Part Three

Answers
to End-of-Chapter
Questions and Problems

Chapter 1

ANSWERS TO QUESTIONS

1. *What is the typical relationship among interest rates on three-month Treasury bills, long-term Treasury bonds, and Baa corporate bonds?*

The interest rate on three-month Treasury bills fluctuates more than the other interest rates and is lower on average. The interest rate on Baa corporate bonds is higher on average than the other interest rates.

1. *What effect might a fall in stock prices have on business investment?*

The lower price for a firm’s shares means that it can raise a smaller amount of funds, so investment in facilities and equipment will fall.

1. *Explain the main difference between a bond and a common stock.*

A bond is a debt instrument, which entitles the owner to receive periodic amounts of money (predetermined by the characteristics of the bond) until its maturity date. A common stock, however, represents a share of ownership in the institution that has issued the stock. In addition to its definition, it is not the same to hold bonds or stock of a given corporation, since regulations state that stockholders are residual claimants (i.e. the corporation has to pay all bondholders before paying stockholders).

1. *Explain the link between well-performing financial markets and economic growth. Name one channel through which financial markets might affect economic growth and poverty.*

Well performing financial markets tend to allocate funds to its more efficient use, thereby allowing the best investment opportunities to be undertaken. The improvement in the allocation of funds results in a more efficient economy, which stimulates economic growth (and thereby poverty reduction).

1. *What was the main cause of the recession that began in 2007?*

The United States’ economy was hit by the worst financial crisis since the Great Depression. Defaults in subprime residential mortgages led to major losses in financial institutions, producing not only numerous bank failures but also the demise of two of the largest investment banks in the United States. These factors led to the “Great Recession” that began late in 2007.

1. *Can you think of a reason why people in general do not lend money to one another to buy a house or a car? How would your answer explain the existence of banks?*

In general, people do not lend large amounts of money to one another because of several information problems. In particular, people do not know about the capacity of other people of repaying their debts, or the effort they will provide to repay their debts. Financial intermediaries, in particular commercial banks, tend to solve these problems by acquiring information about potential borrowers and writing and enforcing contracts that encourage lenders to repay their debt and/or maintain the value of the collateral.

1. *What are the other important financial intermediaries in the economy, besides banks?*

Savings and loan associations, mutual savings banks, credit unions, insurance companies, mutual funds, pension funds, and finance companies.

1. *Can you date the latest financial crisis in the United States or in Europe? Are there reasons to think that these crises might have been related? Why?*

The latest financial crisis in the United States and Europe occurred in 2007–2009. At the beginning it hit mostly the US financial system, but it then quickly moved to Europe, since financial markets are highly interconnected. One specific way in which these markets were related is that some financial intermediaries in Europe held securities backed by mortgages originated in the United States, and when these securities lost their a considerable part of their value, the balance sheet of European financial intermediaries was adversely affected.

1. *Has the inflation rate in the United States increased or decreased in the past few years? What about interest rates?*

From 2014 to mid-2017, inflation has been somewhat low, but increased more recently to near 2%; interest rates have moved in a fairly narrow range, with the benchmark 10-year
US treasury rate moving from a high of around 2.5%, to as low as about 1.5% then increasing again.

1. *If history repeats itself and we see a decline in the rate of money growth, what might you expect to happen to*
	1. *real output?*
	2. *the inflation rate?*
	3. *interest rates?*

The data in Figures 3, 5, and 6 suggest that real output, the inflation rate, and interest rates would all fall.

1. *When interest rates decrease, how might businesses and consumers change their economic behavior?*

Businesses would increase investment spending because the cost of financing this spending is now lower, and consumers would be more likely to purchase a house or a car because the cost of financing their purchase is lower.

1. *Is everybody worse off when interest rates rise?*

No. It is true that people who borrow to purchase a house or a car are worse off because it costs them more to finance their purchase; however, savers benefit because they can earn higher interest rates on their savings.

1. *Why do managers of financial institutions care so much about the activities of the Federal Reserve System?*

Because the Federal Reserve affects interest rates, inflation, and business cycles, all of which have an important impact on the profitability of financial institutions.

1. *How does the current size of the U.S. budget deficit compare to the historical budget deficit or surplus for the time period since 1950?*

The deficit as a percentage of GDP expanded dramatically in 2007 but improved starting in 2010; in 2009, the deficit to GDP ratio was 9.8%, and in 2016 was 3.2%, still above the historical average of around 2% since 1950.

1. *How would a fall in the value of the pound sterling affect British consumers?*

It makes foreign goods more expensive, so British consumers will buy fewer foreign goods and more domestic goods.

1. *How would an increase in the value of the pound sterling affect American businesses?*

It makes British goods more expensive relative to American goods. Thus, American businesses will find it easier to sell their goods in the United States and abroad, and the demand for their products will rise.

1. *How can changes in foreign exchange rates affect the profitability of financial institutions?*

Changes in foreign exchange rates change the value of assets held by financial institutions and thus lead to gains and losses on these assets. Also changes in foreign exchange rates affect the profits made by traders in foreign exchange who work for financial institutions.

1. *According to Figure 8, in which years would you have chosen to visit the Grand Canyon in Arizona rather than the Tower of London?*

In the mid- to late 1970s, the late 1980s to early 1990s, and 2008 to 2015, the value of the dollar was low, making travel abroad relatively more expensive; thus, it was a good time to vacation in the United States and see the Grand Canyon. With the rise in the dollar’s value in the early 1980s, late 1990s, and after 2015, travel abroad became relatively cheaper, making it a good time to visit the Tower of London. This was also true, to a lesser extent, in the early 2000s.

The following table lists the foreign exchange rate between U.S. dollars and British pounds (GBP) during May 2017. Which day would have been the best for converting $200 into British pounds? Which day would have been the worst? What would be the difference in pounds?

|  |  |
| --- | --- |
| **Date** | **$/£** |
| 5-01 | 1.2917 |
| 5-02 | 1.2921 |
| 5-03 | 1.2916 |
| 5-04 | 1.2910 |
| 5-05 | 1.2950 |
| 05-08 | 1.2942 |
| 05-09 | 1.2939 |
| 05-10 | 1.2939 |
| 05-11 | 1.2885 |
| 05-12 | 1.2880 |
| 05-15 | 1.2917 |
| 05-16 | 1.2912 |
| 05-17 | 1.2944 |
| 05-18 | 1.3009 |
| 05-19 | 1.3018 |
| 05-22 | 1.3006 |
| 05-23 | 1.2984 |
| 05-24 | 1.2935 |
| 05-25 | 1.2954 |
| 05-26 | 1.2795 |
|  |  |
| 05-30 | 1.2858 |
| 05-31 | 1.2905 |

1. *When the dollar is worth more in relation to currencies of other countries, are you more likely to buy American-made or foreign-made jeans? Are U.S. companies that manufacture jeans happier when the dollar is strong or when it is weak? What about an American company that is in the business of importing jeans into the United States?*

When the dollar increases in value, foreign goods become less expensive relative to American goods; thus, you are more likely to buy French-made jeans than American-made jeans. The resulting drop in demand for American-made jeans because of the strong dollar hurts American jeans manufacturers. On the other hand, the American company that imports jeans into the United States now finds that the demand for its product has risen, so it is better off when the dollar is strong.

1. *Much of the U.S. government debt is held by foreign investors as treasury bonds and bills. How do fluctuations in the dollar exchange rate affect the value of that debt held by foreigners?*

As the dollar becomes stronger (worth more) relative to a foreign currency, one dollar is equivalent to (can be exchanged for) more foreign currency. Thus, for a given face value of bond holdings, a stronger dollar will yield more home currency to foreigners, so the asset will be worth more to foreign investors. Likewise, a weak dollar will lead to foreign bond holdings worth less to foreigners.

ANSWERS TO APPLIED PROBLEMS

1. *The following table lists the foreign exchange rate between U.S. dollars and British pounds (GBP) during May 2017. Which day would have been the best for converting $200 into British pounds? Which day would have been the worst? What would be the difference in pounds?*

|  |  |
| --- | --- |
| 5-01 | 1.2917 |
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| 05-25 | 1.2954 |
| 05-26 | 1.2795 |
|  |  |
| 05-30 | 1.2858 |
| 05-31 | 1.2905 |

The best day is 5/26. At a rate of $1.2795/pound, you would have £156.31. The worst day is 5/19. At $1.3018/pound, you would have £153.63, or a difference of £2.68

ANSWERS TO Data analysis PROBLEMS

1. *Go to the St. Louis Federal Reserve FRED database and find data on the three-month treasury bill rate (TB3MS), the three-month AA nonfinancial commercial paper rate (CPN3M), the 30-year treasury bond rate (GS30), the 30-year fixed rate mortgage average (MORTGAGE30US), and the NBER recession indicators (USREC). For the mortgage rate indicator, set the frequency setting to ‘monthly’.*

* 1. *In general, how do these interest rates behave during expansionary periods?*

Generally speaking, the interest rates fall during recessions, and rise during expansionary periods.

* 1. *In general, how do the three-month interest rates compare to the 30-year rates? How do the Treasury rates compare to the respective commercial paper and mortgage rates?*

In nearly all instances, the 30-year rates are significantly higher than the three-month rates. Likewise, in most cases, the 30-year mortgage rate is higher than the 30-year treasury rate, and the three-month commercial paper rate is higher than the three-month treasury rate.

* 1. *For the most recent available month of data, take the average of each of the three-month rates and compare it to the average of the three-month rates from January 2000. How do the averages compare?*
	2. *For the most recent available month of data, take the average of each of the 30-year rates and compare it to the average of the 30-year rates from January 2000. How do the averages compare?*

|  |  |  |
| --- | --- | --- |
|  | **May 2017** | **January 2000** |
| Three-month rate avg. | 0.92 | 5.53 |
| 30-year rate avg. | 3.49 | 7.42 |

See table above. For both rate averages, they have decreased significantly since January 2000.

*2. Go to the St. Louis Federal Reserve FRED database and find data on the M1 money supply (M1SL) and the 10-year treasury bond rate (GS10). Add the two series into a single graph by using the “Add Data Series” feature. Transform the M1 money supply variable into the M1 growth rate by adjusting the* units *for the M1 money supply to “Percent Change from Year Ago.”*

*a. In general, how have the growth rate of the M1 money supply and the 10-year treasury bond rate behaved during recessions and during expansionary periods since the year 2000?*

Generally, the 10-year treasury rate fell during the recessionary periods of 2001 and 2007–2009; during expansionary periods, there was less of a pattern, but there seems to be a long-run downward trend in the interest rate. The money growth rate increased significantly during recessionary periods; however, during expansions, there is less of a pattern; following the 2001 recession, money growth gradually declined, but after the 2007–2009 recession, money growth was relatively high and variable.

*b. In general, is there an obvious, stable relationship between money growth and the 10-year interest rate since the year 2000?*

When money growth rises, the 10-year treasury rate appears to fall, and vice-versa; however, this effect is more obvious over some periods than others.

*c. Compare the money growth rate and the 10-year interest rate for the most recent month available to the rates for January 2000. How do the rates compare?*

|  |  |  |
| --- | --- | --- |
|   | **May 2017** | **January 2000** |
| M1 Money Growth | 8.00 | 2.19 |
| 10-year treasury rate | 2.30 | 6.66 |

The money growth rate is significantly higher in May 2017 than it was in January 2000.

The 10-year treasury rate is significantly lower in May 2017 than it was in January 2000.