

# MACROECONOMICS EXAM REVIEW

## CHAPTERS 11 THROUGH 16 AND 18

### Key Terms and Concepts to Know

#### CHAPTER 11 - FISCAL POLICY

##### I. Theory of Fiscal Policy

Fiscal Policy is the use of government purchases, transfer payments, taxes, and borrowing to affect macroeconomic variables such as real GDP, employment, the price level, and economic growth.

##### A. Fiscal Policy Tools

- **Automatic stabilizers:** Federal budget revenue and spending programs that automatically adjust with the ups and downs of the economy to stabilize disposable income.
- **Discretionary fiscal policy:** Deliberate manipulation of government purchases, transfer payments, and taxes to promote macroeconomic goals like full employment, price stability, and economic growth.
- **Changes in Government Purchases:**  
At any given price level, an increase in government purchases or transfer payments increases real GDP demanded. For a given price level, assuming only consumption varies with income:
  - Change in real GDP = change in government spending  $\times 1 / (1 - MPC)$  other things constant.
  - Simple Spending Multiplier =  $1 / (1 - MPC)$
- **Changes in Net Taxes:**  
A decrease (increase) in net taxes increases (decreases) disposable income at each level of real GDP, so consumption increases (decreases). The change in real GDP demanded is equal to the resulting shift of the aggregate expenditure line times the simple spending multiplier.
  - Change in real GDP =  $(-MPC \times \text{change in NT}) \times 1 / (1 - MPC)$  or simplified,
  - Change in real GDP =  $\text{change in NT} \times -MPC / (1 - MPC)$
  - Simple tax multiplier =  $-MPC / (1 - MPC)$

##### B. Discretionary Fiscal Policy to Close a Recessional Gap

Expansionary fiscal policy, such as an increase in government purchases, a decrease in net taxes, or a combination of the two:

- Could sufficiently increase aggregate demand to return the economy to its potential output.
- Causes a higher price level and may cause a budget deficit.

### **C. Discretionary Fiscal Policy to Close an Expansionary Gap**

Contractionary fiscal policy to reduce aggregate demand by reducing government purchases, increasing net taxes, or a combination of the two:

- Could move the economy to potential output without the resulting inflation.
- Causes a lower price level and a lower deficit or even a surplus.
- Fiscal policy can be difficult to achieve: Proper execution depends on assumptions that may not hold.

### **D. The Multiplier and the Time Horizon:**

- The steeper the short-run aggregate supply curve, the less impact a given shift of the aggregate demand curve has on real GDP and the more impact it has on the price level, so the smaller the spending multiplier.
- At potential output, the spending multiplier in the long run is zero.

## **II. Fiscal Policy Up to Stagflation of the 1970s**

**A. Prior to the Great Depression:** Classical economists, who advocated laissez-faire, believed that natural market forces, by way of flexible prices, wages, and interest rates, would move the economy toward potential GDP. There was no need for government intervention.

### **B. The Great Depression and World War II**

- The Great Depression strained belief in the economy's ability to correct itself, which was the view of the classical economist.
- Keynesian theory challenged the classical view:
  - Prices and wages did not appear flexible enough to ensure the full employment of resources.
  - Prices and wages were relatively inflexible, or "sticky" in the downward direction.
  - Business expectations at times become so grim that even very low interest rates would not spur firms to invest all that consumers might save.
- After the Great Depression, the use of discretionary fiscal policy was bolstered by:
  - The influence of Keynes General Theory
  - Impact of WWII on output and employment.
  - Pass of the Employment Act of 1946, giving the government the responsibility for promoting full employment and price stability.

### **C. Automatic Stabilizers:**

The progressive federal income tax, unemployment insurance, and welfare spending smooth fluctuations in disposable income over the business cycle by:

- Stimulating aggregate demand during recessions
- Dampening aggregate demand during expansions

### **D. From the Golden Age to Stagflation**

- 1960s Golden Age of fiscal policy: Increasing or decreasing aggregate demand to smooth economic fluctuations.
- 1970s Stagflation (high inflation and high unemployment due to adverse supply shocks):
  - Fiscal policy is ill-suited to solving stagflation.
  - Increasing aggregate demand would increase inflation, and decreasing aggregate demand would increase unemployment.

## **III. Limits on Fiscal Policy's Effectiveness**

### **A. Fiscal Policy and the Natural Rate of Unemployment**

**Natural rate of unemployment:** The unemployment rate that occurs when the economy is producing its potential GDP. For discretionary policy purposes, officials must correctly estimate this natural rate.

**B. Lags in Fiscal Policy:**

Time required to approve and implement fiscal legislation can weaken the effectiveness of discretionary fiscal policy as a tool for macroeconomic stabilization.

**C. Discretionary Fiscal Policy and Permanent Income:**

Because consumers base their spending decisions on their permanent income, temporary tax changes are less effective.

**IV. Fiscal Policy Since 1980**

**A. Fiscal Policy During the 1980s:**

Automatic stabilizers and discretionary fiscal policy may inadvertently affect individual incentives to work, spend, save, and invest.

**B. 1990 to 2007: From Deficits to Surpluses Back to Deficits:**

Higher tax revenue and spending discipline created surpluses from 1998 to 2000. Recession and terrorist attacks in 2001 caused deficits to return.

**C. Fiscal Policy and the Great Recession:**

- The Financial Crisis and Aftermath: Housing market crisis led to a financial crisis and a deep recession. Tax cuts and increased spending caused ballooning deficits.
- The Stimulus Package: The American Recovery and Reinvestment Act had an estimated cost of \$787 billion.
- Government Purchases and Real GDP: Government purchases declined and employment fell by 6.1 percent between December 2007 and December 2009. The federal deficit ballooned up to 1.4 trillion in 2009. This catastrophic event will require years of study to truly understand its impact.

## **CHAPTER 12 - FEDERAL BUDGETS AND PUBLIC POLICY**

**I. The Federal Budget Process**

**A. Federal budget:** A plan for government outlays and revenues for a specified period, usually a year.

**B. The Presidential and Congressional Roles**

- Early in the calendar year, the President submits The Budget of the United States Government to Congress.
- Fiscal year runs from October 1 to September 30.
- The Economic Report of the President also submitted to Congress, reflects the President's take on the economy and includes fiscal policy recommendations.

**C. The Congressional Role in the Budget Process**

- House and Senate rework the President's budget until total outlays and expected revenues are agreed upon. This is a budget resolution, and it guides spending and revenue decisions.

#### D. Problems with the Budget Process

- **Budget Deficit:** When outlays exceed revenues, the budget is in deficit. A deficit stimulates aggregate demand in the short run but reduces national saving, which can impede economic growth in the long run.
- **Budget Surplus:** When revenues exceed outlays, the budget is in surplus. A surplus dampens aggregate demand in the short run but boosts domestic saving, which can promote economic growth in the long run.
  - **Continuing resolutions instead of budget decisions:** agreements to allow agencies, in the absence of an approved budget, to spend at the rate of the previous year's budget
  - **Lengthy budget process:** By the time Congress and the President actually come to a consensus, most economic crises are over.
  - **Uncontrollable budget items:** 75% of outlays are determined by existing laws. No separate capital budget: capital expenditures and operating expenditures are combined into a single budget.
  - **Overly detailed budget:** reduces the effectiveness of discretionary fiscal policy and is subject to political abuse.

#### E. Possible Budget Reforms

- Convert annual budget to biennial budget.
- Simplify the budget, concentrating on major groupings and eliminating line items.
- Sort federal spending into a capital budget and an operating budget.

## II. The Fiscal Impact of the Federal Budget

### A. Rationale for Deficits:

- Justified for outlays that increase the economy's productivity.
- Justified during recessions when economic activity slows and unemployment rises.

### B. Budget Philosophies and Deficits

- **Annually balanced budget:** Increase spending during expansions and reduce spending during recessions. Magnifies fluctuations in the business cycle.
- **Cyclically balanced budget:** Budget deficits during recessions are covered by budget surpluses during expansions.
- **Functional finance:** Ensures that the economy produces its potential output.

### C. Federal Deficits Since the Birth of the Nation:

- Between 1789 and 1930 (the first full year of the Great Depression), the federal budget was in deficit 33% of the years.
- Since the Great Depression, federal budgets have been in deficit 85% of the years.
- During the 1980s, large tax cuts and higher defense spending contributed to relatively large deficits.
- The 1990s saw the deficit disappear and turn into a surplus by 1998.
- The recession of 2001, tax cuts, and increased federal spending turned surpluses into deficits.
- Weak recovery and the cost of fighting the war against terrorism worsened the deficits by 2003 to 3.5% of GDP.
- A stronger economy, along with a rising stock market, increased federal revenue enough to drop the deficit to about 1.2% of GDP in 2007.
- The global financial crisis and the recession of 2007-2009 caused the deficit to swell to \$1.4 trillion by 2009, 9.9% of GDP.

### D. Why Deficits Persist?

- Since 1930, the federal budget has been in deficit for all but twelve years.
- Congress is not required to balance the budget.
- Voters like spending programs but dislike paying taxes.

#### **E. Deficits, Surpluses, Crowding Out and Crowding In:**

- **Crowding out:** Deficit spending reduces the supply of national saving, thus raising interest rates which discourage some private investment, thereby reducing the expansionary effects of the deficit.
- **Crowding in:** The ability of government deficits to stimulate private investment spending.

#### **F. The Twin Deficits**

- To finance the huge budget deficits, the U.S. Treasury must sell bonds. To get people to buy the Treasury securities, the government must offer higher interest rates. So, funding a higher deficit pushes up market interest rates.
- With U.S. interest rates higher, foreigners find Treasury securities more attractive.
- The greater foreign demand for dollars causes the dollar to appreciate.
- The rising dollar makes imports attractive and U.S. goods more expensive abroad. This leads to an increase in the trade deficit

#### **G. The Short-lived Budget Surplus:**

- In 1990 the deficit was 3.8% of GDP; by 1998 there was a surplus that lasted through 2001.
  - Tax Increases: 1990 President George H.W. Bush agreed to a package of spending cuts and tax increases. This may have cost him reelection; it laid the foundation for erasing the budget deficit.
  - In 1993 President Clinton increased taxes on high-income households, increasing the top marginal tax rate from 31% to 40%.
- The combined effects of higher taxes on the rich and a strengthening economy raised federal revenue from 17.8% of GDP in 1990 to 20.6% of GDP in 2000.
  - Slower Growth in Federal Outlays: Due to reduced U.S. military commitments abroad when the Soviet Union collapsed and lower interest rates.
  - A Reversal of Fortune in 2001:
    - The tax rate increases and a strong economy led to a federal budget surplus of \$236 billion in 2000. But in 2001 unemployment rose, the stock market fell, and the terrorist and anthrax attacks occurred. The federal budget returned to a deficit by 2002 and has been in the red ever since.
    - Trillion Dollar Deficits: The financial crisis and the recession caused tax revenues to fall. Discretionary tax cuts also contributed. Automatic stabilizers and discretionary spending ballooned. The 2009 deficit hit \$1.4 trillion.

#### **H. The Relative Size of the Public Sector**

The public sector includes state and local governments. Total government outlays in the U.S. in 2011 were 41% relative to GDP, slightly greater than in 1994, and less than among major economies. The ten-country average of major economies' outlays relative to GDP remained 46 percent over the period.

### **III. The National Debt in Perspective:**

Measures the net accumulation of past deficits; the amount owed by the federal government.

#### **A. Measuring the National Debt**

- **Gross debt:** Includes U.S. Treasury securities purchased by federal agencies.

- **Debt held by the public:** Includes U.S. Treasury securities held by households, firms, banks, and foreign entities.
- **The National Debt since World War II:** Federal debt was over 100% relative to GDP by 1946 and in 2001 the debt was cut 33% relative to GDP. In 2004 the debt was 37% relative to GDP, where it remained through 2007. The 2007-2009 deficits increased the debt

#### **B. International Perspective on National Debt**

- Net debt is the outstanding liabilities of federal, state, and local governments minus government financial assets.
- Japan's "lost decade" greatly added to its net debt.

#### **C. Interest Payments on the National Debt:**

Most government securities are short term. An increase in nominal interest rates increases annual interest costs.

### **IV. Huge Federal Debt and the Economy**

#### **A. Are Persistent Deficits Sustainable?**

- At some point chronic deficits may accumulate into such a debt that lenders demand an extremely high interest rate or refuse to lend at all. As interest rates rise, debt service costs could then overwhelm the budget.
- The global financial panic encouraged investors around the world to buy U.S. securities as they sought safety. This "flight to quality" drove down the interest rate the U.S. government had to pay, thus reducing the cost of servicing our debt. But that could change.
- As long as the economy is growing at least as fast as the debt service payments, those deficits should be manageable. But trillion dollar deficits are not sustainable.

#### **B. The Debt Ceiling and Debt Default**

- The debt ceiling is a limit on the total amount of money the federal government can legally borrow.

#### **C. Who Bears the Burden of the Debt?**

Deficit spending is a way of billing future taxpayers for current spending. To what extent do deficits and debt shift the burden to future generations?

- **We Owe It to Ourselves:** Debt is not a burden to future generations; they both service the debt and receive the payments.
- **Foreign Ownership of Debt:** Increases the burden of the debt on future generations of Americans because future debt service payments no longer remain in the country.

#### **D. Crowding Out and Capital Formation:**

The long-run effect of deficit spending depends on how the government spends the borrowed funds.

- Investment: Public investment may enhance productivity in the long run.
- An increase in current consumption would cause the economy's capital formation to be less than it would otherwise have been. Declining investment in public infrastructure hurts labor productivity and our future standard of living.

#### **E. The National Debt and Economic Growth:**

Researchers have identified major public debt episodes in the advanced economies around the world since the early 1800s. A major episode is where debt exceeds 90 percent of GDP for 5 years in a row. Researchers found that economies grow more slowly during these periods.

## **CHAPTER 13 - MONEY AND THE FINANCIAL SYSTEM**

### **I. The Evolution of Money**

#### **A. Barter and the Double Coincidence of Wants**

Barter, goods are traded directly for other goods, depends on a double coincidence of wants: two traders want to exchange their products directly.

#### **B. The Earliest Money and Its Functions:**

Money is any commodity that acquires a high degree of acceptability throughout an economy. Its three functions are:

- **Medium of Exchange:** Anything generally accepted in payment for goods and services.
- **Unit of Account:** A standard on which prices are based.
- **Store of Value:** Retains purchasing power over time.

#### **C. Properties of the Ideal Money:**

The best money is durable, portable, divisible, of uniform quality, has a low opportunity cost, and is relatively stable in value.

#### **D. Coins:**

- The quantity and quality control problem addressed by coining precious metals.
- **Seigniorage:** Difference between the face value of money and the cost of supplying it
- **Token money:** Money whose face value exceeds its production costs.

### **II. Money and Banking**

#### **A. Early Banking:**

- Goldsmiths extended loans by creating accounts against which borrowers could write checks.
- Goldsmiths thus created a medium of exchange, or "created money."
- Beginning of a fractional reserve system: bank reserves amount to a fraction of total deposits
- The reserve ratio measures reserves as a percentage of total claims against the goldsmith.

#### **B. Bank Notes and Fiat Money:**

- **Paper money:** represented gold in a bank's vault. Bearer could redeem for gold.
- **Fiat money:** Paper money that has status as money from the power of the state.
  - Acceptable because the government says it is money.
  - Is more efficient than commodity money.

#### **C. The Value of Money:**

People accept these pieces of paper because, through experience, they believe that others will do so as well

#### **D. When Money Performs Poorly**

If inflation gets high enough, people no longer accept the nation's money in exchange and may resort to barter.

### **III. Financial Institutions in the United States:**

#### **A. Commercial Banks and Thrifts**

- **Commercial banks:** Historically made loans primarily to commercial ventures. Account for most deposits.
- **Thrifts:** Savings banks and credit unions that extend loans only to their members to finance homes or other major consumer purposes.

#### **B. Birth of the Fed:**

- Bank runs of 1907 were a catalyst for the Federal Reserve Act of 1913, which created the Federal Reserve System as the central bank and monetary authority of the United States.
- Throughout most of its history, the U.S. had a decentralized banking system. The Federal Reserve Act moved the country toward a system that was partly centralized and partly decentralized.

#### **C. Powers of the Federal Reserve System:**

- To ensure sufficient money and credit in banking system to support a growing economy
- To issue bank notes
- To buy and sell government securities
- To extend loans to member banks
- To clear checks in the banking system
- To require member banks to hold reserve requirements

#### **D. Banking Troubles During the Great Depression**

- Federal Reserve System failed to act as a lender of last resort. Banking Act of 1933 and 1935 passed to shore up banking system and centralize power with the Fed in Washington.
- Board of Governors: Consists of seven members appointed by president and confirmed by Senate who are responsible for setting and implementing the nation's monetary policy.
- Federal Open Market Committee (FOMC): Makes decisions about the key tool of monetary policy, open-market operations (the Fed's purchase and sale of government securities).
- Regulating the Money Supply: The Federal Reserve has a variety of tools:
  - Conducting open-market operations.
  - Setting the discount rate.
  - Setting legal reserve requirements.
- Deposit Insurance: Reduced bank runs by calming fears about safety of deposits.
- Goals of the Fed
  - High employment
  - Economic growth
  - Stability in prices, interest rates, financial markets, and exchange rates

#### **E. Banks Lost Deposits When Inflation Increased**

- Restrictions of the 1930s made banking a heavily regulated industry.
- In the 1970s when market interest rates rose above Federal Reserve ceilings, many savers withdrew deposits and put them into higher-yielding alternatives, such as money market mutual funds. These funds became stiff competition for banks' checkable deposits that paid no interest.

#### **F. Banking Deregulation**

- Eliminated interest-rate ceilings for deposits.



- All depository institutions allowed to offer money market accounts.
- Deregulated state chartered savings banks.
- Gave savings banks a wider latitude in kinds of assets they could hold.
- Created a moral hazard: Tendency of bankers to take unwarranted risks when making loans because deposits were insured.

**G. Banks on the Ropes:** In 1989 Congress approved a \$180 billion bailout (in today's dollars), what was then the largest in history; 80 percent was paid by taxpayers and 20 percent was paid by the banks through higher deposit insurance premiums.

#### **H. U.S. Banking Developments**

- United States has more banks than any other country.
- Branching restrictions create inefficiencies because banks can't easily diversify their portfolios of loans across regions and can't achieve optimal size.
- Bank holding companies: Corporations that may own several different banks.
- Banks merge because they want more customers and expect the higher volume of transactions to reduce operating costs per customer.

### **IV. Banking During and After the Great Recession of 2007-2009**

#### **A. Subprime Mortgages and Mortgage-Backed Securities**

- Development of credit scores enabled subprime mortgages for borrowers with not-so-good credit ratings.
- Hundreds of mortgages were bundled into mortgage-backed securities.
- A higher amount of risky subprime mortgages bundled into a security required a higher interest return for investors. Securities-rating agencies were supposed to assess risk of the financial instruments.
- Subprime market grew to a trillion-dollar industry by 2007 and renters became homeowners.
- Demand for housing and housing prices increased. Mortgage balances and monthly payments increased.

#### **B. Incentive Problems and the Financial Crisis of 2008**

- Two thirds of subprime mortgages originated with mortgage brokers who had incentives to get people to apply for mortgages that the applicants could not afford. Brokers also committed fraud.
- Security underwriters and rating agencies had incentives to boost the market and to ignore risks. Credit standards eroded.
- Between 2006 and 2008, housing prices fell an average of 22 percent. Mortgages slipped "underwater" and defaults rose.
- Mortgage-backed securities lost value and a credit crisis ensued.

#### **C. The Troubled Asset Relief Program**

- October 2008 saw the Troubled Asset Relief Program (TARP). Funds were invested in institutions deemed too big to fail.
- Banks and automakers were bailed out.
- Housing prices continued to fall and banks began to fail.

#### **D. The Dodd-Frank Wall Street Reform and Consumer Protection Act**

- July 2010 sweeping regulatory changes aimed at preventing another financial crisis, authorizing 10 regulatory agencies to write and interpret hundreds of new rules.
- Remedy incentive problems by requiring more responsible behavior in mortgage markets.
- Regulation increased on banks and nonbank financial companies.

- Financial Stability Oversight Council will look for and respond to emerging systemic risks.
- Bureau of Consumer Financial Protection will write rules for banks and financial services firms.
- Critics warn about unintended consequences.

**E. Top Banks in America and the World:**

- The top U.S. bank held nearly 10 times the deposits as the tenth-ranked bank.
- The financial crisis led to bank consolidation.
- Only one U.S. bank (JPMorgan Chase) ranked among the top 10 based on worldwide assets.

## **CHAPTER 14 - BANKING AND THE MONEY SUPPLY**

### **I. Money Aggregates**

**A. Narrow Definition of Money: M1**

- **M1:** Currency (including coins) held by the nonbanking public, checkable deposits, and traveler's checks.
- **Money aggregates:** Measures of the money supply defined by the Federal Reserve (e.g., M1).

**B. Broader Definition of Money: M2:**

- Assets that perform the store of value function and can be converted into currency or checkable deposits.
- **M2:** Includes M1 as well as savings deposits, small-denomination time deposits, money market mutual fund accounts, and other miscellaneous near-monies.

**C. Credit Cards and Debit Cards: What's the difference?**

- Credit card issuers lend money to pay for purchases. You don't need money until you repay the credit card. Therefore, credit cards merely delay the use of money.
- Debit cards reduce your bank balance immediately, electronic transfer (M1).

### **II. How Banks Work**

Banks attract deposits from savers to lend to borrowers. They earn a profit on the difference between the interest paid depositors and the interest charged borrowers

**A. Banks Are Financial Intermediaries,** bringing together both sides of the money market:

- Banks reduce the transaction costs of channeling savings to creditworthy borrowers.
- Banks, by developing expertise in evaluating creditworthiness, structuring loans, and enforcing loan contracts, make the economy more efficient.

**B. Starting a Bank:**

To obtain a charter, first owners must apply to the state banking authority. Next, owners issue themselves shares of stock, called owners' equity or net worth, and start accepting deposits. The bank's balance sheet consists of assets, liabilities, and net worth. Assets must always equal liabilities plus net worth.

**C. Reserve Accounts:**

- **Required reserves:** The Fed requires banks to hold a minimum percentage of their deposits in reserve. Computed by multiplying checkable deposits by the required reserve ratio.
- **Required Reserve Ratio:** Dictates the minimum portion of deposits the bank must hold in reserve.
- **Excess Reserves:** Bank reserves in excess of required reserves; can be used to make loans or purchase interest-bearing assets.

#### **D. Liquidity Versus Profitability:**

The bank manager must structure the portfolio of assets with an eye toward liquidity but must not forget that the banks' survival depends on profitability.

- **Liquidity:** The ease with which an asset can be converted into cash without a significant loss of value.
  - The most liquid asset is bank reserves, but cash earns no interest and reserves held at the Fed earn only a small rate of interest.
  - Because reserves earn little or no interest, banks try to keep excess reserves to a minimum.
- **Federal funds market:** Provides day-to-day lending and borrowing among banks of excess reserves on account at the Fed.
- **Federal funds rate:** Interest rate paid in the federal funds market for excess reserves at the Fed. The Fed targets this rate as a tool of monetary policy.

## **II. How Banks Create Money**

**A. Creating Money Through Excess Reserves:** A bank's lending is limited to the amount of its excess reserves. The bank, by loaning its excess reserves, creates money.

- Round One
  - The Fed buys a \$1,000 U.S. bond from Home Bank, injecting fresh reserves into the banking system.
  - Home Bank's assets: reserves at Fed increase by \$1,000.
  - Home Bank's liabilities: checkable deposits increase by \$1,000.
  - Of the \$1,000, \$100 must be set aside in required reserves (based on a 10% reserve requirement); the remaining \$900 is excess reserves.
  - The money supply increases by \$1,000 in this first round.
- Round Two
  - Home Bank is your bank. You apply for a \$900 student loan. The loan is approved and your checking account is increased by \$900.
  - Checkable deposits are money so the money supply increases by \$900. The total impact on the money supply is now an increase of \$1,900.
  - You write a \$900 check for college fees. Your college deposits the funds in its bank, Merchant's Trust, which increases the college's account by \$900 and sends your check to the Fed. The Fed transfers the \$900 from Home Bank's account to Merchant Trust's account.
- Round Three
  - Merchant's Trust now has \$900 more in reserves on deposit at the Fed. After setting aside required reserves of \$90, it can lend the remaining \$810, increasing the money supply in the economy to \$2,710.
- Round Four and Beyond:

- The process continues. Each bank can lend its excess reserves. If a bank allows its excess reserves to stand idle, the money creation process stops.

### **B. Reserve Requirements and Money Expansion**

- **Money multiplier:** Multiple by which the money supply increases as a result of an increase in the banking system's excess reserves.
- **Simple money multiplier:** Reciprocal of the required reserve ratio ( $1/r$ ), where  $r$  is the reserve ratio.
- Assumes that:
  - Change in the money supply = Change in excess reserves  $\times (1/r)$
  - Banks hold no excess reserves.
  - Borrowers do not let the funds sit idle.
  - People do not want to hold more cash.
  - The higher the reserve requirement ( $r$ ), the smaller the money multiplier ( $1/r$ )
  - As long as the bank's excess reserves do not remain idle, these excess reserves can fuel an expansion of the money supply.
  - The fractional reserve requirement is the key to the multiple expansion of checkable deposits.

### **C. Limitations on Money Expansion**

Leakages from the multiple expansion process reduce the size of the money multiplier.

Test the assumptions of the money expansion model:

- Banks do not let reserves sit idle. Banks have a profit incentive to make loans or buy other interest-bearing assets with excess reserves.
- Borrowers do something with the money. Why would people borrow money if they didn't need it for something?
- People do not choose to increase their cash holdings. Because cash is more versatile, people may hold some of the newly-created money as cash.

### **D. Multiple Contraction of the Money Supply:**

By selling government bonds, the Fed can reduce bank reserves, forcing banks to recall loans or sell some other asset to replenish reserves. The maximum possible effect is to reduce the money supply by the amount of the original reduction in bank reserves times the simple money multiplier ( $1/r$ ).

## **IV. The Fed's Tools of Monetary Control**

**A. Open-Market Operations and the Federal Funds Rate:** The Federal Open Market Committee (FOMC) makes policy decisions.

- **Open-Market Purchase:** Purchase of U.S. government bonds by the Fed to increase the money supply.
- **Open-Market Sale:** Sale of U.S. government bonds by the Fed to decrease the money supply.

### **B. The Discount Rate:**

The interest rates the Fed charges on loans it makes to banks. Changes in the discount rate are a signal to financial markets about the direction of monetary policy.

- **Lowering the discount rate** reduces the costs of borrowing reserves, encourages banks to borrow from the Fed, increases reserves, and increases the money supply.
- **Raising the discount rate** increases the cost of borrowing reserves, discourages banks from borrowing, reduces reserves, and reduces the money supply.

### **C. Reserve Requirements:**

- **Increasing the reserve requirement** reduces excess reserves and reduces the money supply.
- **Decreasing the reserve requirement** increases excess reserves and increases the money supply.

#### **D. Coping with Financial Crises:**

- The Fed, through regulation of financial markets, tries to prevent major disruptions and financial panics, such as during the uncertainty following the terrorist attacks of September 11, 2001.
- In 2007-2008, the Fed lowered the discount rate to 0.5 percent, started paying interest on reserves, and made multibillion dollar investments in financial markets.

#### **E. The Fed Is a Money Machine:**

- One of the Fed's main assets, U.S. government bonds, earns interest; its main liability, Federal Reserve notes in circulation, requires no interest payments.
- In response to the financial crisis, the Fed bought large amounts of mortgage-backed securities and other assets, nearly all of which earn interest. Because of the crisis, the Fed's balance sheet greatly changed from previous times.

## **CHAPTER 15 - MONETARY THEORY AND POLICY**

### **I. The Demand and Supply of Money**

The distinction between the stock of money and the flow of income

**A. The Demand for Money:** Relationship between the interest rate and how much money people want to hold.

- People demand money to pay for purchases.
- The more active the economy, the more money demanded.
- The higher the economy's price level, the more money demanded.

**B. Money Demand and Interest Rates:** The quantity of money demanded varies inversely with the market interest rate; the opportunity cost of holding money.

**C. The Supply of Money and the Equilibrium Interest Rate**

- A vertical supply curve implies that the quantity of money supplied is independent of the interest rate.
- The equilibrium interest rate is determined by the intersection of the supply of money and the demand for money.
- An increase (decrease) in the money supply decreases (increases) the market interest rate

### **II. Money and Aggregate Demand in the Short Run:**

In the short run, money affects the economy through changes in the interest rate. Changes in the supply of money affect the market rate of interest, which affects investment, a component of aggregate demand.

**A. Interest Rates and Planned Investment**

- Effect of an increase in the money supply, M  
 $M \uparrow \rightarrow i \downarrow \rightarrow I \uparrow \rightarrow AD \uparrow \rightarrow Y \uparrow$

- The Fed increases the money supply,  $M$ , by buying U.S. government bonds in the open market.
- Interest rate,  $i$ , falls.
- Investment spending,  $I$ , is stimulated.
- Aggregate demand,  $AD$ , increases.
- Real GDP,  $Y$ , increases.
- Changes in the money supply affect investment if:
  - The interest rate is sensitive to changes in the money supply and
  - Investment spending is sensitive to changes in the interest rate.
- Size of the spending multiplier: Determines the extent to which a given change in investment affects total spending.

**B. Adding Short-Run Aggregate Supply:**

For a given shift of the aggregate demand curve, the steeper the short-run aggregate supply curve:

- The smaller the increase in real GDP
- The larger the increase in the price level

**C. Recent History of the Federal Funds Rate:**

- Exhibit 5 Shows the Federal Funds Rate since early 1996
- For four decades, the Fed has reflected its monetary policy in this interest rate. Walk through the Fed's rationale since 1996.

**III. Money and Aggregate Demand in the Long Run:**

An increase in the supply of money increases aggregate demand which leads to a higher price level since the economy's potential output is fixed in the long run.

**A. The Equation of Exchange:**  $M \times V = P \times Y$  Total spending always equals total receipts:

- **M:** Quantity of money in the economy.
- **V:** Velocity of money, the average number of times per year each dollar is used to purchase GDP.  $V = P \times Y / M$
- **P:** The average price level.
- **Y:** Real output, real GDP.

**B. The Quantity Theory of Money:** If the velocity of money is stable or at least predictable, then the equation of exchange can be used to predict the effects of changes in the money supply on nominal GDP. The quantity theory of money.  $M \times V = P \times Y$  predicts:

- An increase in the money supply results in more spending and a higher nominal GDP ( $P \times Y$ ).
- An increase in the money supply over the long run (assuming the economy is at potential output) results only in higher prices.

**C. What Determines the Velocity of Money?**

- The customs and conventions of commerce
- Commercial innovations that (ATMs, debit cards) have facilitated exchange
- Frequency with which workers are paid
- Stability of money as a store of value (periods of high inflation results in money being a poor store of value)

**D. How Stable Is Velocity?** Since 1980 the velocity of M1 has been variable and by the early 1990s the velocity of M2 had grown more volatile. In 1993 the Fed announced money aggregates, including M2, would no longer be considered reliable guides for monetary policy in the short run. Since 1993, the equation of exchange has been considered a rough guide linking changes in the money supply to inflation in the long run. M1 velocity dropped during the 2007-2009 recession.

#### **IV. Targets for Monetary Policy**

##### **A. Short run vs. long run**

- In the short run, monetary policy affects the economy by influencing **interest rates**.
- In the long run, changes in the **money supply** affect the price level.

##### **B. Contrasting Policies:**

- Targeting interest rates, the money supply must increase during economic expansions and decrease during contractions.
- In targeting the money supply, the interest rate will likely fluctuate, causing undesirable fluctuations in investment which may add instability to the economy.

##### **C. Targets Before 1982:**

- The Fed attempted to stabilize interest rates until 1979.
- In 1979, Paul Volcker targeted growth in the money supply:
  - Interest rates fluctuated
  - Sharp reduction in money growth caused the recession of 1982
  - Inflation declined
  - Unemployment rose to 10 %
  - October 1982, Volcker announced the Fed will again pay some attention to interest rates.

##### **D. Targets After 1982:**

- In 1987, Greenspan said there wasn't a close enough link between the money supply and nominal income to focus single-mindedly on the money supply.
- In 1993, the Fed dropped all targeting of monetary aggregates and focused on the federal funds rate.
- In 1998, the Fed began to track a variety of indicators of inflationary pressure.

##### **E. Other Fed Actions and Concerns**

During 2007-2009 recession:

- Bailing Out AIG
- Reducing the Risk of "Too Big to Fail":
- Quantitative Easing: the Fed trying to do whatever it takes to keep financial markets from freezing up.

##### **F. What About Inflation?**

Inflation is one of the twin statutory mandates for the Federal Reserve. They must watch everything they do to make sure inflation is not overly affected, including releasing assets in a timely manner.

##### **G. International Considerations:**

As national economies grow more interdependent, the Fed has become more sensitive to the global implications of its action: what happens in the U.S. often affects markets overseas and vice versa.

## **CHAPTER 16 - MACRO POLICY DEBATE: ACTIVE OR PASSIVE?**

### **I. Active Policy Versus Passive Policy**

**Active approach:** Discretionary fiscal or monetary policy can reduce the costs of an unstable economy, such as higher unemployment.

**Passive approach:** Discretionary policy may contribute to the instability of the economy and is therefore part of the problem, not part of the solution.

**A. Closing a Recessionary Gap:** when short-run equilibrium is below potential output.

- **Passive approach:** Assumes that the economy is inherently stable.  
High unemployment causes:
  - Wages to fall
  - Production costs to fall
  - Short-run aggregate supply curve (SRAS) to shift to the right
  - The economy will, in a reasonable period of time, move to potential output
- **Active approach:** Monetary policy, fiscal policy, or a mix can be used to:
  - Increase aggregate demand.
  - Increase the price level (inflation)
  - Increase the budget deficit
  - The increase in aggregate demand moves the economy to potential output

**B. Closing an Expansionary Gap:**

Short-run equilibrium output exceeds the economy's potential. The actual price level exceeds the expected price level.

- **Passive approach:** Assumes that natural market forces:
  - Prompt firms and workers to negotiate higher wages
  - Cause higher production costs
  - Shift the SRAS curve leftward
  - Lead to a higher price level
  - Lower output to potential output
- **Active approach:** Discretionary policy can be used to:
  - Decrease the aggregate demand curve
  - Move the economy back to its potential output without an increase in the price level

**C. Problems with Active Policy:**

- Difficult to identify the economy's potential output level and the natural rate of unemployment.
- Requires detailed knowledge of current and future economic conditions.
- Must have tools needed to achieve desired result relatively quickly.
- Must be able to forecast the effects of active policy on key measures.
- Fiscal and monetary policy makers must work together.

**D. The Problem of Lags:**

Lags occur because of the time required to implement policy. Passive policy advocates view these lags as a reason to avoid discretionary policy.

- **Recognition lag:** The length of time it takes to identify a problem
- **Decision-making lag:** The length of time required to decide what to do:
  - Fiscal policy take months to approve



- Monetary policy is decidedly more quick than fiscal policy.
- **Implementation lag:** The length of time before an approved policy is introduced
- **Effectiveness lag:** The length of time before the full impact of the policy registers on the economy

#### E. A Review of Policy Perspectives

- **Active policy:** Failure to pursue a discretionary policy is costly due to the loss of output and the prolonged hardship of unemployment. Despite the lags, this approach prefers action through fiscal policy or monetary policy to inaction.
- **Passive policy:** Uncertain lags and ignorance about how the economy works undermine active policy. Prefer to rely on the economy's natural ability to correct itself using automatic stabilizers.

## II. The Role of Expectations

The effectiveness of a particular governmental policy depends in part on what people expect. Rational expectations are formed on the basis of all available information.

### A. Discretionary Policy and Inflation Expectations

- **Unexpected** expansionary monetary policy causes:
  - Output and employment to increase in the short run.
  - Price level to increase (inflation) in the long run.
- **Time-Inconsistency Problem:** Occurs when policy makers have an incentive to announce one policy to shape expectations but then to pursue a different policy once those expectations have been formed and acted on.

### B. Anticipating Policy

When workers fully expect expansionary monetary policy and inflation, such a policy has no effect on output or employment, not even in the short run.

Only unanticipated changes in policy can temporarily push output beyond its potential.

**C. Policy Credibility:** Necessary if the Fed is to pursue a policy consistent with a constant price level.

## III. Policy Rules Versus Discretion

The passive approach argues for rules to guide actions of policy makers, for example, allowing the money supply to grow at a predetermined rate.

**A. Limitations on Discretion:** The economy is so complex that active policy cannot be successful.

**B. Rules and Rational Expectations:** Advocate a predictable rule to avoid surprises because surprises result in unnecessary departures from potential output.

**IV. The Phillips Curve:** Shows possible combinations of the inflation rate and the unemployment rate.

**A. The Phillips Framework:** Dilemma of 1970s led to reexamination of the Phillips curve.

**B. The Short-Run Phillips Curve:** Assumes a given expected inflation rate; exhibits an inverse relationship between inflation and unemployment.

**C. The Long-Run Phillips Curve:** A vertical line at the economy's natural rate of unemployment; the unemployment rate is independent of the inflation rate. Policy makers cannot choose between unemployment and inflation in the long run. They can only choose among alternative rates of inflation.

**D. The Natural Rate Hypothesis:**

- In the long run the economy tends toward the natural rate of unemployment.
- This natural rate of unemployment is independent of any aggregate demand stimulus.
- The optimal long-run policy is one that results in low inflation.

#### **E. Evidence of the Phillips Curve**

- Each short-run Phillips curve is drawn for a given expected inflation rate.
- A change in inflationary expectations shifts the short-run Phillips curve.

## **CHAPTER 18 - INTERNATIONAL FINANCE**

### **I. Balance of Payments**

- A. International Economic Transactions:** The balance-of-payments measures economic transactions between a country and the rest of the world, whether these transactions involve goods and services, real and financial assets, or transfer payments.
- B. The Merchandise Trade Balance:** The value of merchandise exports minus the value of merchandise imports.
- C. Balance on Goods and Services:** The export value of goods and services minus the import value of goods and services, or net exports, a component of GDP.
- D. Net Investment Income:** U.S. investment earnings from foreign assets minus foreigners' earnings from their U.S. assets.
- E. Unilateral Transfers and Current Account Balance:** Government transfers to foreign residents, foreign aid, money workers send to families abroad, personal gifts to friends and relatives abroad, and charitable donations.
- Net unilateral transfers abroad: Unilateral transfers received from abroad by U.S. residents minus unilateral transfers sent to foreign residents by U.S. residents.
  - Balance on current account: The sum of the country's net unilateral transfers and net exports of goods and services and net investment income from assets owned abroad.
- F. The Financial Account:** Records a country's international purchases of assets, including financial assets, such as stocks, bonds, and bank balances, and real assets such as land, housing, factories, and other physical assets. The Statistical Discrepancy: A fudge factor (1) measuring the net error in the balance-of-payments and (2) satisfying the double-entry bookkeeping requirement that total debits must equal total credits.
- G. Deficits and Surpluses:** Any surplus or deficit in one account must be offset by deficits or surpluses in other balance-of-payments accounts.

### **II. Foreign Exchange Rates and Markets**

- A. Foreign Exchange:** Foreign money needed to carry out international transactions.
- **Exchange Rate:** The price measured in one country's currency of buying one unit of another country's currency.
  - **Euro:** In 2002, euro notes and coins entered circulation in the 12 European countries adopting the common currency.

- **Currency depreciation:** With respect to the dollar, an increase in the number of dollars needed to purchase one unit of foreign exchange. This increase indicates a weakening of the dollar.
- **Currency appreciation:** With respect to the dollar, a decrease in the number of dollars needed to purchase one unit of foreign exchange. This decrease indicates a strengthening of the dollar.

**B. The Demand for Foreign Exchange:**

The inverse relationship between the dollar price of foreign exchange and the quantity of foreign exchange demanded, other things constant.

**C. The Supply of Foreign Exchange:**

The positive relationship between the dollar price of foreign exchange and the quantity of foreign exchange supplied, other things constant.

**D. Determining the Exchange Rate:** Quantity supplied equals quantity demanded.

### III. Other Factors Influencing Foreign Exchange Markets

**A. Arbitrageurs and Speculators**

- **Arbitrageur:** A dealer who takes advantage of any difference in exchange rates between markets by buying low and selling high.
- **Speculator:** A person who buys or sells foreign exchange to profit from trading the currency at a more favorable exchange rate later.

**B. Purchasing Power Parity:**

The theory that the exchange rate between two countries will adjust in the long run to reflect price differences between the two currency regions.

**C. Flexible Exchange Rates:**

Exchange rates determined by demand and supply.

**E. Fixed Exchange Rates:**

Exchange rates are fixed, or pegged, within a narrow band around the particular value selected.

- **Currency devaluation:** An increase in the exchange rate in terms of the domestic currency.
- **Currency revaluation:** A decrease in the exchange rate in terms of the domestic currency.

### IV. Development of the International Monetary System

**A. Gold standard:** An arrangement by which major currencies were convertible into gold at a fixed rate.

**A. The Bretton Woods Agreement:** A 1944 accord among Allied countries that fixed currencies in terms of the dollar. Also created the International Monetary Fund (IMF).

**B. The Demise of the Bretton Woods System:** The collapse of the system in the early 1970s as U.S. inflation overvalued the dollar.

**C. The Current System: Managed Float**

- **Managed Float:** Exchange rate system that combines features of a freely floating exchange rate with sporadic intervention by central banks to moderate exchange rate fluctuations.

# Practice Questions

## CHAPTER 11

1. Financing expansionary fiscal policy by increasing the deficit does not generally affect interest rates.  
True False
2. Automatic stabilizers will reduce tax revenues during recessions and increase tax revenues during periods of strong economic growth.  
True False
3. A federal budget surplus means that government revenues exceed its expenditures.  
True False
4. Financing public debt increases interest rates and reduces private investment spending.  
True False
5. If the economy falls into a recession, automatic stabilizers will cause:  
A. tax receipts to fall and government spending to rise.  
B. tax receipts to rise and government spending to fall.  
C. both tax receipts and government spending to rise.  
D. both tax receipts and government spending to fall.
6. As the economy contracts, tax revenues:  
A. fall and transfer payments rise, causing the economy to contract by less than it would in the absence of automatic stabilizers.  
B. rise and transfer payments rise, causing the economy to contract by more than it would in the absence of automatic stabilizers.  
C. fall and transfer payments fall, causing the economy to contract by more than it would in the absence of automatic stabilizers.  
D. rise and transfer payments fall, causing the economy to contract by less than it would in the absence of automatic stabilizers.
7. Which of the following would *not* be considered an automatic stabilizer?  
A. Welfare payments  
B. Unemployment compensation  
C. Income tax  
D. Defense spending
8. Using fiscal policy to stabilize the economy is difficult because:  
A. potential income is known.  
B. the effects of policy changes is known with certainty.  
C. there are time lags involved in the use of fiscal policy.  
D. the size of the government debt doesn't matter.

9. Fiscal policy is typically:
  - A. extremely flexible because most government spending is discretionary.
  - B. extremely flexible provided policy lags are short.
  - C. extremely flexible despite the presence of implementation problems.
  - D. difficult to implement quickly.
  
10. Fiscal policy includes
  - A. tax policy only.
  - B. government expenditures only.
  - C. tax policy and government expenditures.
  - D. tax policy, government expenditures, and monetary policy.
  
11. Fiscal policy can shift
  - A. aggregate demand only.
  - B. both aggregate demand and potential output.
  - C. both aggregate demand and short-run aggregate supply, but not long-run aggregate supply.
  - D. only short-run functions.
  
12. Which of the following are contractionary fiscal policies?
  - A. Increased taxation and increased government spending
  - B. Increased taxation and decreased government spending
  - C. Decreased taxation and no change in government spending
  - D. No change in taxation and increased government spending
  
13. If the Congress passes legislation to cut taxes to counter the effects of a severe recession, then this would be an example of a(n):
  - A. political business cycle.
  - B. contractionary fiscal policy.
  - C. expansionary fiscal policy.
  - D. nondiscretionary fiscal policy.
  
14. A contractionary fiscal policy can be illustrated by a(n):
  - A. increase in aggregate demand.
  - B. decrease in aggregate demand.
  - C. increase in aggregate supply.
  - D. change in the price level.



15. Refer to the above graph. What combination would most likely cause a shift from  $AD_1$  to  $AD_2$ ?
- An increase in taxes and an increase in government spending
  - A decrease in taxes and an increase in government spending
  - An increase in taxes and a decrease in government spending
  - A decrease in taxes and a decrease in government spending
16. According to Classical Economists if the economy is in a recession, the government should run:
- a budget deficit and increase spending, which will increase output.
  - a budget surplus and decrease spending, which will increase output.
  - neither a surplus nor a deficit and allow the economy to self-correct.
  - neither a surplus nor a deficit since changes in spending affect output.

## **CHAPTER 12**

17. A government budget deficit occurs when government revenues exceed government expenditures.  
True False
18. If there is a federal budget surplus, then government revenues are greater than its expenditures.  
True False
19. Over the past five years, most countries' debt-to-GDP ratios have risen as a result of the global recession.  
True False
20. Crowding out is the offsetting effect on private expenditures caused by the government's sale of bonds to finance expansionary fiscal policy.  
True False
21. The financing of the public debt can increase interest rates and reduce private investment spending.  
True False

22. If government has no debt initially but then annual revenues are \$8 billion for 10 years while annual expenditures are \$11 billion for 10 years, then the government has a:
- A. deficit of \$3 billion per year and a debt of \$30 billion.
  - B. surplus of \$3 billion per year and a debt of \$30 billion.
  - C. deficit of \$30 billion and a debt of \$3 billion per year.
  - D. surplus of \$30 billion and a debt of \$3 billion per year.
23. If the national debt increases in any given year, it follows that the government:
- A. sold bonds in that year to finance a budget surplus.
  - B. bought bonds in that year to finance a budget surplus.
  - C. sold bonds in that year to finance a budget deficit.
  - D. bought bonds in that year to finance a budget deficit.
24. In the long-run framework, budget surpluses:
- A. should be run whenever output dips below potential output.
  - B. should never be run since they crowd out investment in the short run.
  - C. are better than budget deficits over the long run because unlike budget deficits, they increase saving and investment.
  - D. should be run on a permanent basis since they boost saving and investment and stimulate economic growth.
25. If the debt of the federal government increases by \$10 billion in one year the budget:
- A. deficit in that year must be \$10 billion.
  - B. surplus in that year must be \$10 billion.
  - C. deficit in that year increased by \$10 billion.
  - D. surplus in that year decreased by \$10 billion.
26. Debt service refers to:
- A. how much debt a country incurs each year.
  - B. the interest rate a country pays on its debt.
  - C. the fraction of a country's debt that becomes due each year.
  - D. the interest payments a country makes on its debt each year.
27. Debt is measured relative to GDP because:
- A. the ability of a country to pay off its debt depends on its productive capacity.
  - B. the ability to produce output depends on the size of the nation's debt.
  - C. GDP is always used as a reference point in economics.
  - D. as long as this ratio remains high, the government will have no trouble repaying the debt.
28. If the cyclically adjusted budget deficit increases from \$200 billion to \$250 billion and GDP remains constant over the two years:
- A. fiscal policy is expansionary.
  - B. fiscal policy is contractionary.
  - C. fiscal policy is neutral.
  - D. the tax system is progressive.

29. The public debt is the:
- A. amount of U.S. paper currency in circulation.
  - B. ratio of all past deficits to all past surpluses.
  - C. total of all past deficits minus all past surpluses.
  - D. difference between current government expenditures and revenues.
30. Recessions have contributed to the public debt by:
- A. reducing national income and therefore tax revenues.
  - B. increasing real interest rates.
  - C. increasing the international value of the dollar.
  - D. increasing national saving.
31. The crowding-out effect of borrowing to finance the public debt:
- A. decreases current spending for private investment.
  - B. increases the privately owned stock of real capital.
  - C. decreases the economic burden on future generations.
  - D. increases incentives to work and save.
32. Issuing new U.S. Treasury bonds to replace bonds that have matured is:
- A. Debt refinancing.
  - B. Debt servicing.
  - C. Income transfers.
  - D. Discretionary fiscal spending.

## **CHAPTER 13**

33. Cash is an example of a liquid financial asset.  
True False
34. The United States faced the most serious financial crisis since the Great Depression during the period of 2007-2008.  
True False
35. Money doesn't have to have any inherent value to function as a medium of exchange.  
True False
36. U.S. currency is
- A. A commodity money
  - B. Fiat money
  - C. Tied to the value of gold at a fixed rate
  - D. The only store of value
37. Which of the following is *not* one of the functions of money?
- A. Medium of exchange
  - B. Unit of account
  - C. Standard of economic well-being
  - D. Store of wealth



38. People living in the town of Norwich, England have begun a system of trade called the LETS, which allows people to enter into exchanges without using the British pound. Members offer a particular service, such as babysitting, gardening, and plumbing for which they get Croy credits. They can then use these Croys to buy services from other people. Does this system represent what economists call barter?
- A. No; to be true barter, the exchange rate between the Croy and the British pound must be flexible.
  - B. No; this group has merely replace one money, the pound, with a less flexible medium of exchange that they call the Croy.
  - C. Yes, because it does not use the true money, the British pound.
  - D. Yes, because the Croy is not real money but just a bookkeeping account.
39. In POW camps during World War II, everything was traded for cigarettes. For example, one bar of soap cost two cigarettes and two candy bars cost four cigarettes. During the time of the POW camps, cigarettes:
- A. did not serve as money because their value was not backed by government.
  - B. did not serve as money because no one controlled the supply of cigarettes.
  - C. served as money for those who smoked.
  - D. served as money because they served as a unit of account, medium of exchange, and store of wealth.
40. A financial asset is liquid:
- A. if it can be carried easily from one place to another.
  - B. if it can be readily exchanged for another asset or good.
  - C. only if it takes the form of cash.
  - D. if it is held by the public and earning interest.
41. The value and functionality of money are determined by the:
- A. lack of credibility in other financial assets.
  - B. credibility in other financial assets.
  - C. general acceptability to other people.
  - D. regulations defined by the Fed.
42. All of the following are characteristics of money *except*:
- A. it must be portable
  - B. it must be available in unlimited supply.
  - C. it must be durable.
  - D. it must be divisible.
43. The measure of money that *best* fulfills the medium of exchange function because it is most liquid is:
- A.  $M_1$ .
  - B.  $M_2$ .
  - C.  $M_3$ .
  - D. L.

44. When the Fed prints and issues bills, it creates:
  - A. a financial liability for the holder of the IOU.
  - B. a financial asset for itself.
  - C. a real asset.
  - D. money.
  
45. Early goldsmiths were similar to modern bankers in that:
  - A. they lend a portion of the deposits.
  - B. they could not create money.
  - C. deposits were backed by gold.
  - D. they were not subject to any regulation.
  
46. The goldsmith's ability to create money was based on the fact that:
  - A. gold receipts were rarely exchanged for gold.
  - B. the goldsmith was required to keep 100 percent gold reserves.
  - C. consumers preferred to use gold for transactions.
  - D. withdrawals of gold tended to exceed deposits of gold.
  
47. Money facilitates trade because it:
  - A. does not require a double coincidence of wants among individuals.
  - B. requires a double coincidence of wants among individuals.
  - C. does not require a medium of exchange.
  - D. requires carrying other goods around for barter.
  
48. The Federal Reserve System is:
  - A. a group of twelve commercial banks.
  - B. the central bank of the United States.
  - C. the agency of the U.S. government that insures commercial bank deposits.
  - D. the branch of the U.S. Treasury that keeps the U.S. gold reserves.
  
49. The leaders of the Federal Reserve System headquartered in Washington, D.C. are the:
  - A. Federal Reserve Bank of Washington, D.C.
  - B. Federal Open Market Committee.
  - C. Federal Economic Advisory Board.
  - D. Board of Governors.
  
50. The Federal Open Market Committee makes decisions about \_\_\_\_\_ policy.
  - A. monetary
  - B. fiscal
  - C. banking
  - D. deposit insurance
  
51. The most important, convenient, and flexible way the Federal Reserve affects the supply of bank reserves is through:
  - A. conducting open-market operations.
  - B. changing the Federal Reserve discount rate.
  - C. changing bank reserve requirement ratios.
  - D. changing interest rates.

52. A banking panic is an episode in which:
- A. depositors, spurred by news or rumors of possible bankruptcy of one bank, rush to withdraw deposits from the banking system.
  - B. commercial banks, fearing Federal Reserve sanctions, unwillingly participate in open-market operations.
  - C. commercial banks, concerned about high interest rates, rush to borrow at the Federal Reserve discount rate.
  - D. depositors, afraid of increasing interest rates, attempt to engage in discount-window borrowing at the Federal Reserve.
53. Which of the following were factors in the financial crisis of 2007-2008?
- A. Mortgage default crisis.
  - B. Lax lending standards.
  - C. Subprime mortgage loans.
  - D. All of these.
54. What does TARP stand for?
- A. Toxic Asset Rescue Program.
  - B. Troubled Asset Relief Program.
  - C. Tarnished Asset Revenue Program.
  - D. Tinged Asset Reimbursement Program.

## **CHAPTER 14**

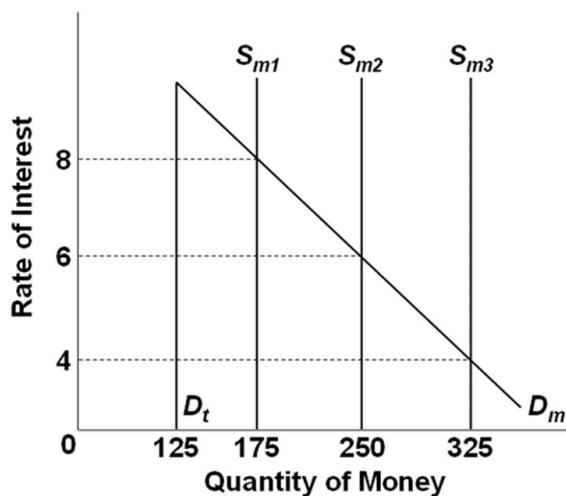
55. When a bank creates loans, it also creates money.  
True False
56. The Federal funds rate is the rate that banks charge other banks for overnight loans of excess reserves.  
True False
57. If the reserve ratio is 0.10, the money multiplier is equal to 5.  
True False
58. Firms that extend credit to borrowers using funds from savers are called:
- A. bond dealers.
  - B. stock brokers.
  - C. central banks.
  - D. financial intermediaries.
59. Early medieval bankers were similar to modern bankers in that:
- A. they lend a portion of the deposits.
  - B. they could not create money.
  - C. deposits were backed by gold.
  - D. they were not subject to any regulation.

60. Which of the following is not included in the  $M_1$  definition of money?
- A. Checking accounts.
  - B. Currency.
  - C. Traveler's checks.
  - D. Savings and money market accounts.
61. Which of the following components is not included in the  $M_2$  definition of money?
- A.  $M_1$ .
  - B. Savings and money market accounts.
  - C. Small-denomination time deposits.
  - D. Bonds.
62.  $M_1$  consists primarily of cash in the hands of the public and:
- A. savings account balances.
  - B. commercial paper.
  - C. checking account deposits.
  - D. certificates of deposit.
63. Consumers shifting money out of checking accounts and paying credit cards will affect:
- A.  $M_1$ .
  - B.  $M_2$ .
  - C.  $M_3$ .
  - D. L.
64. Banks hold people's cash for free, and may pay for the privilege of holding it, because:
- A. they are nice.
  - B. deposits allow banks to make profitable loans.
  - C. the Federal Reserve requires that they do so.
  - D. the cash can be deposited at the Federal Reserve Bank to earn interest.
65. The organizations that can create money are the:
- A. government and its agencies.
  - B. Federal Reserve Bank and the banks.
  - C. mutual funds and retirement funds.
  - D. households and corporations.
66. Liabilities of the commercial banking system include:
- A. reserves and loans.
  - B. deposits.
  - C. reserves and deposits.
  - D. loans and deposits.
67. Suppose total deposits in the First Bank of Commerce are \$200,000 and required reserves are \$10,000. Based on this information, the required reserve ratio is:
- A. 0.05.
  - B. 0.10.
  - C. 0.20.
  - D. 20.0.

68. A reserve ratio of 0.10 means that a bank can lend an amount equal to:
- A. 10 percent of its deposit liabilities.
  - B. 10 percent of its excess reserves.
  - C. 90 percent of its deposit liabilities.
  - D. 90 percent of its excess reserves.
69. A single bank has a reserve requirement of 10 percent. This means that if a customer deposits \$100 million, the bank may lend out:
- A. \$9 million.
  - B. \$10 million.
  - C. \$90 million.
  - D. \$91 million.
70. If the reserve ratio is 0.25, the money multiplier is:
- A. 4.0.
  - B. 5.0.
  - C. 20.0.
  - D. 25.0.
71. If the money multiplier is 5, what is the reserve ratio?
- A. 0.10
  - B. 0.20
  - C. 0.25
  - D. 0.80
72. Suppose the required reserve ratio is 0.20. Total bank deposits are \$200 million and the bank holds \$50 million in reserves. How much more money could the bank create if it does not hold excess reserves?
- A. \$5 million
  - B. \$25 million
  - C. \$30 million
  - D. \$50 million
73. Commercial banks create new money:
- A. when they increase their desired reserve/deposit ratio.
  - B. by issuing checks.
  - C. through multiple rounds of lending.
  - D. when they buy government bonds from the Federal Reserve.
74. Which of the following assets is the most liquid?
- A. Art
  - B. Demand deposits
  - C. Houses
  - D. Stocks

## CHAPTER 15

75. In the AS/AD model, an increase in the money supply causes an increase in the interest rate and an increase in investment spending.  
True False
76. If nominal GDP is \$2000 billion and the amount of money demanded for transactions purposes is \$500 billion, then on average each dollar will be spent about four times.  
True False
77. The discount rate is the interest rate at which commercial banks lend to their best corporate customers.  
True False
78. The most frequently used instrument of the Federal Reserve System to control changes in the money supply is the required reserve ratio.  
True False
79. The Federal funds rate is the interest rate that banks charge other banks for overnight loans of excess reserves in the banking system.  
True False



80. Refer to the above graph;  $D_t$  is the transactions demand for money,  $D_m$  is the total demand for money, and  $S_m$  is the supply of money. If the money market is in equilibrium at a 6% interest rate and the money supply increases, then  $S_{m2}$  will shift to:  
A.  $S_{m3}$  and the interest rate will be 4 percent.  
B.  $S_{m3}$  and the interest rate will be 8 percent.  
C.  $S_{m1}$  and the interest rate will be 8 percent.  
D.  $S_{m1}$  and the interest rate will be 4 percent.
81. Monetary policy affects:  
A. only inflation.  
B. only output.  
C. both inflation and output.  
D. neither inflation nor output.

82. In the AS/AD model, a contractionary monetary policy:
- A. reduces investment but increases aggregate demand.
  - B. increases both investment and aggregate demand.
  - C. reduces both investment and aggregate demand.
  - D. increases investment but reduces aggregate demand.
83. An effect of an expansionary monetary policy is to:
- A. reduce investment spending.
  - B. shift the aggregate demand curve to the left.
  - C. raise interest rates.
  - D. lower interest rates.
84. Which of the following monetary policies raises aggregate demand and output?
- A. An open market sale of government securities
  - B. An increase in the federal funds rate
  - C. An increase in the discount rate
  - D. A cut in the reserve requirement
85. Which of the following monetary policies reduces aggregate demand and output?
- A. A cut in the federal funds rate
  - B. An open market purchase of government securities
  - C. An increase in the discount rate
  - D. A cut in the required reserve ratio
86. According to the AS/AD model, if the economy is in a recession and the Fed wants to increase output and employment, it should:
- A. act to increase the money supply.
  - B. act to decrease the money supply.
  - C. raise interest rates.
  - D. raise reserve requirements.
87. Other things equal, a rise in interest rates can be expected to:
- A. increase the quantity of investment.
  - B. decrease the quantity of investment.
  - C. have no effect upon the quantity of investment.
  - D. increase equilibrium income.
88. According to the AS/AD model, an expansionary monetary policy:
- A. increases interest rates, raises investment, and increases income.
  - B. decreases interest rates, raises investment, and increases income.
  - C. increases interest rates, reduces investment, and decreases income.
  - D. decreases interest rates, reduces investment, and decreases income.

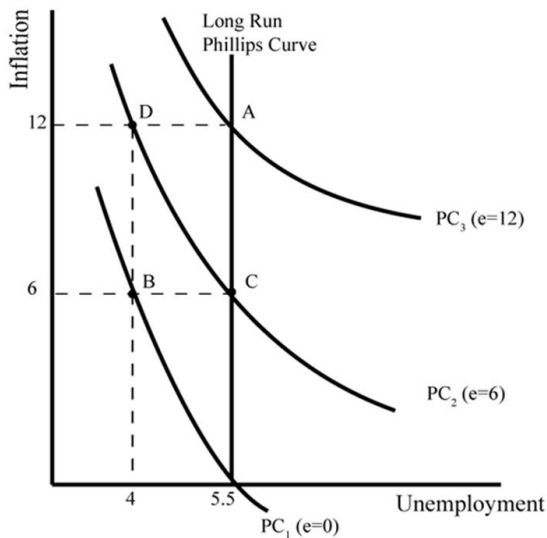
89. During a recession, policy makers who use the AS/AD model would probably recommend an open market:
- A. sale of government securities that reduces interest rates.
  - B. purchase of government securities that reduces interest rates.
  - C. sale of government securities that raises interest rates.
  - D. purchase of government securities that raises interest rates.
90. The central bank of the United States is:
- A. the Treasury.
  - B. the Federal Reserve Bank
  - C. the Bank of the United States.
  - D. Old Lady of Threadneedle Street.
91. Central banks are responsible for:
- A. both monetary policy and fiscal policy.
  - B. monetary policy but not fiscal policy.
  - C. fiscal policy but not monetary policy.
  - D. neither monetary policy nor fiscal policy.
92. Which of the following is *not* something the Fed can change directly?
- A. The reserve requirement
  - B. The discount rate
  - C. Open market operations
  - D. The prime rate
93. Which varies directly with the interest rate?
- A. The opportunity cost of holding money.
  - B. The transactions demand for money.
  - C. The asset demand for money.
  - D. The level of investment.
94. The 2008 financial crisis was caused largely by:
- A. a run on banks and other financial institutions.
  - B. a bursting of the automobile market bubble.
  - C. a bursting of the housing market bubble.
  - D. by the inability of the government to issue Treasury bonds.
95. Buying financial assets from banks and other financial institutions with newly created money is referred to as:
- A. credit easing.
  - B. Operation Twist.
  - C. quantitative easing.
  - D. precommitment policy.



## **CHAPTER 16**

96. Automatic stabilizers are government programs or policies that will counteract the business cycle without any new government action.  
True False
97. The long-run Phillips curve shifts to the left or the right as expectations of inflation change.  
True False
98. Active stabilization policy may actually destabilize the economy since policy makers
- Do not know the exact length of policy lags
  - Often do not know whether a disturbance is permanent or transitory
  - Base their decisions on incomplete information about the economy
  - All of the above
99. Formulating an appropriate policy response to an economic disturbance is difficult since policy makers are often unsure about
- The timing and magnitude of the effects of a proposed policy measure
  - Whether a disturbance is temporary or permanent
  - How the economy really works
  - All of the above
100. The recognition lag is defined as the length of time it takes
- To identify a problem in the economy and determine how serious the problem is
  - For automatic stabilizers to mitigate a disturbance
  - For a policy to affect the economy after its implementation
  - For a policy measure to be implemented after the administration decided on this policy
101. A big advantage of automatic stabilizers is that they
- Completely eliminate the outside lag
  - Do not have any implementation lag
  - Make the recognition lag negative
  - Increase the size of the fiscal policy multiplier
102. The effectiveness lag is defined as the length of time it takes
- To recognize whether a disturbance is permanent or temporary
  - To come up with the appropriate policy response to a disturbance
  - To account for the recognition, decision, and action lags
  - For the full impact of a policy to register on the economy
103. Fiscal policy is typically:
- extremely flexible because most government spending is discretionary.
  - extremely flexible provided policy lags are short.
  - extremely flexible despite the presence of implementation problems.
  - difficult to implement quickly.

104. If inflation is 3 percent last year and 2 percent this year and the economist's model predicts 0 inflation for the next year, inflation for the coming year would rationally be expected as:
- A. 0 percent
  - B. 2 percent
  - C. 3 percent.
  - D. 5 percent.
105. The Phillips curve represents a relationship between:
- A. inflation and unemployment.
  - B. inflation and real income.
  - C. money supply and interest rates.
  - D. money supply and unemployment.
106. The slope of the long-run Phillips curve is thought by many economists to be:
- A. horizontal.
  - B. vertical.
  - C. downward sloping.
  - D. backward bending.



107. Refer to the graph shown. If expected inflation increases from 0 percent to 6 percent the:
- A. short-run Phillips curve will shift from  $PC_2$  to  $PC_1$ .
  - B. short-run Phillips curve will shift from  $PC_1$  to  $PC_2$ .
  - C. economy will move from point C to point A.
  - D. economy will move from point B to point C.

## **CHAPTER 18**

108. If a nation has a balance of payments deficit and exchange rates are flexible, the price of that nation's currency in the foreign exchange markets will rise.

True False

109. When the supply of yen increases, the dollar will appreciate against the yen.  
True False
110. Relatively high rates of U.S. inflation will increase the supply of, and decrease the demand for, dollars in foreign currency markets.  
True False
111. The expectations of speculators in the United States that the exchange rate for the euro will fall in the future will increase the supply of euros in the foreign exchange market and decrease the exchange rate for the euro.  
True False
112. If the U.S. price level rises relative to the Japanese price level, purchasing power parity predicts a long run increase in the value of the dollar relative to the yen.  
True False
113. The record of international trade in goods and services and international transfer payments is called  
A. The balance of payments  
B. The capital account  
C. The current account  
D. The foreign account
114. The difference between the value of goods exported and imported is the:  
A. current account balance.  
B. financial and capital account balance.  
C. government financial balance.  
D. balance of merchandise trade.
115. The accounting of all economic transactions between two countries is known as the:  
A. balance of trade.  
B. net capital outflow.  
C. balance of payments.  
D. trade surplus.
116. For the foreign exchange market, exports from the United States generate a:  
A. supply of dollars and imports to the United States also generate supply of dollars.  
B. supply of dollars and imports to the United States generate a demand for dollars.  
C. demand for dollars and imports to the United States generate a supply of dollars.  
D. demand for dollars and imports to the United States generate a demand for dollars
117. A trade deficit refers to an excess of:  
A. imports of goods over exports of goods.  
B. Exports of services over imports of services.  
C. total debits over total credits in the capital account.  
D. total payments over total revenues in the current account.

118. If the U.S. dollar appreciates relative to the British pound, then:
- A. the pound will appreciate relative to the U.S. dollar.
  - B. the pound will depreciate relative to the U.S. dollar.
  - C. British goods will be more expensive for Americans.
  - D. American goods will be less expensive for the British.
119. Foreign exchange rates refer to the:
- A. price at which purchases and sales of foreign goods take place.
  - B. movement of goods and services from one nation to another.
  - C. price of one nation's currency in terms of a second nation's currency.
  - D. difference between exports and imports in a particular nation.
120. If an American can purchase 40,000 British pounds for \$90,000, the dollar rate of exchange for the pound is:
- A. \$1.40.
  - B. \$2.00.
  - C. \$2.25.
  - D. \$6.00.
121. A market in which one nation's money is exchanged for another nation's money is a:
- A. resource market.
  - B. bond market.
  - C. stock market.
  - D. foreign exchange market.
122. If the dollar price of the yen rises, then:
- A. the yen price of dollars also rises.
  - B. the dollar depreciates relative to the yen.
  - C. the yen depreciates relative to the dollar.
  - D. the dollar will buy fewer U.S. goods.
123. If the exchange rate changes so that more Mexican pesos are required to buy a dollar, then:
- A. the peso has appreciated in value.
  - B. Americans will buy more Mexican goods and services.
  - C. more U.S. goods and services will be demanded by the Mexicans.
  - D. the dollar has depreciated in value.
124. Depreciation of the dollar will:
- A. decrease the prices of both U.S. imports and exports.
  - B. increase the prices of both U.S. imports and exports.
  - C. decrease the prices of U.S. imports but increase the prices to foreigners of U.S. exports.
  - D. increase the prices of U.S. imports but decrease the prices to foreigners of U.S. exports.

125. Appreciation of the Canadian dollar will:
- A. intensify an existing disequilibrium in Canada's balance of payments.
  - B. make Canada's exports less expensive and its imports more expensive.
  - C. make Canada's exports more expensive and its imports less expensive.
  - D. make Canada's exports and imports both more expensive.
126. If a country has a floating exchange rate, it means their currency:
- A. is set by the government.
  - B. has a value determined by the market for loanable funds.
  - C. can be freely traded and their value is determined by the FOREX market.
  - D. All of these statements are true.
127. In an economy with a fixed exchange rate, when the market forces try to change the exchange rate, the government:
- A. must buy or sell its currency using its own reserve to bring equilibrium in the market to where it has "fixed" it.
  - B. declares it can't change, and holds it constant.
  - C. often has to deal with an unhappy domestic population who are constantly dealing with shortages or surpluses of their currency.
  - D. None of these statements is true.

# Solutions to Practice Questions

## **CHAPTER 11**

1. FALSE
2. TRUE
3. TRUE
4. TRUE
5. A
6. A
7. D
8. C
9. D
10. C
11. B
12. B
13. C
14. B
15. B
16. C

## **CHAPTER 12**

17. FLASE
18. TRUE
19. TRUE
20. TRUE
21. TRUE
22. A
23. C
24. C
25. A
26. D
27. A
28. A
29. C
30. A
31. A
32. A

## **CHAPTER 13**

33. TRUE
34. TRUE
35. TRUE
36. B
37. C
38. B

39. D
40. B
41. C
42. B
43. A
44. D
45. A
46. A
47. A
48. B
49. D
50. A
51. A
52. A
53. D
54. B

## **CHAPTER 14**

55. TRUE
56. TRUE
57. FALSE
58. D
59. A
60. D
61. D
62. C
63. A
64. B
65. B
66. B
67. A
68. C
69. C
70. A
71. B
72. D
73. C
74. B

## **CHAPTER 15**

75. FALSE
76. TRUE
77. FALSE

78. FALSE
79. TRUE
80. A
81. C
82. C
83. D
84. D
85. C
86. A
87. B
88. B
89. B
90. B
91. B
92. D
93. A
94. C
95. C

## **CHAPTER 16**

96. TRUE
97. FALSE
98. D
99. D
100. A
101. B
102. D
103. D
104. A
105. A
106. B
107. B

## **CHAPTER 18**

108. FALSE
109. TRUE
110. TRUE
111. TRUE
112. FALSE
113. C
114. D
115. C
116. C

117. A
118. B
119. C
120. C
121. D
122. B
123. B
124. D
125. C
126. C
127. A