How Monetary Policy Works

Final Exam Facts

How is the Federal Reserve Structured?
What are the goals of U.S. monetary policy?
What are the tools of U.S. monetary policy?
Why does changing the Fed Funds rate affect the economy?

What Have We Learned?

Final Exam Facts

Final Exam is December 18, noon-3:00 PM
Only the college can excuse an absence from the final exam.
Those with excuses must present them to me by the end of the semester.
The only makeup exam is December 19, 9:00 AM.
Practice Questions for the Final will be posted on or before December 9.

Aggregate Demand and Potential Output

\[ Y = C + I + G + NX \]

Inflation and Unemployment Zones

Low Inflation Risk
Low Unemployment
High Inflation Risk
High Unemployment
If a recession takes the economy to E and there is not another shift in AD, the Fed can return the economy to full employment without inflation by lowering the real rate to $r_1$.

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Which of the following best explains why lowering the interest rate will raise the equilibrium level of output? A lower interest rate will ______

A. Raise the level of potential output.
B. Cause consumers to increase household saving.
C. Cause firms to increase capital building.
D. Raise the level of imports.

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If the Fed lowers the interest rate to $r_1$ and there is a positive demand shock, the economy will end up in the inflation zone.
If the Fed lowers the interest rate to $r_1$ and there is a positive demand shock, the economy will end up in the inflation zone.

How is the Federal Reserve Structured?

The Federal Reserve is the U.S. Central Bank.
The Fed was established in 1913.
The Fed consists of the Board of Governors in Washington and twelve Federal Reserve District Banks.
Chapel Hill is served by the Richmond Regional Fed and its branch in Charlotte.

The Fed is Largely Independent of Political Control

The Seven Fed Governors are appointed by the President and confirmed by the Senate.
Appointments are for 14 years.
Appointments are staggered.
The Fed is financially self-sufficient.

Why is it important that the Fed be independent of political control?
The Politics of Central Banking

Europe Hints That It May Raise Rates

By MARK L. STEELE

FRANKFURT, Feb. 2 — The European Central Bank laid the groundwork for a rate increase next month, its second in five years, saying that Europe was continuing to grow and that inflation remained a threat.

The central bank raised its key interest rate to 2.25 percent at its meeting Thursday, but its president, Jean-Claude Trichet, said at a news conference that the bank would “exercise vigilance” in monitoring prices — a code phrase for an imminent tightening of monetary policy.

Independence Allows the Fed To
Pursue Its Inflation Objectives Even
When Doing So Is Politically Unpopular

The Fed may believe that it must raise interest rates to assure that the inflation rate does not begin to increase.

Higher interest rates will cause an economic slowdown.

Politicians may fear that the electorate will blame them for loss in jobs and profits.
The data on central bank independence show a _____ correlation between central bank independence and ______.

A. Positive, the rate of inflation.
B. Negative, the rate of inflation.
C. Positive, unemployment.
D. Negative, unemployment

Federal Open Market Committee

Monetary policy is conducted by the Federal Open Market Committee.
FOMC has twelve members:
  Seven Governors
  President of the New York Regional Bank
  Four of Twelve Other Regional Presidents
Congress does mandate regular reports by the Fed.
The goals of US monetary policy

Two Part Mandate:
Promote “maximum” sustainable output and employment.
Promote “stable” prices.
The goals are prescribed in a 1977 amendment to the Federal Reserve Act.

To promote maximum sustainable output means keeping real GDP on its long run growth path.

To promote stable prices means keeping the inflation rate low and steady.

The Two Goals Are in Conflict
Currently, the Federal Reserve resolves the conflict by treating...
“stable prices” as he primary goal of monetary policy and
“maximum sustainable output” as a secondary goal to be pursued only when the primary goal is very likely to be met.
If the Fed keep interest rates low to make sure output growth is as high as possible, the economy can end up in the inflation zone.

If the Fed keep interest rates high to make sure inflation does not occur, the economy can end up with rising unemployment.

The Tools of Monetary Policy

Banks are required to keep a certain amount of funds in reserve to meet unexpected outflows.
Banks may hold reserves either as cash in their vaults or as deposits at the Fed.

### Commercial Bank Balance Sheet

**Commercial Bank Balance Sheet (August, 2006)**

<table>
<thead>
<tr>
<th></th>
<th>Billions of Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
</tr>
<tr>
<td>Bank Credit</td>
<td>$8,034</td>
</tr>
<tr>
<td>Cash</td>
<td>$299</td>
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<tr>
<td>Other</td>
<td>$1,012</td>
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<tr>
<td>Total</td>
<td><strong>$9,345</strong></td>
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<td><strong>Liabilities</strong></td>
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<tr>
<td>Deposits</td>
<td>$6,038</td>
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<tr>
<td>Borrowings</td>
<td>$1,808</td>
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<tr>
<td>Other</td>
<td>$693</td>
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<tr>
<td>Total</td>
<td><strong>$8,539</strong></td>
</tr>
<tr>
<td>Capital</td>
<td>806</td>
</tr>
</tbody>
</table>
The Federal Funds Market

Banks that have less reserves than required can borrow them from banks that have more than required.

Banks borrow and lend reserves in the Federal Funds market.

The interest rate charged by a lending bank for a loan of reserves is called the Federal Funds rate.

The Fed Controls the Supply of Federal Funds

When the Fed wants to lower the federal funds rate it buys government bonds and increases the supply of federal funds.

When the Fed wants to raise the federal funds rate it sells government bonds and decreases the supply of federal funds.

Raising the Federal Funds Rate

To raise the Federal Funds Rate, the Fed sells government bonds and lowers the supply of reserves.

Fed Funds Rate

Fed Funds
**Lowering the Federal Funds Rate**

To Lower the Federal Funds Rate
The Fed Buys Government Bonds and raises the Supply of Reserves

**How does the Fed Increase The Supply of Bank Reserves?**

The Fed Buys Government Bonds.
It pays for the bonds with a check drawn on itself.
The seller of the bond deposits the check in a bank.
The bank presents the check to the Fed for payment.
The Fed honors the check by increasing the banks reserve balance.

**Use Your Clickers to Answer the Following Graded Question.**

Between July, 2004 and June, 2006, the Fed decided to act in a way that would reduce the risk of inflation. What did it do during this period? The Fed _______ government bonds and _______ the Federal Funds Rate.

A. Bought, Increased
B. Sold, Increased
C. Bought, Decreased
D. Sold, Decreased
Why does changing the Federal Funds rate change the desired level of spending in the economy?

When the Fed lowers the federal funds rate, other interest rates tend to fall as well. When the Fed raises the federal funds rate, other interest rates tend to rise as well. But the correlation between the Fed funds rate and some rates is less than perfect.

How Monetary Policy Works

The Fed is made up of a Board of Governors, Regional Banks, and a Federal Open Market Committee. The goals of monetary policy are low and stable inflation and full employment. Normally, monetary policy amounts to changes in the Federal Funds rate. Normally, other interest rates move together with the Federal Funds rate.

What Have We Learned?