable funds demanded. Changes in the demand for or supply of loanable funds change the equilibrium real interest rate and equilibrium quantity of loanable funds. If the demand for loanable funds increases (decreases), the real interest rate rises (falls) and the quantity of loanable funds increases (decreases). If the supply of loanable funds increases (decreases) the real interest rate falls (rises) and the quantity of loanable funds increases (decreases).

Page 174 (page 576 in *Economics*)

1. How does a government budget surplus or deficit influence the market for loanable funds?

   A government budget surplus adds to the supply of loanable funds. A government budget deficit adds to the demand for loanable funds.

2. What is the crowding-out effect and how does it work?

   The crowding out effect refers to the decrease in investment that occurs when the government budget deficit increases. An increase in the government budget deficit increases the demand for loanable funds. As a result the real interest rate rises. The rise in the real interest rate decreases—"crowds out"—investment.

3. What is the Ricardo-Barro effect and how does it modify the crowding-out effect?

   The Ricardo-Barro effect points out that the crowding out effect is less than predicted by looking only at the effect of a budget deficit on the demand for loanable funds. The Ricardo-Barro effect asserts that as a result of a government budget deficit households increase their saving to pay the higher taxes that will be needed in the future to repay the debt issued to fund the deficit. The increase in saving increases the supply of loanable funds. This increase in the supply of loanable funds offsets the rise in the real interest rate from the increase in the demand for loanable funds caused by the budget deficit. Because the real interest rate does not rise as much, the decrease in investment, that is the amount of crowding out, is less in the presence of the Ricardo-Barro effect.

Page 177 (page 579 in *Economics*)

1. Why do loanable funds flow among countries?

   Loanable funds flow among countries because savers are searching for the highest (risk-adjusted) real interest rate and borrowers are searching for the lowest (risk-adjusted) real interest rate.

2. What determines the demand for and supply of loanable funds in an individual economy?

    The demand for and supply of loanable funds in an economy with international lending and borrowing depend on the same factors as in an economy without international lending and borrowing with one exception: If, at the world real interest rate, the country has a surplus of funds, it can lend the surplus to the rest of the world while if, at the world real interest rate, the country has a shortage of funds, it can borrow from the rest of the world.

3. What happens if a country has a shortage of loanable funds at the world real interest rate?

    If a country has a shortage of loanable funds at the world real interest rate, it borrows from other nations and becomes an international borrower.

4. What happens if a country has a surplus of loanable funds at the world interest rate?

    If a country has a surplus of loanable funds at the world real interest rate, it loans to other nations and becomes an international lender.

5. How is a government budget deficit financed in an open economy?

    A government budget deficit increases the demand for loanable funds. In an open economy, the increase in the demand for loanable funds means the country lends less to the rest of the world (if it initially was an international lender) or borrows more from the rest of the world (if it initially was an international borrower). These changes in lending or borrowing finance the budget deficit.