



Teaching Monetary Policy with Ample Reserves

The way monetary policy is implemented has changed. The Fed moved from a limited reserves regime, where reserves in the banking system are scarce, to an ample reserves regime, where reserves are ample or abundant. With the shift came an adjustment to the monetary policy tools. Given that this new regime is here to stay, and teaching materials are not widespread, this paper provides teaching guidance. First, we offer a simple means for covering the key concepts. Second, we answer some often-asked questions about the new material. Third, we present a classroom activity to demonstrate how the Federal Open Market Committee (FOMC) conducts monetary policy, how the Fed implements policy, and how those changes transmit through the economy to promote the dual mandate goals of maximum employment and price stability.

Jane Ihrig[†] Scott Wolla[‡]

[†]Federal Reserve Board [‡]Federal Reserve Bank of St. Louis

1. Introduction

Monetary policy has been operating in the same basic fashion for decades – the Federal Open Market Committee (FOMC) sets a target or target range for the federal funds rate (FFR), and then the Federal Reserve uses its tools to steer the market-determined FFR to the target. But a significant change took place in 2008 that affected how policy is implemented. The Fed moved from a limited reserves regime, where reserves in the banking system are scarce, to an ample reserves regime, where reserves are ample or abundant. With the shift in the level of reserves came an adjustment to the monetary policy tools.

Unfortunately, when the Fed changed its implementation regime and the associated tools, the curriculum and classroom instruction did not change. The curriculum most likely did not change because of a lack of direct and specific communication by the Federal Reserve with the economic education community.¹ That changed in 2020 when Ihrig and Wolla started writing articles for economic education publications and developed teaching resources published on the Federal Reserve Bank of St. Louis website. These actions spurred changes, with individual instructors and curriculum authors starting to move toward new content and a larger splash when the College Board announced an update to the AP macro course description and exam, which took effect in the fall of 2022 (Ma & Woods, 2022). However, while the College Board added ample reserves to their *Course and Exam Description*, they retained the limited reserves regime content. So, in this case, AP Macroeconomics teachers will need to teach both frameworks.²

Today, many educators who teach introductory macroeconomics at the high school and college level are transitioning – learning how the ample reserves regime works, how the new tools operate, and how to teach the new content in the classroom. This article is designed to provide a simple means for covering the ample reserves regime, answer key questions, and provide an easy-to-use classroom activity to teach the new content.

This paper proposes a Literacy-Targeted approach to teaching the concepts. This approach argues that it is far more valuable for students to learn and be able to apply core concepts well than to be exposed to a wide range of concepts and techniques they will not master and, therefore will soon forget (Gilleskie & Salemi, 2012; Benjamin, Cohen & Hamilton, 2020). In that vein, we strip down the full discussion of the ample regime presented in Ihrig and Wolla (2020a) into the key concepts that need to be taught.

2. Key Concepts of an Ample Reserves Regime

As the Fed has done for decades, the FOMC sets a target or a target range for the FFR. Since the Great Financial Crisis, the target range has been set 25 basis points wide, with an upper and lower limit. Then to ensure that the market-determined FFR trades in this target range, the Fed ensures there are ample reserves in the banking system and relies on several policy tools. With limited time in the classroom, instruction should focus on (1) the supply of

¹A set of papers was published in 2015 when the FOMC lifted the target range for the FFR above the zero lower bound, most notably in the widely read *Journal of Economic Perspectives* (Ihrig, Meade, & Weinbach). However, no articles were written specifically for economic education publications or presented at economic education conferences. That changed in 2019 with the publication of “A New Frontier: Monetary Policy with Ample Reserves” (Wolla, 2019) published as part of the Page One Economics series intended for education audiences.

²The College Board, 2022 Updates to the AP Macroeconomics Course and Exam. <https://academicmerit.wistia.com/medias/t6ufvc0fdi>

reserves is ample and (2) the key policy tool of interest on reserve balances.³

The first key component of the ample reserves regime is that reserve balances are ample. This means that banks have enough reserves so that a small decrease in their holdings does not significantly push up borrowing costs. The ample supply of reserves is depicted by the supply curve intersecting the demand curve far to the right where the demand curve is somewhat flat. Here a slight decrease in supply will still intersect the demand curve close to the same FFR.

The second component of the ample regime is the policy tools. Interest on reserve balances and its associated interest on reserves balances rate or IORB rate is the Fed's primary tool for steering the market-determined FFR into the target range. The IORB rate is the interest rate paid on funds banks hold in their reserve balance account at a Federal Reserve Bank. For banks, this interest rate represents a risk-free investment option. Notably, the IORB rate is an "administered rate," which means it is set by the Fed and not determined in a market (like the FFR is). Interest on reserve balances is available only to banks and a few other institutions. One can see the level of the IORB rate on the vertical axis of the standard supply-demand figure.

While instructors should focus on interest on reserve balances as the primary tool, there are two other supplementary monetary policy tools that are often mentioned: overnight reserve repurchases agreement (and its associated overnight reserve repurchase agreement offering rate, or ON RRP rate) and the Discount Window (and its associated discount rate).⁴ The two administered rates also appear in the figure for completeness. For instructors with limited time in the classroom, however, they can focus on the IORB rate. For those who can spend more time on the other tools, see Ihrig and Wolla (2020a) for a full discussion of these tools.

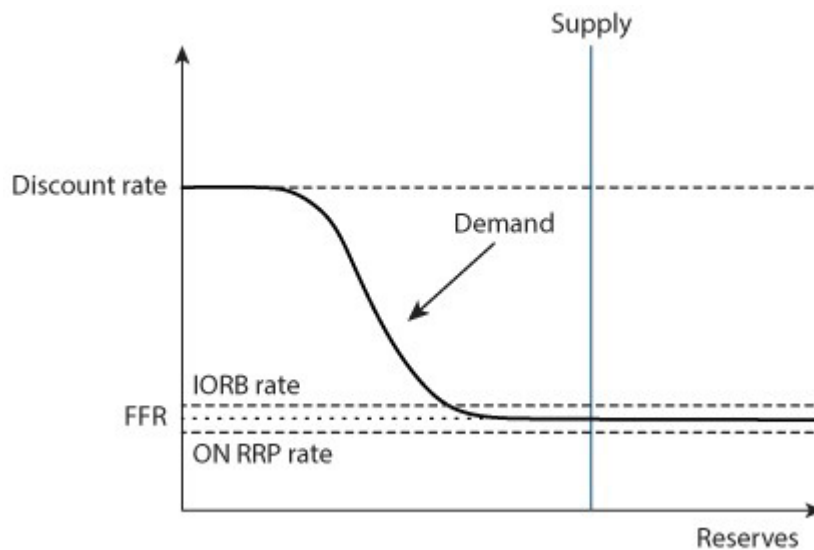
A final tool in the background of the ample reserves regime is open market operations—the purchase or sales of U.S. government securities. In the ample regime, this tool is only used periodically to ensure the supply curve remains ample.⁵ If outside factors cause the supply curve to shift too far to the left, the Fed will need to conduct an open market operation where it purchased securities and put reserves into the banking system. This action would push the supply curve out to the right, keeping the quantity of reserve in the banking system ample. For those whose instruction will solely focus on the ample regime, one can choose to cover or abstract from this discussion. Those teaching AP Macroeconomics will have to discuss open market operations in detail for the limited reserves regime and, therefore, can easily mention its use in the ample regime.

³An instructor who has more time can also discuss the overnight reserve repurchases agreement, open market operations and the discount window. All the tools available to the Fed can be found here: [Federal Reserve Board - Policy Tools](#). Notice that reserve requirements are not an active tool.

⁴One can think of the ON RRP facility as a deposit facility for a larger set of counterparties than those that have access to the Fed's reserve balance accounts. The Discount Window is a lending facility for banks.

⁵During times of severe stress, the Fed also uses open market operations for large-scale asset purchases.

Figure 1: Monetary Policy with Ample Reserves



3. How does Interest on Reserve Balances work?

Two economic concepts underlie the efficacy of how the IORB rate works to move market interest rates. We review these concepts here so that the instructors have a basis for discussing how the policy tool works. Whether either of these concepts is introduced in the classroom will depend on time and the instructor's preference.

The first concept is reservation rate, which is the lowest rate that banks are willing to accept for lending out their funds. Remember that banks can deposit their funds at the Federal Reserve and earn the IORB rate. Because depositing funds at the Fed is a risk-free option, banks will likely not be willing to lend their funds in the federal funds market for a lower interest rate than they can earn from depositing their funds at the Fed. So, the IORB rate serves as a reservation rate for banks trying to decide what to do with their cash (deposit their funds at the Fed and earn the IORB rate, invest in a Treasury security, make a loan, or lend in the federal funds market).

The second concept is arbitrage, which is the simultaneous purchase and sale of funds (or goods) in order to profit from a difference in price. Arbitrage ensures that the FFR does not fall far below or move too far above the IORB rate. Arbitrage is the reason why short-term market interest rates remain closely linked. For example, banks seek the best return for their funds given a low level of risk. Let's assume banks consider two options that are both liquid and virtually risk free – earning interest on reserve balances and lending to other financial institutions in the federal funds market. The FFR is determined in the federal funds market and the IORB rate is determined by the Fed. Notice that one of these (IORB rate) is the Fed's policy tool, and the other (FFR) is the Fed's target for setting policy, known as the policy rate. Arbitrage will ensure that any gap between them quickly disappears.

To see how the gap between similar interest rates should disappear, let's assume the federal funds market says banks can earn 100 basis points (bp) by lending to another bank, but the Fed is paying 125 bp (IORB rate) for banks that deposit at the Fed. Banks will see the opportunity to profit by borrowing in the federal funds market (FFR at 100 bp) and depositing at the Fed (IORB rate at 125 bp). The increase in demand for funds in the federal funds market

will push the market-determined FFR higher until it nears 125 bp.

Now let's assume the federal funds market says banks can earn 150 bp by lending to another bank, and the Fed is still paying 125 bp (IORB rate) for banks to deposit their funds at the Fed. In this case, banks will withdraw funds from their interest on reserve balance accounts and lend them in the federal funds market to profit from the difference. The increase in the supply of funds in the federal funds market will pull the market-driven FFR down until it nears 125 bp.

So, these two economic concepts allow the Fed to be confident that the market-determined FFR will quickly adjust when it changes the IORB rate. Because the Fed sets the IORB rate directly, the Fed can steer the FFR down or up by lowering or raising the IORB rate, respectively.

4. Questions about Teaching the Ample Reserves Framework

The ample reserves regime is here to stay. In January 2019, the FOMC released a statement saying it would continue implementing policy with ample reserves in the long run.⁶ And, for those that teach AP courses, your students are now being tested on the basic concepts. Teaching this material may be a difficult task given that the National Voluntary Content Standard in Economics (Ihrig & Wolla, 2022a), textbooks (Ihrig & Wolla, 2022b), and many other teaching resources (Ihrig & Wolla, 2020b) still reflect the limited reserves regime. This newness and lack of resources has led to many questions about how to introduce the ample reserves regime into the classroom. Here we address several questions that have been posed by many instructors over the past year.

A. Question 1: Do I Need to Teach All the Tools?

When instructors taught the limited reserves implementation framework, they usually spent their time focused on the primary tool – open market operations – and briefly discussed the other tools as playing a supporting role.⁷ In the same way, when teaching the ample reserves regime, instructors should focus on teaching the Fed's primary tool for policy implementation, which is interest on reserve balances, and describe the other tools as playing a supporting role. From this perspective, the critical point for discussion is that the IORB rate is an administered rate, which means the Fed sets it directly. And because the rate is effective at steering the FFR (through the concepts of reservation rate and arbitrage), when the Fed moves the IORB rate, it moves the market-determined FFR. This is a simple and direct approach focusing on interest rates: the Fed raises or lowers its administered IORB rate, which raises or lowers the market-determined FFR. This should be a straightforward approach for instructors to teach and for students to learn.

B. Question 2: Do I Need to Teach Arbitrage?

Arbitrage is not usually covered in an introductory economics course and the topic seems intimidating for many instructors and their students. For introductory courses,

⁶See Board of Governors of the Federal Reserve System. "Statement Regarding Monetary Policy Implementation and Balance Sheet Normalization." Press release, January 30, 2019; <https://www.federalreserve.gov/newsevents/pressreleases/monetary20190130c.htm>.

⁷Often the banking chapter focused on reserve requirements and the money multiplier. With reserve requirements being inactive, the focus on the banking chapter should turn to banks making alternative investment decisions with their funds. See Teaching the Linkage Between Banks and the Fed: R.I.P. Money Multiplier, *Page One Economics*, 2021. <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/teaching-the-linkage-between-banks-and-the-fed>

we suggest that instructors keep arbitrage in their “back pocket.” Teaching that the Fed uses the IORB rate to steer the FFR into the target range should be the focus of introductory courses. Addressing arbitrage is essential for instructors when their students ask “why” – for example, students might wonder why a rate the Fed sets would affect a market-driven rate like the FFR. When answering this question, instructors might explain that the underlying reason the IORB rate is effective for influencing the FFR is that they are both short-term, riskless investment opportunities and that any difference between the two will provide market participants with an opportunity to arbitrage the difference. The arbitrage action moves the FFR (the market-driven rate) toward the IORB rate. These transactions will continue until the opportunity to profit becomes negligible.

C. Question 3: Is the Ample Reserves Approach Harder to Teach than Limited Reserves?

Many instructors have taught the limited reserves regime for years or decades, and it seems natural and intuitive. However, open market operations are a complex and abstract idea for students. This reflects, in part, the fact that the Fed’s action is focused on a quantity of reserves to influence an interest rate. Students were required to understand how the New York Fed Trading Desk’s buying and selling bonds in the open market affects the supply of reserves. And how adjusting the supply of reserves affects interest rates. While these details may seem like natural connections to instructors, they are often complex and abstract to introductory students.

On the other hand, the ample reserves regime is a much more direct method of implementing policy and should be easier for students to grasp. At its most basic level, the ample-reserves framework requires students to know more intuitive concepts associated with interest rates. The implementation is a direct one – the Fed adjusts the IORB rate (which the Fed sets directly) up or down, and this steers the FFR up or down. The level of the IORB rate is set so that the FFR ends up inside the FOMC’s target range. The Fed no longer has to regularly fine-tune the supply of reserves using open market operations to ensure the FFR remains in the target range.

D. Question 4: Isn’t Interest on Reserve Balances Just Another Tool Used to Influence the Money Supply?

The limited reserves regime relied on the open market trading desk at the New York Fed to buy and sell treasury securities (daily) to affect the supply of reserves and ensure the FFR was near the FOMC’s target. In this approach, managing the money supply (reserves) was the method through which the Fed implemented policy. The ample reserves regime relies on the Fed’s administered rates, key interest rates that the Fed sets, to steer the FFR into the FOMC’s target range. Notice that, in the ample reserves regime, the Fed uses its administered interest rates rather than the money supply to move the FFR into the target range. In fact, in the ample reserves regime, the Fed raises or lowers interest rates independent of decisions to increase or decrease the level of reserves in the banking system; rather, reserves remain ample through all policy cycles.

To be clear, raising or lowering the IORB rate does create incentives for banks to hold more (at higher rates) or less (at lower rates) reserves, but interest rates are the mechanism by which changes in the policy stance are transmitted to the broader economy.

E. Question 5 Why Aren’t Open Market Operations the Key Monetary Policy Tool?

The Fed’s current method for implementing monetary policy relies on banks’ reserves remaining ample. So, the Fed needs to monitor reserves to ensure they stay ample. When

outside factors drain reserves, the Fed will step in and buy U.S. government securities in the open market. But, with ample reserves, the Fed sets the level of reserve balances in a way that day-to-day fluctuations in the level do not move the FFR outside the target range. Therefore, open market operations are used only periodically.⁸ However, before 2008, in the limited reserves regime, open market operations were used daily as the Fed's primary monetary policy tool.⁹

F. Question 6: Should I Teach Both the Limited and Ample Reserves Regime?

Many instructors have asked whether they should continue to teach the limited reserves regime alongside the ample reserves regime. Our answer depends on whether your students are taking the AP macro exam (which, at this time, continues to test on the limited regime). Those who need to teach with the test in mind, need to present both regimes.¹⁰ Those who are not teaching the AP Macroeconomic curriculum should focus on teaching what the Fed is doing today and only teach the ample reserves regime.

5. Teaching in Context

The best way to teach the ample reserves regime is by putting it in context of how the Fed's actions affect the economy. We recommend framing the discussion under the umbrella of the FOMC setting the target range to ultimately influence employment and inflation. One can walk through examples of a shock to the economy, how the FOMC adjusts the target range, and what this does to market interest rates and consumer and producers' actions and economic activity. For example, suppose unemployment is low, but inflation is very elevated. In this case, the FOMC may conduct monetary policy to raise the target range for the FFR. The Fed would implement this policy by increasing the IORB rate. This would cause the federal funds and other market interest rates to increase. These tighter financial conditions would dampen consumer spending and business investment that reduce aggregate demand. Ultimately these actions should put downward pressure on inflation and labor demand.

This big-picture discussion of how the Fed works is much more valuable than the behind-the-scenes or "seeing how the sausage is made" discussion of all the Fed's tools, which is best left to a money and banking course. In fact, the policy tools are not highlighted in public documents because it is not essential for getting the key points of communication out to the public. After each FOMC meeting, the Committee communicates its policy decision (did it raise or lower the target range) in the FOMC press release, a document intended to provide policy transparency and information for constituents and markets. This statement does not mention the setting of the IORB rate or other policy tools. The Fed makes that information readily available in an implementation note, a separate document posted to a website along with the press release. Likewise, in the press conference, Chair Powell rarely mentions using the Fed's tools as he describes the stance of policy. Instead, he is focused on the setting of the target range for the FFR and how this stance of policy is aimed at moving the economy toward the mandated goals of maximum employment and price stability.

6. Conclusion

Monetary policy implementation has changed. Unfortunately, textbooks, curriculum, and classroom instruction about monetary policy haven't kept up. This paper provides an

⁸During times of severe stress, the Fed also uses open market operations for large-scale asset purchases. For more information see, "Temporary Open Market Operations and Large-Scale Asset Purchases," *Page One Economics*, 2020. <https://research.stlouisfed.org/publications/page1-econ/2020/07/01/temporary-open-market-operations-and-large-scale-asset-purchases>

⁹The College Board, 2022 Updates to the AP Macroeconomics Course and Exam. <https://academicmerit.wistia.com/medias/t6ufvc0fdi>

overview of the changes and discussed key teaching strategies. It also provides a simple interactive teaching activity for the classroom. This activity discusses the setting of monetary policy in two stages: the FOMC setting of the stance of monetary policy by setting the target range for the FFR, and then the Fed using interest on reserve balances (the primary tool) and the associated IORB rate, to guide the FFR into the target range. The activity also discusses how the FFR transmits to other interest rates, the decisions of individuals and businesses, and how that affects the economy.

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Interactive Teaching Activity

We've provided a relatively quick and easy hands-on activity to reinforce the classroom discussion of how and why the FOMC responds to economic shocks.

1. Produce eight monetary policy cards by printing the following words/phrases on individual 8.5x11" sheets of paper:
 - FOMC Conducts MP: Federal Funds Rate Target Range
 - Fed Implements MP: IORB Rate
 - Market Interest Rates
 - Consumer Spending
 - Business Investment
 - Aggregate Demand
 - Inflation
 - Employment.
2. Ask for eight student volunteers. Randomly hand out the 8 cards to students while they are still sitting. Ask the student holding the "FOMC Conducts MP: Federal Funds Rate Target Range" card to stand on the left side of the front of the room. Ask the students with the "Inflation" and "Employment" cards to stand on the right side at the front of the classroom.
3. Ask the students how the Fed setting the FFR target range affects inflation and employment. (*Answers will vary. Take any answer without clarification at this point.*).
4. Tell the students that the Fed uses its monetary policy tools, which affect financial conditions and the decisions of consumers and businesses. These actions move the economy toward price stability and maximum employment.
5. Ask the other students with cards to arrange themselves in a way that reflects how Fed policy transmits to the broader economy and promotes the Fed's dual mandate goals. Tell students in the audience that they can help the students align themselves correctly. Check to make sure the order from left to right is:
 - FOMC Conducts MP: Federal Funds Rate Target Range
 - Fed Implements MP: IORB Rate
 - Market Interest Rates
 - Consumer Spending
 - Business Investment
 - Aggregate Demand
 - Employment

- Inflation.

6. Take some time to summarize the concepts captured on each card using the information below. When each card is called, ask the student to step forward and hold their card high.

Card 1: FOMC Conducts MP: Federal Funds Rate Target Range

Explain that the FOMC sets a target range for the FFR, the Fed's policy rate, which is the range where it wants the federal funds transactions to take place.

Card 2: Fed Implements MP: IORB Rate

Explain that the IORB rate steers the FFR into the FOMC's target range. When the FOMC raises or lowers the target range for the FFR, the Fed raises or lowers the IORB rate, which moves the FFR into the new target range.

Card 3: Market Interest Rates

Explain that market interest rates include interest rates on car loans, home loans, student loans, and credit cards. Higher or lower interest rates change the savings rate and the cost of borrowing money, which discourages or encourages consumer spending and business investment.

Card 4: Consumer Spending

Explain that consumption spending, which is spending by households, includes spending on goods such as new cars and hamburgers, and services such as haircuts and visits to the dentist. Higher spending results in more production and higher employment. Less spending decreases inflationary pressures.

Card 5: Business Investment

Explain that business investment is spending by businesses on machinery, factories, equipment, tools, and construction of new buildings. Higher spending results in more production and higher employment. Less spending decreases inflationary pressures.

Card 6: Aggregate Demand

Explain that aggregate demand is the amount of real output (gross domestic product [GDP]) that buyers collectively desire to purchase at each possible price level. Aggregate demand increases when total spending in the economy increases. An increase in aggregate demand increases price level (inflation) and increases real GDP (economic output), which generally creates employment opportunities for workers. Aggregate demand decreases when total spending in the economy decreases. A decrease in aggregate demand decreases price level (inflation) and decreases real GDP (economic output), resulting in fewer employment opportunities for workers.

Card 7: Employment

Explain that people with jobs are employed. The Federal Reserve has a mandate for maximum employment. Maximum employment 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

employment.

Card 8: Inflation

Explain that the Federal Reserve has a mandate for price stability. Price stability means 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.

7. Explain that each of these steps are linked and how some variables affect others downstream.

Scenario 1

Start each scenario with all students holding the cards on a level plane.

Write, or provide on a slide, "Headline: Inflation is high and rising" and explain that inflation has been above the Fed's 2 percent target for a considerable time. And inflation is increasing. The unemployment rate is very low. One can note that this is the exact conditions the Fed faced in early 2022.

Ask the student holding the inflation card to raise it above the rest to show that inflation is high.

Ask the students, "how can the Fed use its monetary policy tools to achieve maximum employment and price stability?"

- Ask the students what economic problem should be addressed? Students should answer that inflation is high, much higher than the Fed's 2 percent average inflation target.
- Ask students in the audience how the FOMC should conduct monetary policy to address the problem. Students should suggest that FOMC should raise the target range for the FFR. The student holding the FOMC card should hold it higher.
- Ask students how the Fed should adjust the IORB rate based on the FOMC decision. Students should suggest that the Fed raise the IORB rate to move the FFR into the target range. The student holding the IORB rate card should hold it higher.
- Ask students how the change in the FFR affects other interest rates. Students should suggest that a higher FFR pushes other interest rates higher as well. If students struggle with this idea, explain the roles of reservation rate and/or arbitrage. The student holding the market interest rates card should hold it higher.
- Ask students how higher interest rates will affect the decisions of consumers. Students should suggest that consumers will respond to higher interest rates by borrowing less. This will dampen demand for goods and services. In the saving vs. spending tradeoff, higher interest rates decrease the incentive to borrow and increase the incentive to save. The student holding the consumer spending card should hold it lower.
- Ask students how higher interest rates will affect the decisions of businesses. Students should suggest that businesses will reduce their investment in capital. As businesses consider future investments, higher borrowing costs will make some opportunities unprofitable. The student holding the business investment card should hold it lower.

- Ask students how these actions will affect aggregate demand. Students should reply that the decrease in spending by consumers and businesses will reduce aggregate demand.
- Ask students how the change in aggregate demand will affect inflation. The decrease in spending by consumers and businesses will reduce inflationary pressures. The student holding the inflation card should lower it back to the original level – showing that inflation has returned to its intended level – price stability.
- Ask students how the change in aggregate demand will affect employment. The decrease in spending by consumers and businesses will reduce the rate of job growth or reduce employment overall. If the Fed achieves a “soft landing,” employment will remain near its maximum level. The student holding the employment card should hold it steady or just a little lower.
- Ask the students, did the policy enacted by the FOMC move the economy back toward price stability and maximum employment? (Yes, the higher target and higher IORB rate transmit through the economy and result in lower inflation.)

Scenario 2

Write, or provide on a slide, “Headline: The economy is slowing and employment is falling.” Explain that employment is falling below maximum employment. The inflation rate is steady around or slightly below 2 percent but is showing signs of decreasing.

Direct the student holding the employment sign to lower it.

Ask the students, “How can the Fed use its monetary policy tools to achieve maximum employment and price stability?”

Then guide the students through the following discussion.

- Ask the students what economic problem should be addressed? Students should answer that employment is low; it has fallen below “maximum employment.”
- Ask students in the audience how the FOMC should conduct monetary policy to address the problem. Students should suggest that FOMC should lower the target range for the FFR. The student holding the FOMC card should lower it.
- Ask students how the Fed should adjust the IORB rate based on the FOMC decision. Students should suggest that the Fed lower the IORB rate to move the FFR into the target range. The student holding the IORB rate card should lower it.
- Ask students how the change in the FFR affects other interest rates. Students should suggest that a lower FFR pulls other interest rates down as well. If students struggle with this idea, explain the role of arbitrage. The student holding the market interest rates card should lower it.
- Ask students how lower interest rates will affect the decisions of consumers. Students should suggest that consumers will respond to lower interest rates by borrowing more. This will increase the demand for goods and services. In the saving vs. spending tradeoff, lower interest rates increase the incentive to borrow and decrease the incentive to save. The student holding the consumer spending card should raise it.
- Ask students how lower interest rates will affect the decisions of businesses.

Students should suggest that businesses will increase their investment in capital. As businesses consider future investment, lower borrowing costs will make more investment opportunities profitable. The student holding the business investment card should raise it.

- Ask the students how these actions will affect aggregate demand. Students should note that the increase in spending by consumers and businesses will increase aggregate demand. The student holding the aggregate demand card should raise it.
- Ask students how the change in aggregate demand will affect inflation. Inflation had shown signs of decreasing. The increase in spending by consumers and businesses will increase inflationary pressures. The student holding the inflation card should hold it steady or raise it just a bit.
- Ask students how the change in aggregate demand will affect employment. The increase in spending by consumers and businesses will increase the rate of job growth or increase employment all overall. The student holding the employment card should lower it back to the original level – showing that employment has returned to its intended level – maximum employment.
- Will the policy enacted by the FOMC move the economy back toward price stability and maximum employment? (Yes, the lower target and lower IORB rate transmits through the economy and results in higher employment.)

Conclude the activity by summarizing the key points.

- The Federal Reserve has a Congressional mandate to promote maximum employment and price stability in the economy.
- The FOMC conducts monetary policy by setting a target range for the FFR.
- The Fed uses interest on reserve balances as its primary tool for steering the FFR into the target range.
- The higher FFR affects market interest rates, affecting borrowing costs for consumers and businesses.
- Changes in consumer spending and business investment affect aggregate demand.
- Changes in aggregate spending/demand affect employment and inflation.