Webcast Wednesday, February 20
Thought-experiment Thursday, February 21

- Warm up: Create an index card on Monetary Policy.
- *Learning target: I can define the Federal Funds Rate; I can practice Unit 4 multiple-choice and FRQs regarding monetary policy and the money multiplier.*

- **Look for new HW to be posted on Edmodo today (Wednesday)**

Tutorial is today!
There are busses!

Unit 3 Test Corrections!

A. With your neighbors beside and in front/behind you, review the test questions that you missed. You have three goals during this activity, and **you should make some kind of note to yourself about each question that you missed:**

1. Recognize test-taking mistakes that you made--e.g., were you not reading carefully?
2. Look for patterns in the questions that you missed--e.g. Did you miss a lot of questions on the spending multiplier or on fiscal policy?
3. Talk to your neighbors about content--can they help you understand a concept that you missed on the test?

B. **At home on your own time, complete the test correction sheet for each question that you missed.**

Video: Open Market Operations

Money multiplier with deposits

When using multiplier on deposits, you only use the amount of excess reserves in the initial deposit.

Amount of <u>excess reserves</u> from initial deposit X money multiplier = Total money created

E.g., an initial deposit of $1,000 with a RR of .10. Money multiplier is 10, excess reserves are $900, so total money created:

10 X $900 = $9,000

Money multiplier with OMOs

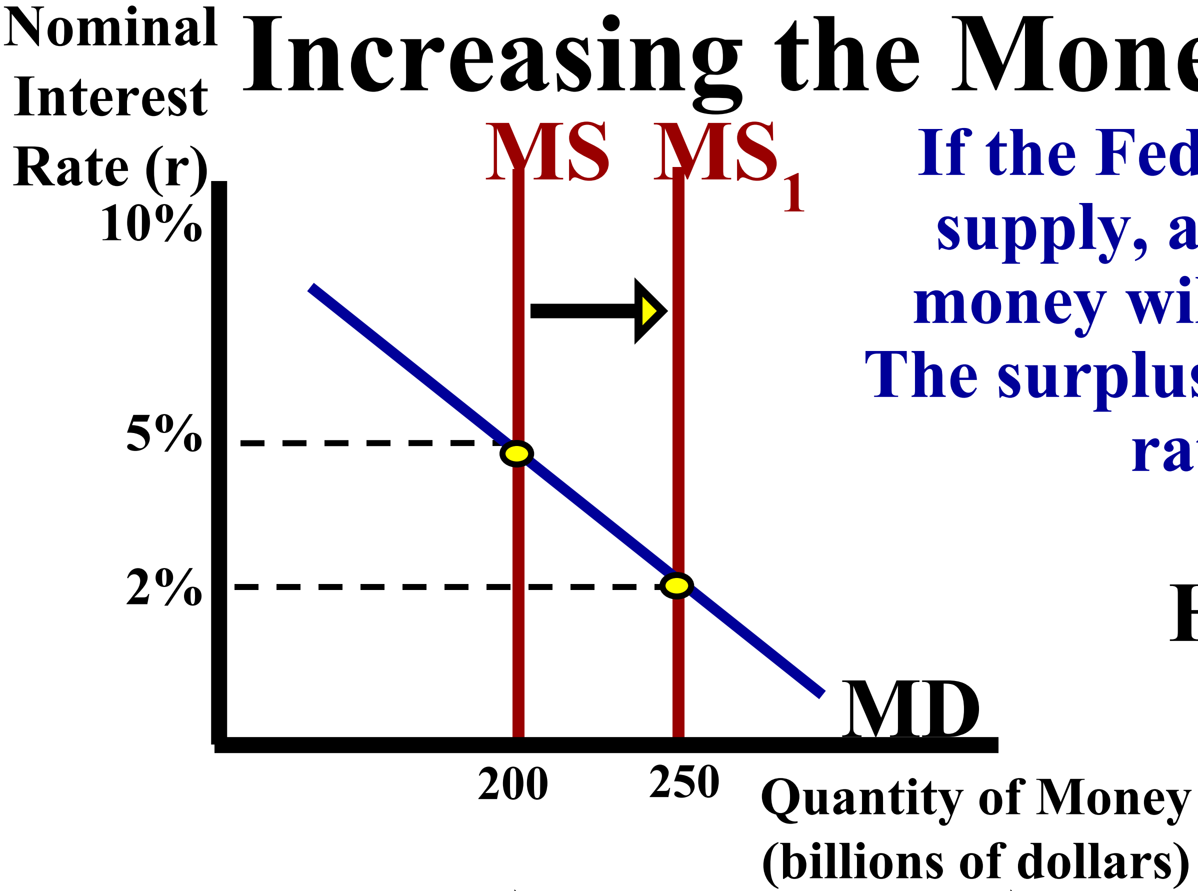
When using multiplier on open market operations (either purchases or sales of bonds), you only use the entire amount of the OMO.

Amount of <u>bonds bought or sold</u> X money multiplier = Total money created

E.g., an OMO bond purchase of $1,000 with a RR of .10:

$1,000 X 10 = $10,000 total money created

Increasing the Money Supply

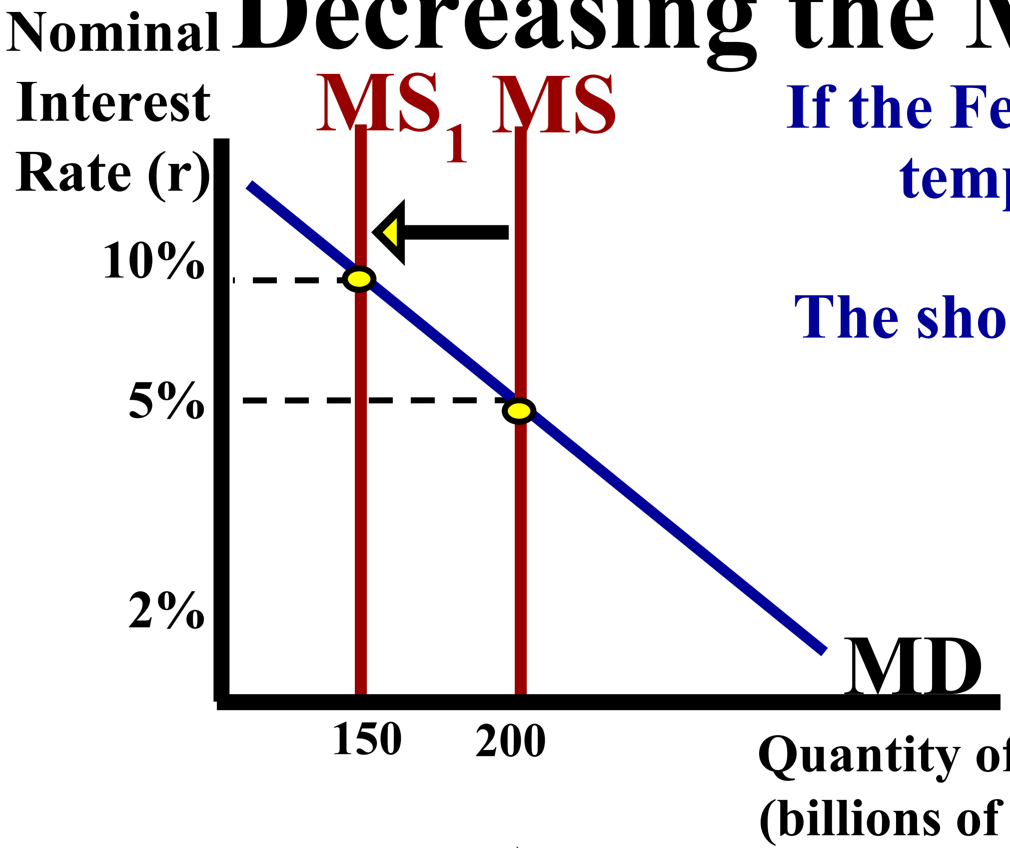


If the Fed increases the money supply, a temporary surplus of money will occur at 5% interest. The surplus will cause the interest rate to fall to 2%.

How does this affect AD?

Increase money supply → Decreases interest rate → Increases investment → Increases AD

Decreasing the Money Supply



If the Fed decreases the money supply, a temporary shortage of money will occur at 5% interest.
The shortage will cause the interest rate to rise to 10%.

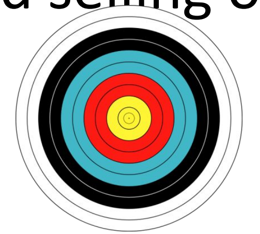
How does this affect AD?

Decrease money supply → Increase interest rate → Decrease investment → Decrease AD

Federal Funds Rate

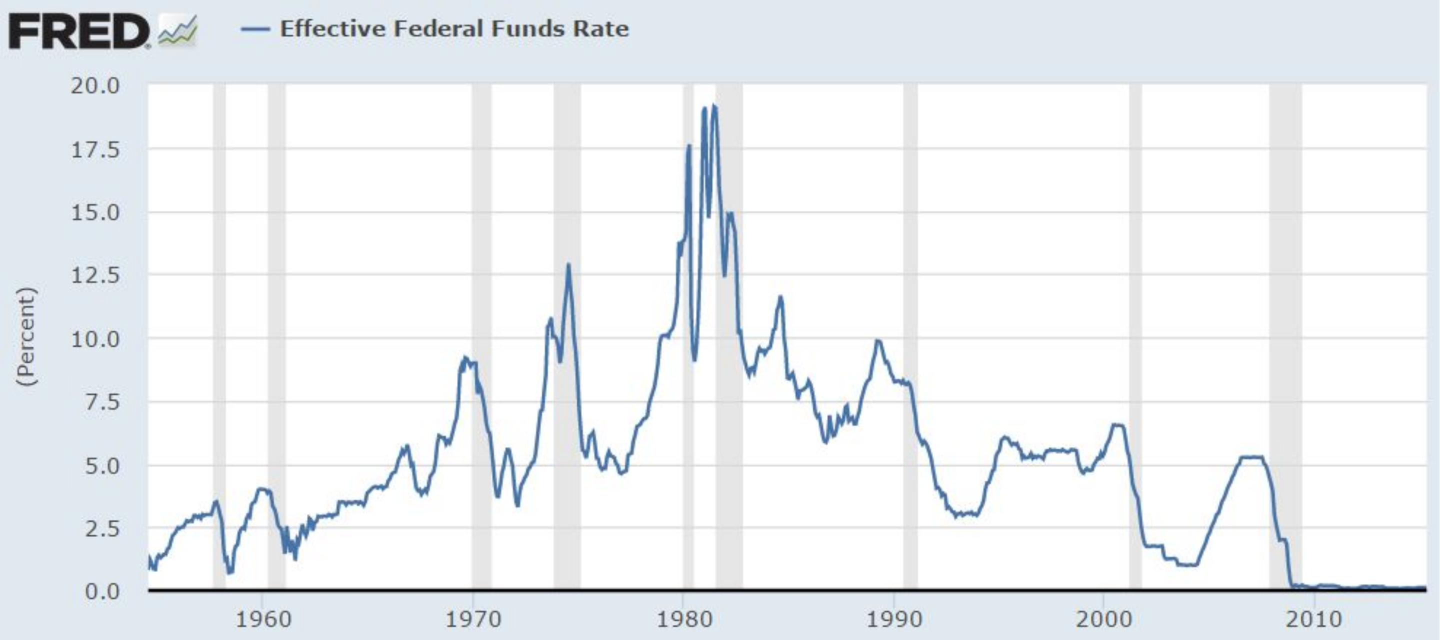
The <u>Federal funds rate</u> is the interest rate that banks charge one another for one-day loans of reserves.

- The Fed can’t dictate what interest rates banks charge their customers. Instead, banks set rates on their own.
- The Fed influences market interest rates by setting a target Fed Funds rate and using OMO to hit the target.
- Banks use the Fed Funds rate to base all other short-term interest rates.
- The Federal Funds rate fluctuates due to market conditions, but it is heavily influenced by monetary policy (buying and selling of bonds).



ENGAGEMENT

Federal Funds Rate



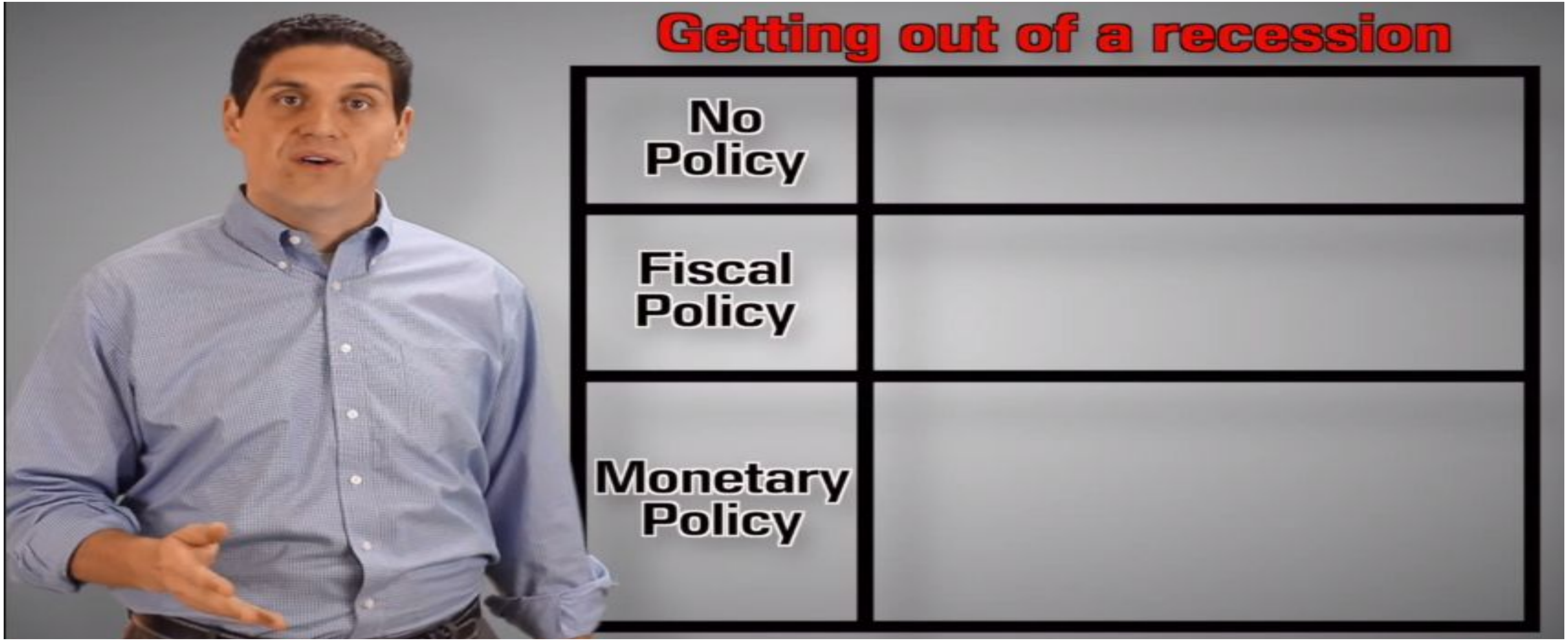
Explain the cause for the differences between the year 1979 and the year 2007.

Freedom Friday, February 22
Mashed-up Monday, February 25

- Warm up: Create two index cards: one on expansionary monetary policy and one on contractionary monetary policy. **AND text your adult units about registering for the AP Macro test!**
- *Learning target: I can practice Unit 4 multiple-choice and FRQs regarding monetary policy and the money multiplier.*
- **Fun Set 4.3 due NOW!**
- **Look for new HW to be posted on Edmodo at some freakin' point . . .**


DESPICABLE
ME
UNITED STATES
RESERVE
AC/DC

Putting It All Together



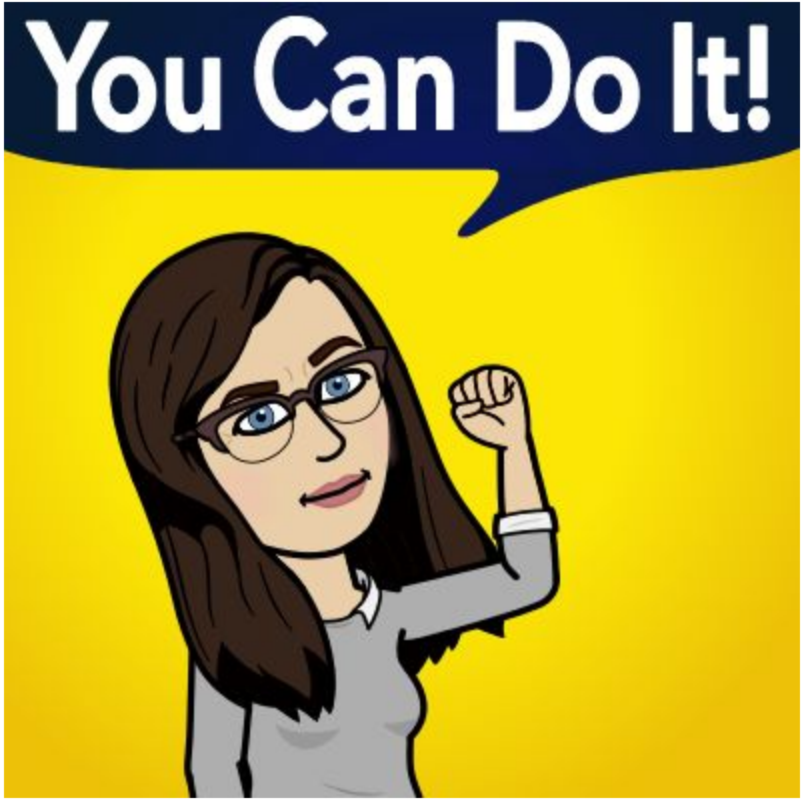
TIME TO PRACTICE

Practice

Don’t forget the Monetary Multiplier!!!!

1. If the reserve requirement is .5 and the Fed <u>sells</u> $10 million of bonds, what will happen to the money supply?
2. If the reserve requirement is .1 and the Fed <u>buys</u> $10 million bonds, what will happen to the money supply?
3. If the Fed decreases the reserve requirement from .50 to .20 what will happen to the money multiplier?

Fun Set 4.3!!



2008 Audit Exam

12. Which of the following is most likely to occur if the Federal Reserve engages in open market operations to reduce inflation?

(A) A decrease in interest rates
(B) A decrease in reserves in the banking system
(C) A decrease in the government deficit
(D) An increase in the money supply
(E) An increase in exports

13. Which Federal Reserve action can shift the aggregate demand curve to the left?

(A) Lowering the federal funds rate
(B) Lowering income taxes
(C) Lowering reserve requirements
(D) Raising the discount rate
(E) Raising government spending on national defense

2008 Audit Exam

18. Which of the following sequences of events would occur if the Federal Reserve implemented contractionary monetary policy?

(A) Interest rates increase, investment and consumption spending decrease, aggregate demand decreases, and output and prices decrease.

(B) Interest rates increase, investment and consumption spending decrease, aggregate demand increases, and output and prices decrease.

(C) Interest rates increase, investment and consumption spending increase, aggregate demand decreases, and output and prices decrease.

(D) Interest rates decrease, investment and consumption spending decrease, aggregate demand decreases, and output and prices decrease.

(E) Interest rates decrease, investment and consumption spending decrease, aggregate demand decreases, and output and prices increase.

39. When an economy is operating below the full-employment level of output, an appropriate monetary policy would be to increase which of the following?

(A) The discount rate
(B) The required reserve ratio
(C) The international value of the dollar
(D) Open market purchases of government bonds
(E) Government expenditure on goods and services

45. The Federal Reserve decreases the federal funds rate by

(A) decreasing the reserve requirement
(B) decreasing the discount rate
(C) increasing the discount rate
(D) selling government bonds on the open market
(E) buying government bonds on the open market

54. Suppose that all banks keep only the minimum reserves required by law and that there are no currency drains. The legal reserve requirement is 10 percent. If Maggie deposits the $100 bill she received as a graduation gift from her grandmother into her checking account, the maximum increase in the total money supply will be

(A) $10
(B) $100
(C) $900
(D) $1,000
(E) $1,100

16. Which of the following will lead to a decrease in a nation's money supply?

(A) A decrease in income tax rates
(B) A decrease in the discount rate
(C) An open market purchase of government securities by the central bank
(D) An increase in reserve requirements
(E) An increase in government expenditures on goods and services

2012 Audit Exam

23. In the short run, an expansionary monetary policy would most likely result in which of the following changes in the price level and real gross domestic product (GDP) ?

	Price Level	Real GDP
(A)	Decrease	Increase
(B)	No change	Decrease
(C)	Increase	No change
(D)	Increase	Decrease
(E)	Increase	Increase

2012 Audit Exam

29. If a country's economy is operating below the full-employment level of output at a very low inflation rate, the central bank of the country is most likely to

(A) pursue an expansionary monetary policy because it is required to do so by law whenever output is below the full-employment level

(B) pursue an expansionary fiscal policy because it is required to do so by law whenever output is below the full-employment level

(C) lower the discount rate and buy bonds on the open market to generate an increase in output

(D) lower the required reserve ratio and sell bonds on the open market to generate an increase in output

(E) raise the discount rate and lower the required reserve ratio to generate an increase in output

43. In the short run, which of the following would occur to bond prices and interest rates if a central bank bought bonds through open-market operations?

	Bond Prices	Interest Rates
(A)	No change	Increase
(B)	Increase	Increase
(C)	Increase	Decrease
(D)	Decrease	Increase
(E)	Decrease	Decrease

46. Assume that the required reserve ratio is 10 percent, banks keep no excess reserves, and borrowers deposit all loans made by banks. Suppose you have saved $100 in cash at home and decide to deposit it in your checking account. As a result of your deposit, the money supply can increase by a maximum of

(A) $800
(B) $900
(C) $1,000
(D) $1,100
(E) $1,200

57. For which of the following sets of unemployment and inflation rates will a central bank be most reluctant to increase the rate of growth in the money supply?

	Unemployment Rate	Inflation Rate
(A)	10%	2%
(B)	10%	5%
(C)	10%	10%
(D)	5%	5%
(E)	5%	10%

If the reserve requirement is 25 percent and banks hold no excess reserves, an open market sale of $400,000 of government securities by the Federal Reserve will

(A) increase the money supply by up to $1.6 million
(B) decrease the money supply by up to $1.6 million
(C) increase the money supply by up to $300,000
(D) increase the money supply by up to $100,000
(E) decrease the money supply by up to $100,000

To counteract a recession, the Federal Reserve should

(A) raise the reserve requirement and the discount rate
(B) sell securities on the open market and raise the discount rate
(C) sell securities on the open market and lower the discount rate
(D) buy securities on the open market and raise the discount rate
(E) buy securities on the open market and lower the discount rate

The purchase of bonds by the Federal Reserve will have the greatest effect on real gross domestic product if which of the following situations exists in the economy?

(A) The required reserve ratio is high, and the interest rate has a large effect on investment spending.

(B) The required reserve ratio is high, and the interest rate has a small effect on investment spending.

(C) The required reserve ratio is low, and the interest rate has a large effect on investment spending.

(D) The required reserve ratio is low, and the marginal propensity to consume is low.

(E) The marginal propensity to consume is high, and the interest rate has a small effect on investment spending.