

Classroom Activity: How Fed Policy Transmits to the Economy

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Standards and Benchmarks (see page 15)

Lesson Description

This interactive activity reinforces students' comprehension of the linkages between monetary policy and the economy. The activity first reviews the key concepts on this topic. Students then participate in an active-learning demonstration showing how changes in monetary policy ripple through the economy to move the economy toward the Fed's goals of maximum employment and price stability.

Grade Level

High school or college

Concepts

Contractionary monetary policy
Dual mandate
Expansionary monetary policy
Federal funds rate
Federal Open Market Committee (FOMC)
Federal Reserve System
Inflation
Interest on reserve balances
Maximum employment
Monetary policy
Price stability

Objectives

Students will be able to

- describe the key components of the Fed’s dual mandate;
 - describe how the Fed sets the stance of monetary policy;
 - analyze the linkages between (i) the Fed’s policy interest rate, (ii) market interest rates, (iii) the decisions of households and businesses, and (iv) the economic goals of maximum employment and price stability; and
 - analyze policy strategies given economic conditions.
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Compelling Question

How does the Fed conduct monetary policy to achieve price stability and maximum employment?

Time Required

30 minutes

Materials

- PowerPoint slide deck for “Classroom Activity: How Fed Policy Transmits to the Economy”
 - Handout, one copy cut apart to provide eight cards for the activity
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Procedure

1. Display Slide 2 and explain that the **Federal Reserve System (Fed)** is the central bank system of the United States. The U.S. Congress has given the Fed two objectives, which we call the “**dual mandate**”—to promote **maximum employment** and **price stability**. The Fed conducts **monetary policy** to move the economy toward this dual mandate. Review the definitions on the slide and discuss the following:
 - When the Fed sees that the economy is falling short of (or is above) maximum employment, it adjusts its monetary policy to move the economy toward maximum employment.
 - The Fed has stated that it seeks to achieve inflation that averages 2 percent over time, using a specific measure called the personal consumption expenditures (PCE) index. **Inflation** is a general, sustained upward movement of prices for goods and services in an economy. If the PCE index increases, the economy is experiencing inflation.
 - When the Fed thinks that inflation is too high (or low) for an extended period of time, it will adjust monetary policy to steer the economy back toward the desired level of inflation.

2. Display Slide 3 and discuss the following:
 - The **Federal Open Market Committee**, or **FOMC**, is the group within the Federal Reserve System that conducts (or sets the stance of) monetary policy. It does this primarily by setting the target range for the **federal funds rate**.
3. Display Slide 4 and tell the students that as they move through this discussion—on how the Fed implements monetary policy—the flow diagram will be their guide. Note the three segments of the flow diagram by discussing the following:
 - First, the Federal Reserve takes monetary policy action (blue section).
 - Second, the policy setting affects market conditions, the decisions of consumers and businesses, and aggregate demand/spending (green section).
 - Third, these changes affect levels of employment and inflation, moving the economy toward maximum employment and price stability, which are the Fed’s dual mandate goals (purple section).
4. Tell the students that you will need eight volunteers to participate in an activity where they will learn how monetary policy transmits through the economy and helps move the economy toward maximum employment and price stability.
5. When you call on a student volunteer, hand them a card (cut apart from *Handout: Cards*) as they come forward to line up in the front of the classroom and face the other students. Students should hold their cards facing outward and all at the same level/distance from the floor.
6. Display Slide 5. Select a student volunteer and give them Card 1 (FOMC conducts monetary policy: Target range for the federal funds rate). Tell the students that the FOMC conducts monetary policy (sets the stance of policy) by setting a target range for the federal funds rate, a key interest rate in the economy. Discuss the following:
 - The FOMC sets a target range for the federal funds rate, which is the range where it wants federal funds transactions to take place.
 - When the FOMC lowers the target range for the federal funds rate, this will lower interest rates in the economy and encourage consumers and businesses to take loans to spend and invest.
 - When the FOMC raises the target range for the federal funds rate, this will increase interest rates in the economy and discourage consumers and businesses to take loans to spend and invest.
 - To summarize, the FOMC *conducts* monetary policy by setting the target range for the federal funds rate.

7. Display Slide 6. Select a student volunteer and give them Card 2 (Fed implements monetary policy: Interest on reserve balances rate). Tell the students that the Fed implements monetary policy by putting a policy decision into effect. Discuss the following:
 - The **interest on reserve balances** rate steers the federal funds rate into the FOMC's target range.
 - When the FOMC lowers the target range for the federal funds rate, the Fed lowers the interest on reserve balances rate, which moves the federal funds rate down into the new target range.
 - When the FOMC raises the target range for the federal funds rate, the Fed raises the interest on reserve balances rate, which moves the federal funds rate up into the new target range.
 - Key point: Interest on reserves balances is the Fed's primary tool for influencing the federal funds rate.

8. Display Slide 7. Select a student volunteer and give them Card 3 (Market interest rates). Discuss the following:
 - Market interest rates include interest rates on car loans, home loans, student loans, and credit cards.
 - Lower interest rates decrease the savings rate and the cost of borrowing money, which encourages consumers to increase spending on goods and services and businesses to invest in new equipment.
 - Higher interest rates increase the cost of borrowing money and make saving more advantageous, which discourages consumers from spending on some goods and services and reduces businesses' investment in new equipment.

9. Display Slide 8. Select a student volunteer and give them Card 4 (Consumer spending). Discuss the following:
 - An increase in consumption spending by consumers increases the overall demand for goods and services in the economy.
 - Higher spending results in more production and higher employment.
 - A decrease in consumption spending by consumers decreases the overall demand for goods and services in the economy.
 - Consumption spending usually makes up more than two-thirds of all spending.

10. Display Slide 9. Select a student volunteer and give them Card 5 (Business investment). Discuss the following:
 - Business investment is spending by businesses on machinery, factories, equipment, tools, and construction of new buildings.
 - An increase in investment spending by businesses increases the overall demand for goods and services in the economy.

- Higher spending results in more production and higher employment.
 - A decrease in investment spending by businesses decreases the overall demand for goods and services in the economy.
 - Less spending decreases inflationary pressures.
11. Display Slide 10. Select a student volunteer and give them Card 6 (Aggregate demand). Discuss the following:
- Aggregate demand is the amount of real output (goods and services) that buyers collectively desire to purchase at each possible price level.
 - Aggregate demand increases when total spending in the economy increases.
 - Aggregate demand decreases when total spending in the economy decreases.
 - When aggregate demand increases, it increases price level (inflation) and increases real GDP (economic output), which generally creates employment opportunities for workers.
 - When aggregate demand decreases, it decreases price level (deflation) and decreases real GDP (economic output), which generally reduces employment opportunities for workers.
12. Display Slide 11. Select a student volunteer and give them Card 7 (Employment). Discuss the following:
- People with jobs are employed.
 - The Federal Reserve has a mandate for maximum employment, which is the highest level of employment that an economy can sustain while maintaining a stable inflation rate.
 - Higher spending results in more production and higher employment.
 - Lower spending results in less production and lower employment.
 - When aggregate demand increases, it generally creates employment opportunities for workers.
 - When aggregate demand decreases, it generally reduces employment opportunities for workers.
13. Display Slide 12. Select a student volunteer and give them Card 8 (Inflation). Discuss the following:
- Inflation is a general, sustained upward movement of prices for goods and services in an economy.
 - The Federal Reserve has a mandate for price stability.
 - Price stability is a low and stable rate of inflation maintained over an extended period of time.
 - The Federal Reserve seeks to achieve inflation that averages 2 percent over time.

- When aggregate demand increases, it increases price level (inflation).
- When aggregate demand decreases, it decreases price level (deflation).

Example of Expansionary Monetary Policy

14. Display Slide 13. Check to make sure students are lined up in the order shown on the slide and that they are holding their cards at the same level from the floor. Explain to the students that the next few slides will tie together the FOMC's policy action—its moving of the target range for the federal funds rate—with its goal of meeting its dual mandate of maximum employment and price stability.
15. Display Slide 14. Suppose the economy weakens. Employment falls short of maximum employment. Meanwhile, the inflation rate, which might have recently been steady around 2 percent, is showing signs of decreasing.
16. Display Slide 15 and discuss the following:
 - How would this headline be reflected in the position of the cards?
 - *Answer: Employment would decrease.*
 - *Action: Student should lower Card 7.*
17. In this case, the FOMC might decide to use **expansionary monetary policy** to bring the economy back to maximum employment. Work through the following:
 - Point to Card 1 (FOMC conducts monetary policy: Target range for the federal funds rate) and ask, How would the FOMC conduct policy to address the problem?
 - *Answer: The FOMC would decrease the target range for the federal funds rate.*
 - *Action: Student should lower Card 1.*
 - Point to Card 2 (Fed implements monetary policy: Interest on reserve balances rate) and ask, How would the Fed adjust the interest on reserve balances rate based on the FOMC decision?
 - *Answer: To implement the FOMC's policy change, the Fed would decrease the interest on reserve balances rate—to steer market rates toward the FOMC's target range.*
 - *Action: Student should lower Card 2.*
 - Point to Card 3 (Market interest rates) and ask, How does a change in the federal funds rate affect market interest rates?
 - *Answer: Lowering the interest on reserve balances rate pushes the federal funds rate and other market interest rates lower. These lower market interest rates make borrowing money more affordable.*
 - *Action: Student should lower Card 3.*

- Point to Card 4 (Consumer spending) and ask, How does the change in market interest rates affect consumer spending?
 - *Answer: Lower interest rates decrease the savings rate and the cost of borrowing money, which encourages consumers to spend more on goods and services.*
 - *Action. Student should raise Card 4.*
 - Point to Card 5 (Business investment) and ask, How does the change in market interest rates affect business investment?
 - *Answer: Lower interest rates decrease the savings rate and the cost of borrowing money, which encourages businesses to invest in new equipment.*
 - *Action: Student should raise Card 5.*
 - Point to Card 6 (Aggregate demand) and ask, How does the change in consumer and business spending affect aggregate demand?
 - *Answer: The increase in consumption spending by consumers and investment spending by businesses increases the overall demand (aggregate demand) for goods and services in the economy.*
 - *Action: Student should raise Card 6.*
 - Point to Card 7 (Employment) and ask, How does the change in aggregate demand affect employment?
 - *Answer: The increase in consumer spending and business investment increases the job growth rate or increases hiring, which moves the economy toward the Fed's goal of maximum employment.*
 - *Action: Student should raise Card 7 back to the original level, showing that employment has returned to its intended level—maximum employment.*
 - Point to Card 8 (Inflation) and ask, How does the change in aggregate demand affect inflation?
 - *Answer: Inflation had shown signs of decreasing, but the increase in overall spending by consumers and businesses increases inflationary pressures.*
 - *Action: Student should hold Card 8 steady or raise it just a bit to signal a slightly higher level of inflation.*
 - Ask the following:
 - Would the policy enacted by the FOMC move the economy back toward price stability and maximum employment? (*Yes, the lower target range for the federal funds rate and lower interest on reserve balances rate transmit through the economy, which results in higher employment.*)
18. Display Slide 16. This shows the pattern of the cards, with the red arrow pushing employment higher, back to maximum employment.

19. Explain to students that the Fed's monetary policy tools can be effective for moving the economy back toward maximum employment when the economy weakens (as just reviewed). But what if the economy overheats? Students should now turn to look at the price stability part of the dual mandate.

Example of Contractionary Monetary Policy

20. Display Slide 17. Assume the economy is growing at a very fast rate; inflation has been above the Fed's 2 percent target for a considerable time and is increasing. At the same time, the unemployment rate is very low.
21. Display Slide 18 and discuss the following:
- How would this headline be reflected in the position of the cards?
 - *Answer: Inflation would increase.*
 - *Action: Student should raise Card 8.*
22. In this case, the FOMC might decide to use **contractionary monetary policy** to bring inflation back to the Fed's goal of averaging 2 percent over time. Work through the following:
- Point to Card 1 (FOMC conducts monetary policy: Target range for the federal funds rate) and ask, How would the FOMC conduct policy to address the problem?
 - *Answer: The FOMC would increase the target range for the federal funds rate.*
 - *Action: Student should raise Card 1.*
 - Point to Card 2 (Fed implements monetary policy: Interest on reserve balances rate) and ask, How would the Fed adjust the interest on reserve balances rate based on the FOMC decision?
 - *Answer: To implement the FOMC's policy change, the Fed would increase the interest on reserve balances rate—to steer market rates toward the FOMC's target range.*
 - *Action: Student should raise Card 2.*
 - Point to Card 3 (Market interest rates) and ask, How does a change in the federal funds rate affect market interest rates?
 - *Answer: Raising the interest on reserve balances rates pushes the federal funds rate and other market interest rates higher. These higher interest rates make borrowing money more costly.*
 - *Action: Student should raise Card 3.*
 - Point to Card 4 (Consumer spending) and ask, How does the change in market interest rates affect consumer spending?
 - *Answer: Higher interest rates increase the savings rate and the cost of borrowing money, which discourages consumers from spending on some goods and services.*
 - *Action: Student should lower Card 4.*

- Point to Card 5 (Business investment) and ask, How does the change in market interest rates affect business investment?
 - *Answer: Higher interest rates increase the savings rate and the cost of borrowing money, which discourages businesses from investing in new equipment.*
 - *Action: Student should lower Card 5.*
- Point to Card 6 (Aggregate demand) and ask, How does the change in consumer and business spending affect aggregate demand?
 - *Answer: The decrease in consumption spending by consumers and investment spending by businesses decreases the overall demand (aggregate demand) for goods and services in the economy.*
 - *Action: Student should lower Card 6.*
- Point to Card 7 (Employment) and ask, How does the change in aggregate demand affect employment?
 - *Answer: The decrease in consumer spending and business investment reduces the job growth rate or reduces employment overall. (If the Fed achieves a “soft landing,” employment will only decrease modestly.)*
 - *Action: Student should hold Card 7 steady or lower it just a bit to signal a slightly lower level of employment.*
- Point to Card 8 (Inflation) and ask, How does the change in aggregate demand affect inflation?
 - *Answer: Inflation had shown signs of increasing, but the decrease in overall spending by consumers and businesses decreases inflationary pressures, so the inflation rate will fall back toward 2 percent.*
 - *Action: Student should lower Card 8 back to the original level, showing that inflation has returned to its intended level—price stability.*
- Ask the following:
 - Would the policy enacted by the FOMC move the economy back toward price stability and maximum employment? (*Yes, the higher target range for the federal funds rate and higher interest on reserve balances rate transmit through the economy, which results in lower inflation.*)

23. Display Slide 19. This shows the pattern of the cards, with the red arrow pushing inflation down, back to price stability.

Closure

24. To conclude the lesson, ask the students the following review questions:

- What are the Fed’s dual mandate goals? (*The Fed is mandated by Congress to promote maximum employment and price stability.*)

- What does it mean to conduct monetary policy? (*The FOMC conducts monetary policy by setting a target range for the federal funds rate, a key interest rate in the economy. It does this with the goal of moving the economy toward the Fed's dual mandate.*)
 - What does it mean to implement monetary policy? (*The Fed implements monetary policy by using its tools to steer the federal funds rate into the target range set by the FOMC.*)
 - What is the Fed's primary tool for implementing monetary policy? (*Interest on reserve balances is the Fed's primary tool for adjusting the federal funds rate.*)
 - Can the Federal Reserve adjust inflation or employment directly? (*No, the Fed uses a key interest rate, which transmits through the economy, affecting consumer and business spending decisions, which then affect inflation and employment.*)
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Assessment

25. Display Slide 20 and present the following questions as an assessment of students' learning:

- (i) Explain the three segments of the flow diagram, including how monetary policies made by the Federal Reserve transmit to the broader economy to influence employment and inflation.

The blue tiles represent the two parts of monetary policy: The FOMC sets the target range for the federal funds rate, and the Fed uses its tools, such as interest on reserve balances, to steer the federal funds rate into the target range.

The green tiles represent market conditions and consumer and business spending decisions: A change in the federal funds rate affects other interest rates and affects consumer and business spending decisions, which affect overall demand/spending.

The purple tiles represent the dual mandate of maximum employment and price stability: Changes in overall spending affect employment and inflation.

- (ii) How would the FOMC conduct monetary policy to help achieve the Fed's dual mandate when inflation is higher than the Fed's 2 percent inflation target?

The FOMC would raise the target range for the federal funds rate. Then, the Fed would raise the interest on reserve balances rate, which encourages higher market interest rates and reduces spending by households and businesses, which in turn discourages production and employment. As inflationary pressures begin to decrease, the inflation rate will move back toward 2 percent.

- (iii) How would the FOMC conduct monetary policy to help achieve the Fed's dual mandate when employment is lower than maximum employment?

The FOMC would lower the target range for the federal funds rate. Then, the Fed would lower the interest on reserve balances rate, which encourages lower market interest rates and boosts spending by households and businesses, which in turn encourages production and employment. The increase in employment would move the economy back toward maximum employment.

Handout: Cards (page 1 of 4)

(1)

**FOMC conducts
monetary policy:
Target range for the
federal funds rate**

(2)

**Fed implements
monetary policy:
Interest on
reserve balances rate**

Handout: Cards (page 2 of 4)

(3)

Market interest rates

(4)

Consumer spending

Handout: Cards (page 3 of 4)

(5)

Business investment

(6)

Aggregate demand

Handout: Cards (page 4 of 4)

(7)

Employment

(8)

Inflation

Standards and Benchmarks

Voluntary National Content Standards in Economics

NOTE: The most recent version (2010) of the Voluntary National Content Standards in Economics does not align with the Fed's ample reserves implementation of monetary policy. You can read our recommendations for updating the Voluntary National Content Standards in Economics at <https://www.federalreserve.gov/econres/feds/files/2020092pap.pdf>.

Standard 20: Fiscal and Monetary Policy

Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

- **Benchmarks: Grade 12**

7. Monetary policies are decisions by the Federal Reserve System that lead to changes in the supply of money, short-term interest rates, and the availability of credit. Changes in the growth rate of the money supply can influence overall levels of spending, employment, and prices in the economy by inducing changes in the levels of personal and business investment spending.
8. The Federal Reserve System's major monetary policy tool is open market purchases or sales of government securities, which affects the money supply and short-term interest rates. Other policy tools used by the Federal Reserve System include making loans to banks (and charging a rate of interest called the discount rate). In emergency situations, the Federal Reserve may make loans to other institutions. The Federal Reserve can also influence monetary conditions by changing depository institutions' reserve requirements.
9. The Federal Reserve targets the level of the federal funds rate, a short-term rate that banks charge one another for the use of excess funds. This target is largely reached by buying and selling existing government securities.
10. The Federal Reserve tends to increase interest rate targets when it feels the economy is growing too rapidly and/or the inflation rate is accelerating. It tends to lower rate targets when it wants to stimulate the short-term growth of the economy.