## Instructor Instructions

We will be working in pairs today on an activity that will help you better understand real and nominal interest rates, the role of the Federal Funds rate in impacting economic activity, the role of inflation expectations, and the importance of Federal Reserve transparency.

In each pair of students there will be a lender (bank) and a borrower (consumer of firm). You will remain with the same partner for the duration of the activity, but you might choose to trade off who the borrower is and who the lender is. The loan amount is always $10,000 and the term is 1 year. We assume simple interest.

Each pair of students will receive a worksheet and an instruction sheet. You will need to turn in the completed worksheet at the end of class today. Be sure to put both partners’ name on the top.

This activity is broken up into 3 rounds. Be sure to listen closely as the background information will change for each round.

I have in the front of the room a representative market basket of goods. This market basket includes some housing, transportation, food, energy, telecommunications, entertainment, health care, etc. Each market basket has a cost of $10,000.

I will now hand out the worksheets and the instruction sheets. Please put your names on the worksheet and read through the instruction sheet.

Are there any questions? If you haven’t already done so, determine who the lender (bank) is and who the borrower is.

## Round 1

(Write “Round 1” on the board)

In Round 1 borrowers take out simple short-term loans of $10,000 from the bank. I will now distribute a black card to each team. The number on the card is nominal interest rate for the loan. Please enter this rate into your worksheet and determine the payback amount for the loan.

I will now roll the die and announce the rate of inflation over this period. The rate of inflation is \_\_\_\_. Please enter this information into your table and compute the cost of the market basket at the end of the period. With your partner, determine whether the lender can purchase this market basket at the end of the period with the money she is paid back.

Please turn in your black cards and get ready for another period of lending.

(Repeat this process 2 more times)

Now that we have 3 periods of borrowing completed, I’d like you to talk about the discussion questions on your student worksheet. Please make groups of 4 to discuss these questions. While you discuss I will collect your black cards.

**Discussion**: Ask students to share their experiences. You should hear a variety of outcomes. Why is it important for borrowers and lenders to know the current rate of inflation? Does it make sense that nominal interest rates would include a “cushion” to cover inflation over the life of the loan? Who wins and who loses with inflation? Explain.

## Round 2:

(Write “Round 2” on the board.)

We are now starting Round 2 of this activity. I am going to start by announcing a Federal Funds rate. The Federal Funds rate can be thought of as the opportunity cost for lending to a borrower instead of lending overnight to another bank.

The Federal Funds rate is 1%. Please enter this into the space provided.

I will now distribute a black card to each team. Recall that the number on this card is the nominal interest rate on a principle amount of $10,000. Enter this number into the space provided.

With your partner, determine whether or not the bank will make a loan to the borrower at this nominal interest rate.

(On the board, start a table that shows the Federal Funds rate in one column and the number of teams making a loan in another column)

By show of hands, raise your hand if your team made a loan. (Count the number of teams and enter this information into the table on the board)

Suppose that the Federal Funds rate was 3% instead of 1%. Raise your hand if your team will still make a loan (enter this information into the table on the board. Continue in this fashion until the message sinks in; the higher the Federal Funds rate, the less lending and economic activity. You may also want to explore the likely outcome on nominal interest rates (here, we are keeping them fixed)).

With your partner, answer the discussion questions associated with Round 2. While you discuss I will collect the black cards.

**Discussion**: At this Federal Funds rate, did the loan get made or not? Explain. Discuss the likely impact on overall lending and economic activity when the Federal Funds Rate is lowered/raised

## Round 3:

(Write “Round 3” on the board. Also, write “Each lender would like an expected real return of 2%”).

If you have not yet traded roles, you can do so now.

In this round, all lenders would like to receive a real interest of 2%. Please enter that information into your table for Round 3.

I will now distribute a red card to each student. The number of this card is your best prediction of inflation, or the expected rate of inflation.

Enter this information into your table and compute the nominal interest rate as well as the borrower payback amount.

You’ve made your loan and we are now at the end of the loan period. I will now roll the die to reveal the actual rate of inflation over this period. The rate of inflation is \_\_\_\_\_.

Please enter this information into your table, determine the cost of the market basket as well as the actual real interest rate, and with your partner figure out if the lender has earned enough to buy the market basket.

I will now collect the red cards as you prepare for the next period of lending.

(Repeat this 2 more times, always keeping an expected real interest rate of 2%)

**Discussion**: Ask students to share their experiences. Discuss the consequences of not correctly predicting the inflation rate. Why is it important for borrowers and lenders to try to figure out what prices will do over the life of the loan, i.e. to form expectations about inflation? What information could they use to form these expectations? Given this exercise, comment on the role of the Federal Reserve in inflation expectations.