Chapter 33
Interest Rates and Monetary Policy

CHAPTER OVERVIEW

- The objectives and the mechanics of monetary policy are covered in this chapter. It is organized around seven major topics:

1. interest rate determination;
2. the balance sheet of the Federal Reserve Banks;
3. the tools of monetary policy;
4. Federal Reserve targeting of the Federal funds rate;
5. the cause effect chain of monetary policy;
6. an evaluation of the advantages and disadvantages of monetary policy; and
7. a brief, but important, synopsis of mainstream theory and policies. The purpose of the concluding sections is to summarize all the macro theory developed so far and fit the pieces together as an integrated whole for students.
OBJECTIVES

- Identify the goals of monetary policy.
- Identify two types of demand for money and the main determinant of each.
- Describe the relationship between GDP and the interest rate and each type of money demand.
- Explain what is meant by equilibrium in the money market and the equilibrium rate of interest.
- Explain the relationship between bond prices and the money market
- List the principal assets and liabilities of the Federal Reserve Banks.
- Explain how each of the three tools of monetary policy may be used by the Fed to expand and to contract the money supply.
- Explain the relative importance of the monetary policy tools.
- Describe how the Fed targets the Federal funds rate as part of its monetary policy actions.
- Describe expansionary and restrictive monetary policies, and explain why and how they are used.
• Explain the Taylor rule and describe how it relates to current Fed policy.

• Explain the cause effect chain between monetary policy and changes in equilibrium GDP.

• Demonstrate graphically the money market and how a change in the money supply will affect the interest rate.

• Show the effects of interest rate changes on investment spending.

• Describe the impact of changes in investment on aggregate demand and equilibrium GDP.

• Contrast the effects of an expansionary monetary policy with the effects of a restrictive monetary policy.

• List two strengths and three shortcomings of monetary policy.

• Describe the arguments for and against “inflation targeting” versus a more discretionary “artful management” approach to monetary policy.

• Summarize the connections between AD-AS, the price level, real output, and stabilization (fiscal and monetary) policy.

• Define and identify terms and concepts at the end of the chapter.
Introduction to Monetary Policy

• **Learning objectives**
  - How the equilibrium interest rate is determined in the market for money.
  - The goals and tools of monetary policy.
  - About the Federal funds rate and how the Fed controls it.
  - The mechanisms by which monetary policy affects GDP and the price level.
  - The effectiveness of monetary policy and its shortcomings.

• Reemphasize Chapter 31’s points: The Fed’s Board of Governors formulates policy, and twelve Federal Reserve Banks implement policy.

• The fundamental objective of monetary policy is to aid the economy in achieving full employment output with stable prices.
  - To do this, the Fed changes the nation’s money supply.
  - To change money supply, the Fed manipulates size of excess reserves held by banks.

• Monetary policy has a very powerful impact on the economy, and the Chairman of the Fed’s Board of Governors, Ben Bernanke currently, is sometimes called the second most powerful person in the U.S.
Interest Rates

• Price paid for the use of money
  – The price that borrowers need to pay lenders for transferring purchasing power to the future.

• Many different interest rates
  – that vary by purpose, size, risk, maturity, and taxability, etc.
  – Refer to Graph 33.4.

• Speak as if only one interest rate

• Determined by money supply and money demand
  – Turn to demand and supply analysis.

• The Fed’s primary influence is on the money supply and interest rates.
The Demand for Money: Two Components

• Why hold money?

1. To make purchase,
2. To hold it as an asset,
3. To invest for future consumption.

• Transactions demand, $D_t$,

– is money kept for purchases goods and services.
  * Households use it for purchasing goods and services.
  * Businesses need money to pay for labor, materials, power, and other inputs.
– Refer to PPT 33-5 or Key Graph 33.1a.
– Determined by nominal GDP
  * The larger the total money value of all goods and services exchanged in the economy, the larger the amount of money needed.
– Independent of the interest rate
  * For simplicity, we assume that the $D_t$ is independent of the interest rate and is determined exclusively on the level of nominal GDP.
  * In reality, higher interest rates are associated with slightly lower volumes of money demanded for transaction.
• **Asset demand,** $D_a$,
  
  is money kept as a store of value for later use.

  * People may hold their financial assets in many forms, including stocks, bonds, money, land, properties, etc.
  * People hold money because
    - Liquid
    - No capital loss.

  * The disadvantage of holding money is that it earns no or very little interest.

  - Asset demand varies inversely with the interest rate, since that is the price of holding idle money

  - Refer to PPT 33-5 or Key Graph 33.1b.

• **Total demand** $D_m$,

  - Total demand for money will equal quantities of money demanded for assets plus that for transactions

    $$D_m = D_t + D_a$$

  - Refer to PPT 33-5 or Key Graph 33.1c.

  - depends on the **nominal GDP**

    * through transactions demand for money, $D_t$,

    * An increase (decrease) in nominal GDP infers that people will hold higher (less) amount of money for transactions and shift the total demand curve for money to the right (left).

  - depend on interest rate

    * through asset demand for money, $D_a$, i
The Equilibrium Interest Rate

- Refer to PPT 33-5 or Key Graph 33.1c.

- Key Graph 33.1c illustrates the money market. It combines demand with supply of money.

- The vertical line, $S_m$, represents the money supply.

- The intersection of demand and supply determines the equilibrium price in the market for money – the interest rate, $i_e$.

- Changes in the demand for money and the supply of money, or both, can change the equilibrium interest rate $i_e$.

- An increase (decrease) in the supply of money will lower (raise) the equilibrium interest rate.

- Refer to Key Graph 33.5a.
The Equilibrium Interest Rate and Bond Prices

• Inversely related
  – When the interest rate increases, bond prices fall.
  – When the interest rate falls, bond prices rise.

• Example: suppose a bond with no expiration date pays $50 annual interest payment and is selling for its face value of $1000.
  – The interest yield on this bond is 5% \( \left(= \frac{50}{1000} \right) \)

• Suppose the interest rate rise to 7.5%.
  – Newly issued bonds will pay $75 per $1000 face value.
  – Old bonds pay $50 could not be able to sell at $1000.
  – Its price will drop to $667 because
    \[
    \frac{50}{667} = 7.5\%
    \]

• Similarly, suppose the interest rate falls to 2.5%.
  – Newly issued bonds will pay $25 per $1000 face value.
  – Old bonds pay $50 will be higher attractive.
  – Bond buyers will bid up its price to $2000 because
    \[
    \frac{50}{2000} = 2.5\%
    \]
• If the quantity demanded exceeds the quantity supplied, people sell assets like bonds to get money. This causes bond supply to rise, bond prices to fall, and a higher market rate of interest.

• If the quantity supplied exceeds the quantity demanded, people reduce money holdings by buying other assets like bonds. Bond prices rise, and lower market rates of interest result (see example in text).
Consolidated Balance Sheet of the Federal Reserve Banks

• We turn to study monetary policy, which relies on changes in interest rate to be effective.

• The Feb’s balance sheet helps us understand how the Feb conducts monetary policy

• Refer to Table 33.1

• The assets column on the Fed’s balance sheet contains two major items.

  1. **Securities**

     – holdings by the Fed that affect money supply and earn interest

     – They consist largely of Treasury bills (short-term securities), Treasury notes (mid-term securities), and Treasury bonds (long-term securities),

     – These securities are part of the public debt - the money borrowed by the Federal government.

     – The Fed’s holdings of securities issued by the U.S. Treasury

     – The Fed bought these securities from banks and the public through open-market operations.

     – The Fed provides reserves to the banking system by purchasing securities, thereby increasing its holdings of these
assets.

- An increase in government securities held by the Fed leads to an increase in the money supply.

which are federal government bonds purchased by Fed, and

2. **Loans** to commercial banks (**Discount loans**)

- provide reserves to banks and earn the discount rate
- The Fed provides reserves to the banking system by making discount loans to banks.
- The discount loans banks take out are referred to as **borrowings from the Fed** or **borrowed reserves**.
- The interest rate charges banks for these discount loans is called the **discount rate**.
- Note: again commercial banks term is used even though the chapter analysis also applies to other thrift institutions.

- **Assets are important because**

  - Changes in the asset items lead to changes in reserves and consequently to changes in the money supply.
  - These assets earn interest while liabilities do not, the Fed makes billions of dollars every year.

- **The liability** side of the balance sheet contains three major items.

  1. **Reserves of banks**
- held as deposits at Federal Reserve Banks,
- That is, reserves consist of deposits at the Fed plus currency that is physically held by banks (vault cash).
- Total reserves = required reserves + excess reserves.

2. U.S. **Treasury deposits**
   - U.S. Treasury deposits of tax receipts and borrowed funds,
   - The U.S. Treasury keeps deposits in the Federal Reserve Banks and draws check on them to pay its obligations.
   - To the U.S. Treasury, these are assets,
   - To the Federal Reserve Banks, these are liabilities.

3. **Federal Reserve Notes outstanding,**
   - our paper currency.
   - The Fed issues currency, Federal Reserve Note, in the hands of the public
   - Federal Reserve notes are IOU’s from the Fed to the bearer and are liabilities.

- The following is the simplest balance sheet:

<table>
<thead>
<tr>
<th>Federal Reserve System</th>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government securities</td>
<td>Currency in circulation</td>
<td></td>
</tr>
<tr>
<td>Discount loans</td>
<td>Treasury deposits</td>
<td></td>
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<tr>
<td></td>
<td>Reserves</td>
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</tbody>
</table>
“Tools” of Monetary Policy

- Tools of Monetary Policy to influence the money-creating abilities of the banking system include
  
  1. Open market operations
  2. The reserve ratio
  3. The discount rate
  4. Term auction facility

Open Market Operations

- **Open market operations** refer to the Fed’s buying and selling of government bonds.
  
  - Buying securities will increase bank reserves and the money supply (see Figure 33.2)
    
    * If the Fed buys directly from banks, then bank reserves go up by the value of the securities sold to the Fed.
  
  - **Suppose that the Fed purchases $100 of bonds from a bank and pays for them a $100 check.**
    
    * The bank will either deposit the check in its account with the Fed or cash it in for currency as vault cash. Either action means that the bank will find itself with $100 more reserves and a reduction in its holding of securities of $100.
The Fed finds that its liabilities have increased by the additional $100 of reserves, while its assets have increased by the $100 of additional securities.

The net results of this open market purchase are:

- reserves have increased by $100, the amount of the open market purchase.

- If the Fed buys from the general public, people receive checks from the Fed and then deposit the checks at their bank. Bank customer deposits rise and therefore bank reserves rise by the same amount.

- To understand what happens when there is an open market purchase from the nonbank public, we look at two cases:

  1. The person or corporation sells the $100 of bonds to the Fed deposits the Fed’s check in the local bank.

* The nonbank public’s T-account becomes

<table>
<thead>
<tr>
<th>Non-Bank Public</th>
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</thead>
<tbody>
<tr>
<td>Securities</td>
<td>−$100</td>
</tr>
<tr>
<td>Checkable deposits</td>
<td>+$100</td>
</tr>
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</table>

* When the bank receives the check, it credits the depositor’s account with the $100 and then deposit the
check in its account with the Fed, thereby adding to its reserves. The banking system’s T-account becomes

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<tr>
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<td></td>
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<tr>
<td>Reserves</td>
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<td></td>
</tr>
<tr>
<td>Checkable deposits</td>
<td>+$100</td>
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* On the Fed’s balance sheet, it has gained $100 of securities in this assets and increase $100 in its liabilities:

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</tr>
<tr>
<td>Securities</td>
<td>+$100</td>
<td></td>
</tr>
<tr>
<td>Reserves</td>
<td>+$100</td>
<td></td>
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</tbody>
</table>

* The net results of the Fed’s open market purchase from the nonbank public is identical to the effect of its open market purchase from a bank.

2. if, however, the person or corporation sells the $100 of bonds to the Fed cashes the Fed’s check at the local bank or at a Fed. The effect on reserves is different.

* This seller will receive currency of $100 while reducing holdings of securities by $100. The bond seller’s T-account becomes

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<td></td>
</tr>
<tr>
<td>Currency</td>
<td>+$100</td>
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* The Fed now finds that it has exchanged $100 of currency for $100 of securities. So, its T-account is

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<td></td>
</tr>
<tr>
<td>Currency in circulation</td>
<td>+$100</td>
<td></td>
</tr>
</tbody>
</table>

* The net results of the Fed’s open market purchase from the nonbank public is that reserves are unchanged, while
currency in circulation increases by the amount (i.e., $100) of the open market purchase.

* Thus, money supply increases by the amount (i.e., $100) of the open market purchase, while reserves remain unchanged.

- Banks’ lending ability rises with new excess reserves.
- Money supply rises directly with increased deposits by the public.
- When Fed buys bonds from bankers, reserves rise and excess reserves rise by same amount since no checkable deposit was created.
- When Fed buys from public, some of the new reserves are required reserves for the new checkable deposits.
- Conclusion: When the Fed buys securities, bank reserves will increase and the money supply potentially can rise by a multiple of these reserves.
- Note: When the Fed sells securities, Bank reserves will go down, and eventually the money supply will go down by a multiple of the banks’ decrease in reserves.
- How the Fed attracts buyers or sellers:
When Fed buys, it raises demand and price of bonds, which in turn lowers effective interest rate on bonds. The higher price and lower interest rates make selling bonds to Fed attractive.

- When Fed sells, the bond supply increases and bond prices fall, which raises the effective interest rate yield on bonds. The lower price and higher interest rates make buying bonds from Fed attractive.

- **Suppose that the Fed sells $100 of bonds to a bank or the nonbank public, the money supply will decrease by $100.**

- **Example**: Suppose that the Fed sells $100 of bonds to an individual who pay for them with cash

  * The buyer exchanges $100 of currency for $100 of bonds to yield

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* the Fed has reduced its holdings of securities by $100 and has lowered its monetary liability by accepting $100 as payment for its bonds, thereby reducing the amount of currency in circulation by $100.
The Federal Reserve System

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The effect of the open market sale of bonds

- Reduces the money supply by the amount of the sale
- Reserves remain unchanged
- The effect of open market operations on the money supply is much more certain than the effect on reserves
The Reserve Ratio

- **The reserve ratio** is another “tool” of monetary policy. It is the fraction of reserves required relative to their customer deposits.

  - Raising the reserve ratio increases required reserves and shrinks excess reserves. Any loss of excess reserves shrinks banks’ lending ability and, therefore, the potential money supply by a multiple amount of the change in excess reserves.

  - Lowering the reserve ratio decreases the required reserves and expands excess reserves. Gain in excess reserves increases banks’ lending ability and, therefore, the potential money supply by a multiple amount of the increase in excess reserves.

  - Changing the reserve ratio has **two effects**:

    - It affects the size of excess reserves.
    - It changes the size of the monetary multiplier. For example, if ratio is raised from 10 percent to 20 percent, the multiplier falls from 10 to 5.

  - Changing the reserve ratio is very powerful since it affects banks’ lending ability immediately. It could create instability, so Fed rarely changes it.

  - Table 33.2 provides illustrations.
The Discount Rate

• The third “tool” is the **discount rate**, which is the interest rate that the Fed charges to commercial banks that borrow from the Fed.

  – An increase in the discount rate signals that borrowing reserves is more difficult and will tend to shrink excess reserves.

  – A decrease in the discount rate signals that borrowing reserves will be easier and will tend to expand excess reserves.

  – **When the Fed make a $100 discount loan to the bank.** The bank is credited with $100 of reserves from the proceeds of the loan.

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<td>Reserves +$100</td>
<td>Discounted loans +$100 (Borrowings from the Fed)</td>
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<td>Discounted loans +$100 (Borrowings from the Fed)</td>
<td>Reserves +$100</td>
</tr>
</tbody>
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– The net effect:

  * Monetary liabilities of the Fed have increased by $100

  * Money supply also increases by this amount
- **If a bank pays off a discount Loan from the Fed**, thereby reducing its borrowing from the Fed by $100

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Term Auction Facility

• The fourth Fed “tool” for altering bank reserves is the term auction facility

• This tool was introduced in December 2007 in response to mortgage debt crisis.
  – Tens of thousands of homeowners defaulted on mortgage loans when they experienced higher mortgage interest rates and falling home prices.

• Under the term auction facility, the Fed holds two auctions each month.
  – Banks bid for the right to borrow reserves for 28 days

• Example: the Fed auction off $20 billion in reserves.
  – Banks want to participate in the auction provide:
    1. How much they wish to borrow, and
    2. The interest rate they are willing to pay.
  – the limited pool of $20 billion goes to those banks offer to pay the highest interest rates
  – The rate that all the auction winners pay is the same - the lowest bidder whose bid is accepted.
• Lending through the term auction facility guarantees that the amount of reserves that the Fed wishes to lend will be borrowed.

  – This is to help those reserves will, in fact, be borrowed, thereby increasing the overall level of reserves in the banking system.
  – Reserves fell dramatically during the sub-prime crisis and the Fed want to increase reserves so that bank would have excess reserves and therefore the ability to keep making loans.

• For several reasons, open market operations give the Fed most control of the four “tools.”

  – Open market operations are most important. This decision is flexible because securities can be bought or sold quickly and in great quantities. Reserves change quickly in response.
  – The reserve ratio is rarely changed since this could destabilize bank’s lending and profit positions.
  – Changing the discount rate has become a passive tool of monetary policy. The Fed sets their target for the Federal funds rate, and then typically sets the discount rate at 1 percentage point above that target. Although this rule is not at rigid as it once was. The Fed set the discount rate 50 basis points above the Fed Funds Rate in August of 2007.
Targeting the Federal Funds Rate

- **The Federal funds rate** is the interest rate that banks charge each other for overnight loans.

- Recently, the Fed has focused on the federal funds rate as the primary indicator of the stance of monetary policy
  
  - Since 1994, the Fed announces a federal funds rates target at each Federal Open market Committee (FOMC) meeting.
  
  - It affects interest rates throughout the economy

  - Banks with excess reserves desire to lend out their temporary excess reserves overnight to other banks that temporary need them to meet their reserve requirement.

- Banks lend to each other from their excess reserves, but because the Fed is the only supplier of Federal funds (the currency used as reserves), it can set the Federal funds rate and then use open-market operations to make sure that rate is achieved.

  - The Fed will increase the availability of reserves if it wants the Federal funds rate to fall (or keep it from rising).
  
  - Reserves will be withdrawn if the Fed wants to raise the Federal funds rate (or keep it from falling).

- Refer to PPT 33-16
– The demand curve for Federal funds, $D_f$ (FF), is downward-sloping because lower interest rates give the banks with reserve deficiencies a greater incentive to borrow FF rather than reduce loans to meet their reserve requirements.

– The supply curve for Federal funds, $S_f$ is horizontal at the targeted Federal funds rate, say, 4%.

  * It is horizontal because the Fed uses open-market operations to manipulate the supply of FF.
  * If the demand for FF increases ($D_f$ shifts to the right), the Fed will use its open-market operations to increase the availability of reserves such that the 4% FF rate is retained.
  * If the demand for FF decreases ($D_f$ shifts to the left), the Fed will use its open-market operations to reduce the availability of reserves such that the 4% FF rate is retained.
Expansionary Monetary Policy

- The Fed may use an expansionary monetary policy if the economy is experiencing a recession and rising rates of unemployment.
  
  - The Fed will initially announce a lower target for the Federal funds rate,
  - then use open-market operations (buying bonds in this case).
  - The Fed may also lower the reserve ratio or
  - lower the discount rate.

- Increasing reserves will generate two results:
  
  - The supply of Federal funds will increase, lowering the Federal funds rate.
  - Through the money multiplier process, a greater expansion of the money supply will occur. (See Chapter 31 for a refresher on that process)

- Expansionary monetary policy will put downward pressure on interest rates, including the prime interest rate - the benchmark interest rate used by banks to set many other interest rates.
Restrictive Monetary Policy

• **Restrictive monetary policy** is used to combat rising inflation.
  
  – The initial step is for the Fed to announce a higher target for the Federal funds rate,
  
  – followed by the selling of bonds to soak up reserves.
  
  – Raising the reserve ratio and/or discount rate is also an option.

• Reducing reserves will produce results opposite of what we saw for an expansionary monetary policy.
  
  – The reduced supply of Federal funds will raise the Federal funds rate to the new target.
  
  – Multiple contraction of the money supply, through the money multiplier process (Chapter 31).
  
  – Restrictive monetary policy results in higher interest rates, including the prime rate.

• **CONSIDER THIS – The Fed as a Sponge**
  
  – If reserves in the banking system are like a bowl of water, the Fed can use open-market operations as a sponge that can change the amount of water (reserves) in the bowl.

  * If there are too many reserves, the Fed “soaks up” the excess by selling bonds.

  * If the Fed wants more reserves in the system, it “squeezes the sponge” by buying bonds.
The Taylor Rule

- **The Taylor Rule** – Stanford economist John Taylor has proposed a rule for targeting the Federal funds rate. It assumes a target inflation rate of 2% and has three components:
  
  - If real GDP rises by 1 percent above potential, the Federal funds rate should be raised by one-half a percentage point.
  
  - If inflation rises by 1 percentage point above its target, the Federal funds rate should be raised by one-half a percentage point.
  
  - When real GDP is at its potential and inflation is at its target, the Federal funds rate should be at 4% (implying a real interest rate of 2)
  
  - The rules work in reverse as well, if real GDP is below its potential and inflation is below the 2% target.
  
  - While the Fed has roughly followed the Taylor rule in recent years, it has also deviated under certain circumstances (e.g. the threat of deflation)
Monetary Policy, Real GDP, and the Price Level: How Policy Affects the Economy

- **Cause effect chain:**
  - Money market impact is shown in Key Graph 33.5.
    * Supply of money is assumed to be set by the Fed.
    * Interaction of supply and demand determines the market rate of interest, as seen in Figure 3.5a.
    * Interest rate determines amount of investment businesses will be willing to make. Investment demand is inversely related to interest rates, as seen in Figure 33.5b.
    * Effect of interest rate changes on level of investment is great because interest cost of large, long-term investment is sizable part of investment cost.
    * As investment rises or falls, equilibrium GDP rises or falls by a multiple amount, as seen in Figure 33.5c and 33.5d.
  - Expansionary monetary policy:
    * The Fed takes steps to increase excess reserves, which lowers the interest rate and increases investment which, in turn, increases aggregate demand and real GDP.
    * See Column 1, Table 33.3
  - Restrictive monetary policy
    * is the reverse of an expansionary monetary policy: Excess reserves fall, which raises interest rate, which decreases investment, which, in turn, reduces aggregate demand and inflation.
    * See Column 2, Table 33.3
Monetary Policy: Evaluation and Issues

• **Strengths of monetary policy:**
  - It is speedier and more flexible than fiscal policy since the Fed can buy and sell securities daily.
  - It is less political. Fed Board members are isolated from political pressure, since they serve 14 year terms, and policy changes are more subtle and not noticed as much as fiscal policy changes. It is easier to make good, but unpopular decisions.

• **Recent monetary policy**
  - To counter the recession that began in March 2001, the Fed pursued an easy money policy that saw the prime interest rate fall from 9.5 percent at the end of 2000 to 4.25 percent in December 2002.
  - The Fed has been praised for helping the U.S. economy maintain simultaneously full employment, price stability, and economic growth for over four years. They have also received credit for swift and strong responses to the September 11, 2001, terrorist
attacks, significant declines in the stock market, and the overall recessionary conditions.

- In response to strong economic growth in 2004, the Fed began a series of quarter-percentage-point increases in the Federal funds rate. Those increases have continued well into 2006.

**Problems and complications:**

- Recognition and operational lags impair the Fed’s ability to quickly recognize the need for policy change and to affect that change in a timely fashion. Although policy changes can be implemented rapidly, there is a lag of at least 3 to 6 months before the changes will have their full impact.

- Cyclical asymmetry may exist: a restrictive monetary policy works effectively to brake inflation, but an expansionary monetary policy is not always as effective in stimulating the economy from recession. “You can lead a horse to water, but you can’t make it drink.”

- CONSIDER THIS Pushing on a String Japan’s ineffective expansionary monetary policy illustrates the potential inability of monetary policy to bring an economy out of recession. While pulling on a string (restrictive monetary policy) is likely to move the attached object to its desired destination, pushing on a string is not.

- The impact on investment may be less than traditionally
thought. Japan provides a case example. Despite interest rates of zero, investment spending remained low during the recession.

• **“Artful Management”** or **“Inflation Targeting”?**
  
  – The Fed under Alan Greenspan managed the money supply such that the U.S. economy enjoyed price stability, high levels of employment, and strong economic growth. This leads some to argue that the Fed should take an active policy role and attempt to pursue all of those objectives in setting policy.
  
  – Ben Bernanke replaced Alan Greenspan in early 2006. Many are wondering whether or not Bernanke has Greenspan’s intuition.
  
  – Out of concern that the Fed’s success under Greenspan may not be reproducible, some argue for inflation targeting. This narrower policy objective, which has been successful in other industrialized economies, would make monetary policy more predictable and “transparent” to those in the economy making decisions based on Fed action.
  
  – Skeptics of inflation targeting argue that that approach is too narrow, and that successes of other nations should be viewed carefully given the relative lack of global inflationary pressure in recent years.
The Big Picture (Key Graph 33.6) Shows Many Interrelationships

- **Fiscal and monetary policy are interrelated.** The impact of an increase in government spending will depend on whether it is accommodated by monetary policy. For example, if government spending comes from money borrowed from the general public, it may be offset by a decline in private spending, but if the government borrows from the Fed or if the Fed increases the money supply, then the initial increase in government spending may not be counteracted by a decline in private spending.

- Study Key Graph 33.6 and you will see that the levels of output, employment, income, and prices all result from the interaction of aggregate supply and aggregate demand. In particular, note the items shown in red that constitute, or are strongly influenced by, public policy.

- Try Quick Quiz 33.6.
The Mortgage Debt Crisis

- In 2007 there was a major wave of defaults on home mortgages, which threatened the health of many financial institutions. There is some debate of whether this wave has crested yet.

- A strange thing about the crisis was that before it happened, banks had mistakenly believed that an innovation known as the ’mortgage backed security’ had eliminated their exposure to mortgage defaults.

- To deal with this crisis the FOMC lowered the target rate for the Fed Funds Rate to 2

- Politicians and financial regulators are now examining whether tighter lending rules would help offset the ’pass-the-buck’ incentives created by mortgage backed securities.