Extending the Lesson

Have students visit the FED101 website at http://www.federalreserveeducation.org/fed101/policy/. Students can learn more about monetary policy and economic indicators,and take an on-line quiz.

Discussion Point:

Myth:

When the Fed prints money for banks it increases the national debt.

REALITY:

Federal Reserve Banks do not print money, they manage the inventory of the existing stock of currency. Money is printed by the Bureau of Printing and Engraving, an agency of the U.S. Treasury Department. Government debt is generated by government borrowing.The amount of borrowing, measured by the deficit, is not decided by the Fed.The government's debt and deficit are the result of the budgetary decisions of the Congress and President.

MATERIALS:

- Classroom Visual #3: *The Tools of Monetary Policy* and Classroom Visual *#4:Open Market Operations*
- Copies of Student Handout #2: Example Scenario: *Stagflation—No Growth with High Inflation*
- Four group sets of Student Handout #3: *Potential Effects of Monetary Policy, scenarios 1-4* (one for each group.)
- Answer keys for each scenario
- Access to the FED101 website, http://www.federalreserveeducation.org/fed101/policy, and the New York Fed's website, http://www.newyorkfed.org/education/bythe.html, to learn more about monetary policy and economic indicators. Additional on-line charts and activities available. (Optional)

TEACHER PREPARATION:

1. Review the content in the class visuals, handouts, and monetary policy scenarios.
2. Prepare copies of the example scenario for all students and the four monetary policy scenarios, one for each student group.
3. Review FED101 website, http://www.federalreserveeducation.org/fed101/policy, and the New York Fed's website, http://www.newyorkfed.org/education/bythe.html, to learn more about monetary policy and economic indicators. Additional on-line charts and activities available. (Optional)

ACTIVITY:

Part Two: Potential Effects of Monetary Policy

PROCEDURES:

1. Ask students to get into four groups.
2. Explain to students that the Federal Reserve can strongly influence the U.S. economy by setting monetary policy. Remind students about *The Fed Today* video's portrayal of the big table around which Federal Open Market Committee meetings take place. Ask them if they remember how often these meetings occur, who participates, and what is the committee's ultimate goal. These questions will be answered in Classroom Visual #3.
3. Project Classroom Visual #3: *The Tools of Monetary Policy* to the entire class. Discuss the three tools that can increase or decrease the amount of money and credit in the economy.
4. Emphasize that the primary monetary policy tool is open market operations. Using Classroom Visual #4, discuss how the Fed targets the federal funds rate by buying and selling Treasury securities through open market operations, which will likely impact other short-term commercial lending rates. Lastly, explain to students that changes in short-term lending rates may affect inflation, employment levels, and economic growth.
5. Explain to students that the FOMC must respond to a variety of economic conditions. The committee must decide whether to choose a loose monetary policy (by reducing the federal funds rate) or a tight one (by increasing the federal funds rate). Of course, the FOMC can also maintain the status quo by choosing to leave the federal funds rate unchanged.
6. Explain to the class that student groups will receive an economic scenario to analyze. They will then be asked to recommend the appropriate monetary policy. Distribute Student Handout #2: Example Scenario: *Stagflation—No Growth with High Inflation*. Review the scenario, checking for understanding. Inform students that this scenario of stagflation is taken from an actual period during the 1970s and 1980s. (In fact, all scenarios resemble real economic conditions that have occurred in recent history).
7. Distribute a different *Monetary Policy Scenario* to each of the four groups. Ask student groups to read and discuss the scenarios and answer the corresponding questions in the spaces provided. (Tell students that each group has been given a different scenario at random).
8. Each group is assigned the job of summarizing the scenario and explaining their answers to the rest of the class.
9. Teachers can refer to the suggested answers to the *Monetary Policy Scenarios* as each group completes its analysis.

10. **Teacher Summary:** Remind students that although monetary policy has three tools at its disposal, the primary tool is open market operations, or the buying and selling of U.S. Treasury securities. Ask for student participation to summarize the following main points:
    - The Fed can affect the federal funds rate by buying and selling U.S. Treasury securities.
    - Tight monetary policy is recommended when the economy is in danger of creating inflation, and loose monetary policy is recommended when the economy is showing signs of low economic and employment growth.
    - Monetary policy that leaves the federal funds rate unchanged is quite common.
    - Changing the federal funds rate may affect short-term borrowing rates, which can in turn affect spending and job growth.

Extending the Lesson:

Have students visit the FED101 website at http://www.federalreserveeducation.org/fed101/policy/. Students can learn more about monetary policy and economic indicators, and take an on-line quiz.

Classroom Visual #3

THE TOOLS OF MONETARY POLICY

UNDERSTANDING MONETARY POLICY:

- The primary objective of monetary policy is to influence the amount of **money and credit** in the economy in order to help promote sustainable economic growth,full employment,and stable prices.
- The Federal Open Market Committee (FOMC) meets approximately eight times a year to **formulate the nation's monetary policy.**
- The voting members of the FOMC consist of the **seven members of the Board of Governors, the President of the Federal Reserve Bank of New York, and presidents of four other Reserve Banks** who serve on a one-year rotating basis.
- **Monetary policy is formulated in terms of a target for the federal funds rate,** the interest rate that banks charge one another for short-term loans. Changes to the federal funds rate typically affect other short-term commercial lending rates.

THE TOOLS OF MONETARY POLICY:

The Federal Reserve's three monetary policy tools are **open market operations, the discount rate and reserve requirements.**

- The most frequently used tool of monetary policy is **open market operations,** which involves buying and selling U.S. government securities.
- Adjusting the **discount rate,** the next most utilized tool, involves changing the interest rate charged on short-term loans to depository institutions by the Federal Reserve.
- Adjusting **reserve requirements,** a rarely used tool, involves changing the percentage of deposits that banks must keep on reserve in their vaults or on deposit at a Federal Reserve Bank.

Classroom Visual #4

Open Market Operations

Tight Monetary Policy

The Fed sells Treasury securities, taking money out of the economy

↓

This creates upward pressure on the federal funds rate

↓

Short-term interest rates may go up because banks have less money to lend

↓

Consumers and businesses may borrow less money

↓

Consumer and business spending may decrease

↓

Employment and economic growth may decrease in the short-term

Loose Monetary Policy

The Fed buys Treasury securities, adding money to the economy

↓

This creates downward pressure on the federal funds rate

↓

Short-term interest rates may go down because banks have more money to lend

↓

Consumers and businesses may borrow more money

↓

Consumer spending may increase

↓

Employment and economic growth may increase in the short-term

Student Handout #2

EXAMPLE SCENARIO:

STAGFLATION-NO GROWTH WITH HIGH INFLATION

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the list of questions, and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Economic growth over the past year, measured by real gross domestic product (GDP) for the United States,has been negative. The number of jobs has declined and the already high unemployment rate has been rising, yet inflation pressures remain persistent. Moreover, most inflation and wage and salary indicators suggest that inflation has not subsided over the past year despite the decline in economic growth. Nominal interest rates also are very high, reflecting high inflation expectations. Your group is concerned that continued inflationary pressures are undermining the economy's already weak performance.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Suggested Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	**Raising** the short-term federal funds interest rate will slow the economy even further. Higher interest rates will tend to cause the economy to slow and potential output to be lost; however, over time this policy should reduce the inflationary pressure facing the economy.
How does your policy affect both the economy and the inflation rate?	A policy to slow the economy may lower economic growth in the short run (in the next year, for example). This same policy should also help to slow inflationary pressures in the longer run (during the next several years) and help reduce inflationary expectations.
What effect is your policy likely to have on the level of employment over the next six months?	A higher federal funds rate (tighter monetary policy) will tend to slow the already weak economy and cause additional job losses in the next year. However, this policy also should help to alleviate inflationary pressures on the economy over the long run.
What other information not provided in the scenario might have changed your recommendation? Provide an example.	Information on the trends in other key inflation indicators (the core consumer price index (CPI) excluding food and energy;the producers'price index (PPI); and the gross domestic product (GDP) deflator would be useful for policy makers. Additional information on inflation expectations and any changes expected should help policy makers. Information on recent trends in the unemployment rate would help policy makers monitor how much the economy is slowing as they pursue an anti-inflation policy.

Student Handout #3-1

Potential Effects of Monetary Policy

SCENARIO #1:
MAINTAINING THE STATUS QUO

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions, and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

In view of the conflicting evidence on inflation and economic growth provided by recently released economic indicators, your group believes that prospective developments are equally likely to warrant an increase or a decrease in the federal funds rate. For example, the core Consumer Price Index (CPI) remains stable. The core CPI excludes the volatile food and energy components that have been causing the overall CPI index to rise. However, there is uncertainty in the employment situation. Job growth remains positive, an indication that the expansion is continuing, but the unemployment rate also has been rising, an indication of weakness in the economy. The conflicting indicators suggest that the current policy be maintained until evidence exists that the growth rate of the economy has deviated from its target growth path.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	
What are the risks associated with overstimulating the economy?	
What are the risks associated with overtightening monetary policy?	
What other information not provided in the scenario might have changed your recommendation?	

Answer Key

Potential Effects of Monetary Policy

SCENARIO #1:

MAINTAINING THE STATUS QUO

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions, and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

In view of the conflicting evidence on inflation and economic growth provided by recently released economic indicators, your group believes that prospective developments are equally likely to warrant an increase or a decrease in the federal funds rate. For example, the core Consumer Price Index (CPI) remains stable. The core CPI excludes the volatile food and energy components that have been causing the overall CPI index to rise. However, there is uncertainty in the employment situation. Job growth remains positive, an indication that the expansion is continuing, but the unemployment rate also has been rising, an indication of weakness in the economy. The conflicting indicators suggest that the current policy be maintained until evidence exists that the growth rate of the economy has deviated from its target growth path.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Suggested Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	**Maintaining** the federal funds rate at its current level. Until stronger inflation or economic growth trends develop, or both, policy should remain steady. Stimulating the economy at this time could cause it to overheat and increase the potential for future inflation. In contrast, tightening could cause the economy to slow down too much if it is weaker than the indicators presently indicate.
What are the risks associated with overstimulating the economy?	Lowering the federal funds rate will cause other short-term interest rates to fall and will help stimulate investment and the economy in the short run. This would be appropriate if the economy were slowing, but would be inappropriate if it caused the economy to overheat and inflationary pressures to build.
What are the risks associated with overtightening monetary policy?	Raising the federal funds rate will slow investment and the economy in the short run. This would be appropriate if the economy showed signs of overheating and inflationary pressures were building. However, if the economy were already slowing,a higher federal funds rate would tend to weaken it.
What other information not provided in the scenario might have changed your recommendation?	Additional information on monetary policy over the past couple of years could provide important clues on the future behavior of the economy. Current economic forecasts might help policy makers anticipate movements in the economy under different economic scenarios. The composite index of leading economic indicators, published by *The Conference Board*, may provide clues to the economy's behavior over the next several months.

Student Handout #3-2

Potential Effects of Monetary Policy

SCENARIO #2:

MAINTAINING THE STATUS QUO DURING A PERIOD OF RAPID EXPANSION

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions,and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Your group prefers to maintain the federal funds rate at its present level because of recent information from economic indicators on inflation and economic growth.While the unemployment rate has fallen to its lowest level in decades and labor markets remain tight, the core Consumer Price Index (CPI)—excluding volatile food and energy items—continues to rise at only a modest rate. Investment, especially in high technology, remains strong, and productivity continues to rise at a rapid pace by historic standards. Meanwhile, Real Gross Domestic Product (GDP)—GDP adjusted for inflation—continues to expand rapidly. The behavior of these indicators suggests that the current policy be maintained until evidence exists that either the future inflation rate or GDP has deviated from the target growth path.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	
What are the risks associated with overstimulating the economy?	
What are the risks associated with overtightening monetary policy?	
What other information not provided in the scenario might have changed your recommendation?	

Answer Key

Potential Effects of Monetary Policy

SCENARIO #2:

MAINTAINING THE STATUS QUO DURING A PERIOD OF RAPID EXPANSION

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions,and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Your group prefers to maintain the federal funds rate at its present level because of recent information from economic indicators on inflation and economic growth. While the unemployment rate has fallen to its lowest level in decades and labor markets remain tight, the core Consumer Price Index (CPI)—excluding volatile food and energy items—continues to rise at only a modest rate. Investment, especially in high technology, remains strong, and productivity continues to rise at a rapid pace by historic standards. Meanwhile, Real Gross Domestic Product (GDP)—GDP adjusted for inflation—continues to expand rapidly. The behavior of these indicators suggests that the current policy be maintained until evidence exists that either the future inflation rate or GDP has deviated from the target growth path.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Suggested Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	**Maintaining** the federal funds rate at its current level. Rapid productivity growth appears to be allowing the economy to expand faster than in prior years without building significant inflationary pressure. Until stronger trends develop in either inflation, or economic growth, or both,policy should remain steady.
What are the risks associated with overstimulating the economy?	Lowering the federal funds rate will cause other short-term interest rates to fall and will help stimulate investment and the economy in the short run. With the economy already at or above full employment, lowering rates would be inappropriate if that caused the economy to overheat and inflationary pressures to build.
What are the risks associated with overtightening monetary policy?	Raising the federal funds rate will slow investment and the economy in the short run. While the economy already is at or above full employment,there is little evidence of rising inflation. Strong productivity growth appears to be allowing the economy to expand at a faster pace than normal without building significant upward pressure on wages and prices. Slowing the economy would not be necessary at this time.
What other information not provided in the scenario might have changed your recommendation?	Additional information on monetary policy over the past couple of years could provide important clues to its future behavior. Information on trends in investment spending and productivity may provide clues to future productivity growth rates. Information on the direction of fiscal policy, whether it is stimulating the economy with a budget deficit or slowing it with a budget surplus, also might be useful for policy makers.

Student Handout #3-3

Potential Effects of Monetary Policy

Scenario #3:

A Slowing Economy

Instructions:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions,and be ready to summarize your answers for the rest of the class.

Setting the Scene:

Investment in capital equipment, including high-tech computers,networks,and equipment used to manufacture consumer goods, continues to decline. Lower corporate profits and an uncertain business outlook have contributed to a sharp decline in the stock market and are expected to reduce spending on high-tech equipment this year and next.In addition,slower economic growth for our major trading partners (Canada,Mexico, Asia, and Europe) is expected to limit demand for U.S. exports over the next year. Weak investment spending,an uncertain business outlook, and slower economic growth abroad lead your group to believe that the risks to the U.S. economy in the near future are weighted mainly toward further slowing in the economy.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	
How might your policy recommendation affect short-term lending rates (interest rates on other securities maturing in one year or less)?	
What impact is your policy likely to have on the level of employment over the next six months to a year?	
What other information not provided in the scenario might have changed your recommendation? Provide two examples.	

Answer Key

Potential Effects of Monetary Policy

SCENARIO #3:

A SLOWING ECONOMY

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions, and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Investment in capital equipment,including high-tech computers, networks, and equipment used to manufacture consumer goods, continues to decline. Lower corporate profits and an uncertain business outlook have contributed to a sharp decline in the stock market and are expected to reduce spending on high-tech equipment this year and next. In addition,slower economic growth for our major trading partners (Canada, Mexico, Asia, and Europe) is expected to limit demand for U.S. exports over the next year. Weak investment spending, an uncertain business outlook,and slower economic growth abroad lead your group to believe that the risks to the U.S. economy in the near future are weighted mainly toward further slowing in the economy.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Suggested Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	**Lowering** the federal funds rate should help stimulate the U.S. economy in the months ahead. Lower short-term interest rates should help to offset the weakness in domestic investment spending and the weak export sales caused by slower economic growth abroad.Furthermore, the stock markets typically, but not always, respond positively to lower interest rates.
How might your policy recommendation affect short-term lending rates (interest rates on other securities maturing in one year or less)?	The federal funds rate is a short-term interest rate; interbank loans are usually made on an overnight basis.Lowering the federal funds rate will lower the cost of borrowing in other short-term financial markets, such as Treasury bills and commercial paper (corporate IOUs).
What impact is your policy likely to have on the level of employment over the next six months to a year?	A lower federal funds rate (more relaxed monetary policy) will tend to boost economic growth as measured by Gross Domestic Product (GDP) and employment growth in the short run.
What other information not provided in the scenario might have changed your recommendation? Provide two examples.	Information on the expected severity and duration of the investment slowdown and export slump would help U.S. policy makers make a decision on interest rates that is consistent with economic growth and modest inflation. Statistics on sales,new orders, and inventories of semiconductors, personal computers,and communications devices would be helpful in analyzing the downturn in high tech. Likewise, additional information on the weakness in the economies of our major export markets (Canada, Mexico, Asia,and Europe) would help policy makers estimate the expected size of the downturn in U.S. exports.

Student Handout #3-4

Potential Effects of Monetary Policy

SCENARIO #4:

A GLOBAL ECONOMIC SHOCK

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions, and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Increased turbulence in foreign financial markets, highlighted by significant exchange rate devaluations, a widespread currency crisis, and potential defaults on international debts held by foreign nations have caused foreign stock markets to collapse and weakened foreign economies. As a result, financial market conditions are tighter in the United States. Simultaneously, the U.S. economy also has been showing signs of growing more slowly. Your group should decide the following: First, whether the weakness in the global economy and financial markets would warrant a change in the federal funds rate, and, second, if that change should be a small adjustment or an aggressive one.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	
How might your policy recommendation affect short-term lending rates (interest rates on other securities maturing in one year or less)?	
What effect is your policy likely to have on the level of employment in the short-term?	
What other information not provided in the scenario might have changed your recommendation? Provide two examples.	

Answer Key

Potential Effects of Monetary Policy

SCENARIO #4:

A GLOBAL ECONOMIC SHOCK

INSTRUCTIONS:

Read and discuss the following monetary policy scenario within your group. Provide short answers to the corresponding questions,and be ready to summarize your answers for the rest of the class.

SETTING THE SCENE:

Increased turbulence in foreign financial markets,highlighted by significant exchange rate devaluations, a widespread currency crisis, and potential defaults on international debts held by foreign nations have caused foreign stock markets to collapse and weakened foreign economies.As a result,financial market conditions are tighter in the United States.Simultaneously, the U.S. economy also has been showing signs of growing more slowly.Your group should decide the following: First,whether the weakness in the global economy and financial markets would warrant a change in the federal funds rate, and,second, if that change should be a small adjustment or an aggressive one.

Members of your group represent an important faction on the FOMC. Your group's recommendation is likely to convince the other FOMC members which way to vote.

Questions	*Suggested Answers*
Does your group recommend raising or lowering the federal funds rate, or maintaining it at its current level?	**Lowering** the federal funds rate should help stimulate the U.S economy in the months ahead. Lower rates would work to offset the weakness in the economy that is developing domestically. Lower rates also may help to counteract the negative effects of uncertainty in world financial markets.A more significant crisis would likely require a larger policy response.
How might your policy recommendation affect short-term lending rates (interest rates on other securities maturing in one year or less)?	The federal funds rate is a short-term interest rate;loans are usually made on an overnight basis to other banks and financial institutions. Lowering the federal funds rate will lower the cost of borrowing in other short-term financial markets, such as Treasury bills and commercial paper (corporate IOUs).
What effect is your policy likely to have on the level of employment in the short-term?	A lower federal funds rate (more relaxed monetary policy) will tend to boost economic growth and employment growth in the short run.
What other information not provided in the scenario might have changed your recommendation? Provide two examples.	Information on international financial rescue efforts; for example, those lead by the International Monetary Fund (IMF) would provide a sense of the magnitude of the problem. Information on the expected severity and duration of the currency crises also would help analysts evaluate the potential impact on the U.S. economy. It would be important to know whether our trading partners are suffering from financial problems (for example, Canada, Mexico, Asia, and Europe). Information on the expected severity and duration of the financial shock abroad also would help U.S. policy makers make a decision on interest rate that is consistent with economic growth and modest inflation.