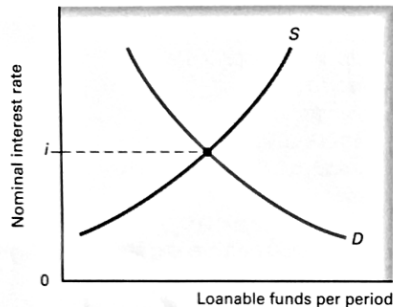


- Compute the inflation rate for each year 1993–2012 and determine which were years of inflation. In which years did deflation occur? In which years did disinflation occur? Was there hyperinflation in any year?
- (Sources of Inflation) Using the concepts of aggregate supply and aggregate demand, explain why inflation usually increases during wartime.
  - (Inflation and Interest Rates) Using a demand-supply diagram for loanable funds (like the exhibit below), show what happens to the nominal interest rate and the equilibrium quantity of loans when both borrowers and lenders increase their estimates of the expected inflation rate from 5 percent to 10 percent.

#### The Market for Loanable Funds



#### 7-4 Explain how unanticipated inflation harms some individuals and harms the economy as a whole

- (Anticipated Versus Unanticipated Inflation) If actual inflation exceeds anticipated inflation, who will lose purchasing power and who will gain? How does unanticipated inflation harm the economy?

## CHAPTER 8

### 8-1 Describe how we measure labor productivity, and explain why it is important for a nation's standard of living

- (Measuring Labor Productivity) How do we measure labor productivity? How do changes in labor productivity affect the U.S. standard of living?
- (Growth and the PPF) Use the production possibilities frontier (PPF) to demonstrate economic growth.
  - With consumption goods on one axis and capital goods on the other, show how the combination of goods selected this period affects the PPF in the next period.
  - Extend this comparison by choosing a different point on this period's PPF and determining whether that combination leads to more or less growth over the next period.
- (Shifts in the PPF) Terrorist attacks foster instability and may affect productivity over the short and long term. Do you think the September 11, 2001, terrorist attacks on the World Trade Center and the Pentagon affected short- and/or long-term productivity in the United States? Explain your response and show any movements in the PPF.

### 8-2 Summarize the history of U.S. labor productivity changes since World War II and explain why these changes matter

- (Labor Productivity) Identify at least four definable periods of labor productivity growth beginning right after World War II. During which periods was productivity growth lowest and why? (Refer to Exhibit 6 in the chapter.)
- (Long-Term Productivity Growth) Suppose that two nations start out in 2013 with identical levels of output per work hour—say, \$100 per hour. In the first nation, labor productivity grows by 1 percent per year. In the second, it grows by 2 percent per year. Use a calculator or a spreadsheet to determine how much output per hour each nation will be producing 20 years later, assuming that labor productivity growth rates do not change. Then, determine how much each will be producing per hour 100 years later. What do your results tell you about the effects of small differences in productivity growth rates?

### 8-3 Evaluate the evidence that technological change increases the unemployment rate

- (Technological Change) Does technological change create unemployment? What's the evidence?
- (Technological Change and Unemployment) What are some examples, other than those given in the chapter, of technological change that has caused unemployment? And what are some examples of new technologies that have created jobs? How do you think you might measure the net impact of technological change on overall employment and GDP in the United States?

## CHAPTER 9

### 9-1 Explain what a consumption function illustrates and interpret its slope

- (Consumption) Use the following data to answer the questions below:

Consumption Real Disposable Income (billions)	Expenditures (billions)	Saving (billions)
\$100	\$150	\$ _____
\$200	\$200	_____
\$300	\$250	_____
\$400	\$300	_____

- Graph the consumption function, with consumption spending on the vertical axis and disposable income on the horizontal axis.
  - If the consumption function is a straight line, what is its slope?
  - Fill in the saving column at each level of income. If the saving function is a straight line, what is its slope?
- (MPC and MPS) If consumption increases by \$12 billion when disposable income increases by \$15 billion, what is the value of the MPC? What is the relationship between the MPC and the MPS? If the MPC increases, what must happen to the MPS? How is the MPC related to the consumption function? How is the MPS related to the saving function?

3. *(Consumption and Saving)* Suppose that consumption equals \$500 billion when disposable income is \$0 and that each increase of \$100 billion in disposable income causes consumption to increase by \$70 billion. Draw a graph of the consumption function using this information. What is the slope of the consumption function?

### 9-2 Describe what can shift the consumption function up or down

4. *Consumption Function* How would an increase in each of the following affect the consumption function?
- Net taxes
  - The interest rate
  - Consumer optimism, or confidence
  - The price level
  - Consumers' net wealth
  - Disposable income

### 9-3 Explain why investment varies more than consumption from year to year

5. *(Investment)* Why does investment vary more than consumption from year to year?
6. *(Investment)* Why would the following investment expenditures increase as the interest rate declines?
- Purchases of a new plant and equipment
  - Construction of new housing
  - Increase of inventories

### 9-4 Describe how the aggregate expenditure line determines the quantity of aggregate output demanded

7. *(Aggregate Expenditure)* What are the components of aggregate expenditure? In the model developed in this chapter, which components vary with changes in the level of real GDP? What determines the slope of the aggregate expenditure line?
8. *(GDP Demanded)* How is the aggregate expenditure line used to identify real GDP demanded assuming a given price level?

### 9-5 Determine the simple spending multiplier and explain its relevance

9. *(Simple Spending Multiplier)* For each of the following values for the MPC, determine the size of the simple spending multiplier and the total change in real GDP demanded following a \$10 billion decrease in spending:
- $MPC = 0.9$
  - $MPC = 0.75$
  - $MPC = 0.6$
10. *(Simple Spending Multiplier)* Suppose that the MPC is 0.8 and that \$14 trillion of real GDP is currently being demanded. The government wants to increase real GDP demanded to \$15 trillion at the given price level. By how much would it have to increase government purchases to achieve this goal?
11. *(Investment and the Multiplier)* This chapter assumes that investment is autonomous. What would happen to the size of the multiplier if investment increases as real GDP increases? Explain.

### 9-6 Summarize the relationship between the aggregate expenditure line and the aggregate demand curve

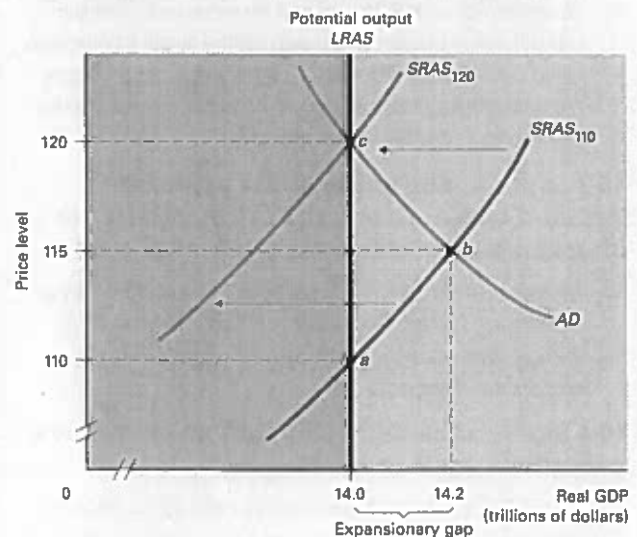
12. *(Shifts of Aggregate Demand)* Assume the simple spending multiplier equals 3. Determine the size and direction of any changes of the aggregate expenditure line, real GDP demanded, and the aggregate demand curve for each of the following changes in spending:
- Spending rises by \$8 billion at each income level.
  - Spending falls by \$5 billion at each income level.
  - Spending rises by \$20 billion at each income level.

## CHAPTER 10

### 10-1 Explain what determines the shape and position of the short-run aggregate supply curve

1. *(Natural Rate of Unemployment)* What is the relationship between potential output and the natural rate of unemployment?
- If the economy currently has a frictional unemployment rate of 2 percent, structural unemployment of 2 percent, seasonal unemployment of 0.5 percent, and cyclical unemployment of 2 percent, what is the natural rate of unemployment? Where is the economy operating relative to its potential GDP?
  - What happens to the natural rate of unemployment and potential GDP if cyclical unemployment rises to 3 percent with other types of unemployment unchanged from part (a)?
  - What happens to the natural rate of unemployment and potential GDP if structural unemployment falls to 1.5 percent with other types of unemployment unchanged from part (a)?
2. *(Real Wages)* In the accompanying exhibit, how does the real wage rate at point *c* compare with the real wage rate at point *a*? How do nominal wage rates compare at those two points? Explain your answers.

#### Long-Run Adjustment When the Price Level Exceeds Expectations



10. *(Fiscal Policy)* Why or why not was fiscal policy effective when the U.S. economy was experiencing stagflation during the 1970s?

### 11-3 Identify some reasons why discretionary fiscal policy may not work very well

11. *(Fiscal Policy Effectiveness)* Determine whether each of the following would make fiscal policy more effective or less effective:
- A decrease in the marginal propensity to consume
  - Shorter lags in the effect of fiscal policy
  - Consumers suddenly becoming more concerned about permanent income than about current income
  - More accurate measurement of the natural rate of unemployment

### 11-4 Summarize fiscal policy from 1980 to the present and describe the most significant event during that period and the fiscal policy response

12. *(Fiscal Policy During the Great Recession)* Using the aggregate demand–aggregate supply model, illustrate what President Obama was trying to accomplish with the \$831 billion stimulus program. What were some costs and benefits of this program?

## CHAPTER 12

### 12-1 Summarize how federal spending priorities have changed since the 1960s

- (Changing Budget Priorities)* What spending category claimed the largest share of federal outlays during the 1960s? How about during the most recent decade?
- (The Federal Budget Process)* Why does the budget require a forecast of the economy? Under what circumstances would actual government spending and tax revenue fail to match the budget as approved?

### 12-2 Explain why the federal budget has been in deficit in most years since the Great Depression

- (Budget Philosophies)* Explain the differences among an annually balanced budget, a cyclically balanced budget, and functional finance. How does each affect economic fluctuations?
- (Chronic Deficits)* Why has the federal budget been in deficit in all but 14 years since 1929?

### 12-3 Outline what has happened to the federal debt in recent decades and how it compares with debt levels in other countries

- (Federal Debt)* What has happened to the federal debt since 2008 as measured relative to GDP?
- (Net Public Debt)* What's the level of net public debt (for federal, state, and local governments) relative to U.S. GDP? How does the U.S. measure compare with that of other major economies?
- (Debt Measures)* What's the difference between gross federal debt and federal debt held by the public?

8. *(The National Debt)* Try the following exercises to better understand how the national debt is related to the government's budget deficit.
- Assume that the gross national debt initially is equal to \$3 trillion and the federal government then runs a deficit of \$300 billion.
    - What is the new level of gross national debt?
    - If 100 percent of the deficit is financed by the sale of securities to federal agencies, what happens to the amount of debt held by the public? What happens to the level of gross debt?
    - If GDP increased by 5 percent in the same year that the deficit is run, what happens to gross debt as a percentage of GDP? What happens to the level of debt held by the public as a percentage of GDP?
  - Now suppose that the gross national debt initially is equal to \$2.5 trillion and the federal government then runs a deficit of \$100 billion.
    - What is the new level of gross national debt?
    - If 100 percent of this deficit is financed by the sale of securities to the public, what happens to the level of debt held by the public? What happens to the level of gross debt?
    - If GDP increases by 6 percent in the same year as the deficit is run, what happens to gross debt as a percentage of GDP? What happens to the level of debt held by the public as a percentage of GDP?

### 12-4 Describe how a giant federal debt could have a negative impact on the economy

- (Crowding Out and Capital Formation)* In earlier chapters, we've seen that the government can try to increase GDP in the short run by running a budget deficit. What are some longterm effects of deficit spending?
- (Sustainability of Federal Debt)* Are large federal deficits and a growing federal debt sustainable? What can be learned from the experiences of other countries?

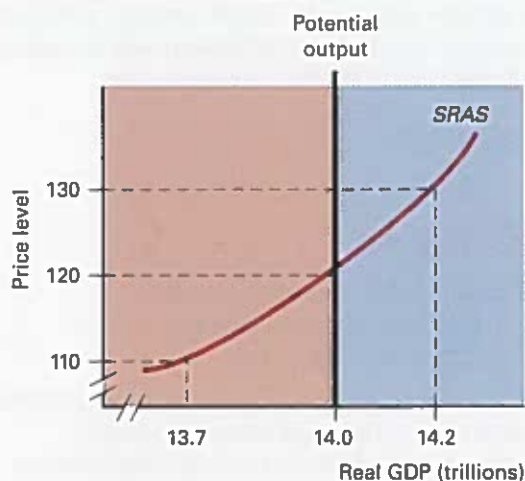
## CHAPTER 13

### 13-1 Identify three functions of money and six qualities of the ideal money

- (Functions of Money)* What are three functions of money?
- (Ideal Money)* What are six qualities of the ideal money?
- (Origins of Banking)* Discuss the various ways in which London goldsmiths functioned as early banks.
- (Types of Money)* Complete each of the following sentences:
  - A product that serves both as money and as a commodity is \_\_\_\_\_.
  - Most coins and paper money circulating in the United States have face values that exceed the value of the materials from which they are made. Therefore, they are forms of \_\_\_\_\_.
  - If the government declares that creditors must accept a form of money as payment for debts, the money becomes \_\_\_\_\_.

## 10-2 Describe the market forces that push the economy toward its potential output in the long run

3. (*Expansionary and Recessionary Gaps*) Answer questions a through f on the basis of the following graph:



- If the actual price level exceeds the expected price level reflected in long-term contracts, real GDP equals \_\_\_\_\_ and the actual price level equals \_\_\_\_\_ in the short run.
  - The situation described in part (a) results in a(n) \_\_\_\_\_ gap equal to \_\_\_\_\_.
  - If the actual price level is lower than the expected price level reflected in long-term contracts, real GDP equals \_\_\_\_\_ and the actual price level equals \_\_\_\_\_ in the short run.
  - The situation described in part (c) results in a(n) \_\_\_\_\_ gap equal to \_\_\_\_\_.
  - If the actual price level equals the expected price level reflected in long-term contracts, real GDP equals \_\_\_\_\_ and the actual price level equals \_\_\_\_\_ in the short run.
  - The situation described in part (e) results in a(n) \_\_\_\_\_ gap equal to \_\_\_\_\_.
4. (*Long-Run Adjustment*) The ability of the economy to eliminate any imbalances between actual and potential output is sometimes called self-correction. Using an aggregate supply and aggregate demand diagram, show why this self-correction process involves only temporary periods of inflation or deflation.

## 10-3 Explain why shifts of the aggregate demand curve change the price level in the long run but do not change potential output

5. (*Changes in Aggregate Supply*) List three factors that can change the economy's potential output. What is the impact of shifts of the aggregate demand curve on potential output? Illustrate your answers with a diagram.

## 10-4 Summarize what can shift an economy's potential output in the long run

6. (*Supply Shocks*) Give an example of an adverse supply shock and illustrate graphically. Now do the same for a beneficial supply shock.

## CHAPTER 11

### 11-1 Describe the discretionary fiscal policies to close a recessionary gap and an expansionary gap

- (*Fiscal Policy*) Define *fiscal policy*. Determine whether each of the following, other factors held constant, would lead to an increase, a decrease, or no change in the level of real GDP demanded:
  - A decrease in government purchases
  - An increase in net taxes
  - A reduction in transfer payments
  - A decrease in the marginal propensity to consume
- (*Recessionary Gap*) What is a recessionary gap? What fiscal policy might close that gap? Show with a graph.
- (*Expansionary Gap*) What is an expansionary gap? What fiscal policy might close that gap? Show with a graph.
- (*Changes in Government Purchases*) Assume that government purchases decrease by \$10 billion, with other factors held constant, including the price level. Calculate the change in the level of real GDP demanded for each of the following values of the MPC. Then, calculate the change if the government, instead of reducing its purchases, increased autonomous net taxes by \$10 billion.
  - 0.9
  - 0.8
  - 0.75
  - 0.6
- (*Fiscal Multipliers*) Explain the difference between the government purchases multiplier and the net tax multiplier. If the MPC falls, what happens to the tax multiplier?
- (*Multipliers*) Suppose investment, in addition to having an autonomous component, also has a component that varies directly with the level of real GDP. How would this affect the size of the spending multiplier?
- (*Fiscal Policy*) Chapter 11 shows that increased government purchases, with taxes held constant, can eliminate a recessionary gap. How could a tax cut achieve the same result?
- (*Fiscal Policy with an Expansionary Gap*) Using the aggregate demand–aggregate supply model, illustrate an economy with an expansionary gap. If the government is to close the gap by changing government purchases, should it increase or decrease those purchases? In the long run, what happens to the level of real GDP as a result of government intervention? What happens to the price level? Illustrate this on an *AD–AS* diagram, assuming that the government changes its purchases by exactly the amount necessary to close the gap.

### 11-2 Summarize fiscal policy from the Great Depression to stagflation

9. (*Evolution of Fiscal Policy*) What did classical economists assume about the flexibility of prices, wages, and interest rates? What did this assumption imply about the self-correcting tendencies in an economy in recession? What disagreements did Keynes have with classical economists?