Chapter 7
The Asset Market, Money, and Prices

■ Multiple Choice Questions

1. A disadvantage of the barter system is that
   (a) no trade occurs.
   (b) people must produce all their own food, clothing, and shelter.
   (c) the opportunity to specialize is greatly reduced.
   (d) gold is the only unit of account.
   Answer: C
   Level of difficulty: 1
   Section: 7.1

2. The use of money is more efficient than barter because the introduction of money
   (a) reduces the need for economic specialization.
   (b) reduces the need to exchange goods.
   (c) reduces the need for other stores of value.
   (d) reduces transaction costs.
   Answer: D
   Level of difficulty: 1
   Section: 7.1

3. In economics, money refers to
   (a) income.
   (b) wealth.
   (c) assets used and accepted as payment.
   (d) currency.
   Answer: C
   Level of difficulty: 1
   Section: 7.1

4. Money’s primary role in the economy comes from the benefits of lowering transactions costs and allowing specialization. This function of money is called
   (a) store of value.
   (b) medium of exchange.
   (c) standard of deferred payment.
   (d) unit of account.
   Answer: B
   Level of difficulty: 1
   Section: 7.1
5. In some countries, prices in stores are listed in terms of U.S. dollars, rather than in units of the local currency. That’s most likely because
   (a) the country’s political system is unstable.
   (b) interest rates are higher using U.S. dollars than using the local currency.
   (c) there is no other store of value.
   (d) the country has experienced high rates of inflation.
   Answer: D
   Level of difficulty: 1
   Section: 7.1

6. A good that is used as a medium of exchange as well as being a consumption good is called
   (a) a barter money.
   (b) a commodity money.
   (c) a legal tender.
   (d) a debased money.
   Answer: B
   Level of difficulty: 1
   Section: 7.1

7. Why do people keep currency in their pockets when bank deposits pay interest?
   (a) Because banks might steal your money.
   (b) Because currency is more liquid.
   (c) Because bank deposits lose value due to inflation.
   (d) Because bank deposits lose value due to changes in interest rates.
   Answer: B
   Level of difficulty: 1
   Section: 7.1

8. One of money’s primary roles in the economy comes from the use of money to transfer purchasing power to the future. This role of money is called
   (a) store of value.
   (b) unit of account.
   (c) medium of exchange.
   (d) standard of deferred payment.
   Answer: A
   Level of difficulty: 1
   Section: 7.1

9. Which of the following measures is the best measure of money as a medium of exchange?
   (a) M1
   (b) M2
   (c) M3
   (d) None of the above
   Answer: A
   Level of difficulty: 1
   Section: 7.1
10. Suppose your bank raises its minimum-balance requirement for free checking on checking accounts by $500. You take $500 out of your passbook savings account and put it in your checking account. What is the overall effect on M1 and M2?
   (a) M1 rises by $500, M2 falls by $500.
   (b) M1 is unchanged, M2 is unchanged.
   (c) M1 rises by $500, M2 is unchanged.
   (d) M1 is unchanged, M2 falls by $500.
   Answer: C
   Level of difficulty: 3
   Section: 7.1

11. M1 does not include
   (a) MMMFs.
   (b) travelers’ checks.
   (c) currency.
   (d) demand deposits.
   Answer: A
   Level of difficulty: 1
   Section: 7.1

12. Which of the following statements about M1 and M2 is true?
   (a) Demand deposits are not part of M1.
   (b) M2 is more liquid than M1.
   (c) M1 is larger than M2.
   (d) Savings deposits are part of M2.
   Answer: D
   Level of difficulty: 1
   Section: 7.1

13. M2 includes
   (a) large-denomination time deposits.
   (b) institutional MMMFs.
   (c) commercial paper.
   (d) M1.
   Answer: D
   Level of difficulty: 1
   Section: 7.1

14. M2 does not include
   (a) Treasury bonds.
   (b) passbook savings accounts.
   (c) small-denomination time deposits.
   (d) M1.
   Answer: A
   Level of difficulty: 1
   Section: 7.1
15. NOW accounts are different from demand deposits because
   (a) stores prefer checks from demand deposits rather than NOW accounts.
   (b) NOW accounts are not insured by the FDIC.
   (c) NOW accounts pay interest.
   (d) money in NOW accounts may not be withdrawn from the bank without 30 days prior notice.
   Answer: C
   Level of difficulty: 1
   Section: 7.1

16. Weighted monetary aggregates
   (a) ignore the fact that some assets are more moneylike than others.
   (b) are constructed by simply adding up the outstanding amounts of various types of assets.
   (c) give greater weight to currency than to savings deposits.
   (d) value coins more than currency.
   Answer: C
   Level of difficulty: 1
   Section: 7.1

17. Over half of U.S. currency is
   (a) held abroad.
   (b) used in the underground economy.
   (c) held by banks as reserves.
   (d) held by businesses, especially retailers, for making transactions.
   Answer: A
   Level of difficulty: 1
   Section: 7.1

18. People in other countries want to hold U.S. dollars as a
   (a) medium of exchange.
   (b) store of value.
   (c) unit of account.
   (d) standard of deferred payment.
   Answer: B
   Level of difficulty: 1
   Section: 7.1

19. We shouldn’t be concerned about U.S. currency held abroad because
   (a) the currency will never return to the United States.
   (b) foreigners use it to buy U.S. bonds.
   (c) it represents an interest-free loan to the United States.
   (d) foreigners can’t spend it in their own countries.
   Answer: C
   Level of difficulty: 1
   Section: 7.1
20. What’s the most common way for a central bank to reduce the money supply?
(a) Collect higher taxes
(b) Sell bonds to the public
(c) Buy bonds from the government
(d) Buy bonds from the public
Answer: B
Level of difficulty: 1
Section: 7.1

21. A developing country does not have enough taxes to cover its expenditures and is unable to borrow. This government would be most likely to cover its deficit by
(a) purchasing government bonds from the public.
(b) selling government bonds to the public.
(c) selling newly issued government bonds directly to the central bank.
(d) buying newly issued government bonds directly from the central bank.
Answer: C
Level of difficulty: 2
Section: 7.1

22. People’s best guesses about returns on assets are called
(a) expected returns.
(b) liquidity.
(c) risk.
(d) the term structure of returns.
Answer: A
Level of difficulty: 1
Section: 7.2

23. AAA Company stock has a higher expected rate of return than ZZZ Company stock. All else being equal, you would expect that relative to ZZZ, AAA company stock provides
(a) less risk and less liquidity.
(b) less risk and more liquidity.
(c) more risk and less liquidity.
(d) more risk and more liquidity.
Answer: C
Level of difficulty: 1
Section: 7.2

24. A 10% decrease in real income usually leads to _____ in money demand.
(a) an increase
(b) no change
(c) a decrease of less than 10%
(d) a decrease of 10%
Answer: C
Level of difficulty: 1
Section: 7.3
25. Which of the following is most likely to lead to a decrease of 10% in the nominal demand for money?
   (a) An increase in real income of 5%
   (b) A decrease in real income of 5%
   (c) A decline of 10% in the price level
   (d) An increase of 10% in the price level
   Answer: C
   Level of difficulty: 2
   Section: 7.3

26. The opportunity cost of holding currency decreases when
   (a) income decreases.
   (b) the interest rate on bonds decreases.
   (c) the interest rate on money decreases.
   (d) wealth decreases.
   Answer: B
   Level of difficulty: 1
   Section: 7.3

27. An increase in the real interest rate would cause an increase in the real demand for money
   (a) no matter what the change in expected inflation.
   (b) if expected inflation fell by less than the rise in the real interest rate.
   (c) if expected inflation fell by the same amount as the rise in the real interest rate.
   (d) if expected inflation fell by more than the rise in the real interest rate.
   Answer: D
   Level of difficulty: 2
   Section: 7.3

28. An increase in expected inflation is likely to cause
   (a) a decline in the demand for real balances.
   (b) an increase in the demand for real balances.
   (c) no change in the demand for real balances.
   (d) no change in the demand for real balances only if the income elasticity of real money demand is zero.
   Answer: A
   Level of difficulty: 1
   Section: 7.3

29. Money demand is given by
   \[ \frac{M}{P} = 1000 + 0.2Y - 1000i. \]
   Given that \( P = 200, Y = 2000, \) and \( i = 0.10, \) real money demand is equal to
   (a) 1300.
   (b) 1500.
   (c) 260,000.
   (d) 300,000.
   Answer: A
   Level of difficulty: 2
   Section: 7.3
30. Over time, the wealth of society increases and payments technologies get more efficient. What is the effect on money demand of these two changes?
   (a) Money demand rises proportionately to the rise in wealth.
   (b) Money demand rises, but less than proportionately to the rise in wealth.
   (c) The overall effect is ambiguous.
   (d) Money demand declines.
   Answer: C
   Level of difficulty: 2
   Section: 7.3

31. If there is a financial panic and increased uncertainty about the returns in the stock market and bond market, what is the likely effect on money demand?
   (a) Money demand declines first, then rises when inflation increases.
   (b) Money demand rises.
   (c) The overall effect is ambiguous.
   (d) Money demand declines.
   Answer: B
   Level of difficulty: 2
   Section: 7.3

32. Suppose a new law imposes a tax on all trades of bonds and stock. What is the likely effect on money demand?
   (a) Money demand declines first, then rises when inflation increases.
   (b) Money demand rises.
   (c) The overall effect is ambiguous.
   (d) Money demand declines.
   Answer: B
   Level of difficulty: 2
   Section: 7.3

33. If real income rises 4%, prices rise 1%, and nominal money demand rises 4%, what is the income elasticity of real money demand?
   (a) 3/4
   (b) 4/5
   (c) 5/6
   (d) 1
   Answer: A
   Level of difficulty: 3
   Section: 7.3

34. If the interest elasticity of money demand is –0.1, by what percent does money demand change if the nominal interest rate rises from 2% to 3%?
   (a) –0.1%
   (b) 5%
   (c) 0%
   (d) –5%
   Answer: D
   Level of difficulty: 2
   Section: 7.3
35. If the income elasticity of money demand is 3/4 and the interest elasticity of money demand is –1/4, by what percent does money demand rise if income rises 10% and the nominal interest rate rises from 4% to 5%?
   (a) 7.50%
   (b) 6.25%
   (c) 5.00%
   (d) 1.25%
   Answer: D
   Level of difficulty: 3
   Section: 7.3

36. Which of the following is the most likely explanation for the causes behind the “case of the missing money”?
   (a) Higher prices in the 1970s reduced the demand for money.
   (b) Government deficits increased the demand for money, draining it out of the private sector.
   (c) Financial innovations, such as money market mutual funds, changed the demand for narrow definitions of money such as M1.
   (d) Increases in Eurodollar deposits drew money out of the American banking system.
   Answer: C
   Level of difficulty: 2
   Section: 7.3

37. Velocity is defined as
   (a) nominal money stock/nominal GDP.
   (b) nominal GDP/nominal money stock.
   (c) real money stock/real GDP.
   (d) $mc^2$.
   Answer: B
   Level of difficulty: 1
   Section: 7.3

38. If real GDP is $4 billion, the price level is 1.25, and the nominal money stock is $500 million, then velocity is
   (a) 0.1.
   (b) 1.
   (c) 10.
   (d) 100.
   Answer: C
   Level of difficulty: 2
   Section: 7.3
39. Money demand is given by

\[ \frac{M^d}{P} = 1000 + 0.2Y - 1000i. \]

Given that \( P = 200, Y = 2000, \) and \( i = 0.10, \) velocity is equal to

(a) 0.65.
(b) 0.75.
(c) 1.33.
(d) 1.54.

Answer: D
Level of difficulty: 2
Section: 7.3

40. Suppose velocity is 3, real output is 9000, and the price level is 1.5. What is the level of real money demand in this economy?

(a) 2000
(b) 3000
(c) 6000
(d) 30,000

Answer: B
Level of difficulty: 2
Section: 7.3

41. Suppose velocity is constant at 4, real output is 10, and the price level is 2. From this initial situation, the government increases the nominal money supply to 6. If velocity and output remain unchanged, by how much will the price level increase?

(a) 2.4%
(b) 20%
(c) 24%
(d) 50%

Answer: B
Level of difficulty: 3
Section: 7.3

42. Under a situation of asset market equilibrium,

(a) the quantity of money supplied equals the quantity of money demanded.
(b) the quantity of money supplied equals the quantity of nonmonetary assets demanded.
(c) the quantity of nonmonetary assets supplied equals the quantity of monetary assets demanded.
(d) the quantity of money supplied equals the quantity of nonmonetary assets supplied.

Answer: A
Level of difficulty: 1
Section: 7.4
43. If the quantity of money demanded exceeds the quantity of money supplied, then
   (a) the quantity of nonmonetary assets demanded exceeds the quantity supplied.
   (b) the quantity of nonmonetary assets supplied exceeds the quantity demanded.
   (c) the quantity of nonmonetary assets demanded will still equal the quantity supplied, all else being
       equal.
   (d) you can make no conclusions about the relative supply and demand of nonmonetary assets.

   Answer: B
   Level of difficulty: 2
   Section: 7.4

44. Suppose the real money demand function is

   \[\frac{M}{P} = 2400 + 0.2Y - 10,000 (r + \pi_e)\]

Assume \( M = 4000 \), \( P = 2.0 \), \( \pi_e = 0.03 \), and \( Y = 5000 \). The real interest rate that clears the asset
market is
   (a) 3%.
   (b) 6%.
   (c) 11%.
   (d) 14%.

   Answer: C
   Level of difficulty: 3
   Section: 7.4

45. Suppose the real money demand function is

   \[\frac{M}{P} = 2400 + 0.2Y - 10,000 (r + \pi_e)\]

Assume \( M = 5000 \), \( \pi_e = 0.03 \), and \( Y = 5000 \). If the price level were to decrease from 2.5 to 2.0, then
the real interest rate would decrease by how many percentage points (assuming \( M^\prime, \pi_e \), and \( Y \) are
unchanged)?
   (a) 4
   (b) 5
   (c) 9
   (d) 14

   Answer: B
   Level of difficulty: 3
   Section: 7.4

46. Suppose the real money demand function is

   \[\frac{M}{P} = 2400 + 0.2Y - 10,000 (r + \pi_e)\]

Assume \( M = 5000 \), \( P = 2.0 \), and \( \pi_e = .03 \). If \( Y \) were to increase from 4000 to 5000, then the real
interest rate would increase by how many percentage points?
   (a) 2
   (b) 4
   (c) 5
   (d) 7

   Answer: A
   Level of difficulty: 3
   Section: 7.4
47. Suppose real money demand is

\[ L = 0.8 Y - 100,000 (r + \pi). \]

If the nominal money supply is 12,000, real output is 15,000, the real interest rate is .02, and the expected inflation rate is .01, then the price level is

(a) 3/4
(b) 1
(c) 4/3
(d) 3

Answer: C
Level of difficulty: 3
Section: 7.4

48. If the nominal money supply doubles while real money demand is unchanged, what happens to the price level?

(a) The price level increases by a factor of four.
(b) The price level doubles.
(c) The price level is unchanged.
(d) The price level falls by one-half.

Answer: B
Level of difficulty: 1
Section: 7.5

49. If real money demand doubles while the nominal money supply is unchanged, what happens to the price level?

(a) The price level increases by a factor of four.
(b) The price level doubles.
(c) The price level is unchanged.
(d) The price level falls by one-half.

Answer: D
Level of difficulty: 1
Section: 7.5

50. If nominal money supply grows by 3% and real money demand grows by 8%, the inflation rate is

(a) –5%.
(b) 8/3%.
(c) 5%.
(d) 11%.

Answer: A
Level of difficulty: 2
Section: 7.5
51. If real money demand increases 5% and real money supply increases by 10%, by about how much does the price level change?
   (a) Falls by 5%.
   (b) Unchanged.
   (c) Rises by 2%.
   (d) Rises by 5%.
   Answer: D
   Level of difficulty: 1
   Section: 7.5

52. If the income elasticity of money demand is 3/4 and income increases by 8%, by about how much does the price level change?
   (a) Falls by 6%.
   (b) Unchanged.
   (c) Rises by 6%.
   (d) Rises by 8%.
   Answer: A
   Level of difficulty: 1
   Section: 7.5

53. If the nominal money supply grows by 5%, real income falls by 2%, and the income elasticity of money demand is 0.8, then the inflation rate is
   (a) 3.0%.
   (b) 3.4%.
   (c) 6.6%.
   (d) 7.0%.
   Answer: C
   Level of difficulty: 2
   Section: 7.5

54. Large differences in inflation rates among countries are almost always the result of large differences in
   (a) productivity.
   (b) real income growth.
   (c) the growth rates of real money demand.
   (d) the growth rates of nominal money supplies.
   Answer: D
   Level of difficulty: 1
   Section: 7.5

55. When a government prints money to finance its expenditures, it is likely to cause
   (a) unemployment.
   (b) inflation.
   (c) deflation.
   (d) reductions in the use of barter.
   Answer: B
   Level of difficulty: 1
   Section: 7.5
56. The most likely explanation for the high inflation rates that countries like Russia and the Ukraine have suffered is that
(a) large inflows of foreign funds increase the money supply, causing inflation.
(b) without inflation, these countries would be unable to achieve high rates of growth.
(c) borrowing from the central bank is the most expedient method of funding the government’s expenditures.
(d) the flood of financial innovations has increased liquidity in these nations’ economies.

Answer: C
Level of difficulty: 2
Section: 7.5

Essay Questions

1. What happens to M1 and M2 due to each of the following changes?
   (a) You take $500 out of your checking account and put it into a passbook savings account.
   (b) You take $1000 out of your checking account and buy traveler’s checks.
   (c) You take $1500 out of your money-market mutual fund and deposit into your checking account.
   (d) You cash in $2000 in savings bonds and invest the money in a certificate of deposit.

   Answers:
   (a) M1 falls $500, M2 is unchanged (remember that M1 is part of M2).
   (b) M1 and M2 are both unchanged.
   (c) M1 rises $1500, M2 is unchanged.
   (d) M1 is unchanged, M2 rises $2000.

   Level of difficulty: 2
   Section: 7.1

2. Why is per-capita U.S. currency demand so large? Who is holding large amounts of U.S. currency and why are they doing so? Should U.S. policymakers be concerned about this? Why?

   Answer: Currency demand is large mostly because foreigners hold many dollars. They do so because of inflation or political instability in their countries. Policymakers shouldn’t be very concerned, since foreigners’ dollar holdings represent an interest-free loan to the United States. However, a cause for concern may be that fluctuations in our money supply may reflect conditions abroad that are unrelated to the U.S. economy.

   Level of difficulty: 1
   Section: 7.1
3. What happens to real money demand (rise, fall, or no change) due to a change in each of the following factors?
   (a) A tax on stock market transactions is introduced.
   (b) Computerized bond trading reduces transaction costs.
   (c) People’s average level of wealth rises.
   (d) The threat of a recession increases the riskiness of stocks and bonds.
   (e) The interest rate paid on checking account balances declines.
   (f) The price level falls in a one-time jump.

   **Answers:**
   (a) Rises
   (b) Falls
   (c) Rises
   (d) Rises
   (e) Falls
   (f) Is unchanged

   Level of difficulty: 1
   Section: 7.3

4. Give five examples of factors that could reduce the demand for money.

   **Answer:** Lower price level, lower real income, higher real interest rate, higher expected inflation, lower nominal interest rate on money, lower wealth, lower risk on alternative assets, higher risk on money, increased liquidity of alternative assets, or increased efficiency of payments technologies.

   Level of difficulty: 2
   Section: 7.3

5. Describe the case of the missing money: when did it occur, what measure of money was relevant, why was the money considered “missing,” and who first discovered it? What explains why the money was missing?

   **Answers:** Goldfeld found that real demand for M1 was fairly stable, but from late 1974 to early 1976 money demand was much lower than predicted. It may be that financial innovation changed real money demand in the mid-1970s, including the introduction of new interest-bearing assets that were quite liquid, including money market mutual funds and overnight repurchase agreements.

   Level of difficulty: 1
   Section: 7.3
6. Suppose the money demand function is 

\[ \frac{M^d}{P} = 1000 + 0.2Y - 1000 (r + \pi'). \]

(a) Calculate velocity if \( Y = 2000, r = .06, \) and \( \pi' = .04. \)
(b) If the money supply \((M')\) is 2600, what is the price level?
(c) Now suppose the real interest rate rises to 0.11, but \( Y \) and \( M' \) are unchanged. What happens to velocity and the price level? So if the nominal interest rate were to rise from 0.10 to 0.15 over the course of a year, with \( Y \) remaining at 2000, what would the inflation rate be?

**Answers:**

(a) \( V = \frac{PY}{M} = Y(\frac{M}{P}) \). From the money demand function, \( \frac{M}{P} = 1300. \) So \( V = 2000/1300 = 1.54. \)
(b) \( P = \frac{M'}{(M'/(P) = 2600/1300 = 2. \)
(c) Now \( M'/(P = 1250. \) So \( V = 2000/1250 = 1.6. \) \( P = M'/(M'/(P) = 2600/1250 = 2.08. \) The inflation rate would be 4%.

Level of difficulty: 3
Section: 7.3

7. Suppose the money demand function is given by 

\[ \frac{M^d}{P} = 640 + 0.1Y - 5000 (r + \pi'). \]

Suppose the central bank changes the nominal money supply depending on income and inflation:

\[ M' = 1000 + 0.1Y - 4000 \pi. \]

(a) If expected inflation equals actual inflation = 0.03, \( Y = 1000, \) and \( r = 0.02, \) calculate the price level.
(b) If inflation rises to 0.04 while the other variables remain as in part \( a, \) calculate the price level.
(c) If expected inflation rises to 0.04 while the other variables remain as in part \( a, \) calculate the price level.
(d) If the real interest rate rises to 0.03 while the other variables remain as in part \( a, \) calculate the price level.

**Answers:**

Plug in the value of \( Y \) and use text Eq. (7.10) to get \( P = [1100 - 4000 \pi]/[740 - 5000(r + \pi')] \). When \( r = 0.02, \) this becomes \( P = [1100 - 4000 \pi]/[640 - 5000 \pi]. \)

(a) \( P = 980/490 = 2. \)
(b) \( P = 940/490 = 1.92. \)
(c) \( P = 980/440 = 2.23. \)
(d) \( P = 980/440 = 2.23. \)

Level of difficulty: 2
Section: 7.4
Chapter 7  The Asset Market, Money, and Prices  117

8. Calculate the change in the price level for each of the following events, taken one at a time, with other variables unchanged.

(a) Money supply increases 10%.
(b) Money demand increases 5%.
(c) Money supply decreases 5% while money demand increases 5%.
(d) Money supply increases 15% while money demand increases 5%.

Answers:
(a) 10%
(b) –5%
(c) –10%
(d) 10%

Level of difficulty: 1  
Section: 7.5

9. Why did some of the formerly Communist countries of Eastern Europe have inflation rates over 100%, while others didn’t? Which factor was more important in explaining the differing inflation rates, real money demand or nominal money supply? Why did the countries with high inflation rates allow inflation to get so high?

Answer: Some countries had high inflation while others didn’t because of differences in rates of money growth. Real money demand didn’t vary enough to explain the differences in inflation rates; instead, nominal money supply growth was strongly correlated with inflation. The countries allowed inflation to get so high because they were trying to finance government expenditures by printing money.

Level of difficulty: 1  
Section: 7.5