



The Other Side of the Coin **... the FRS impact upon interest rates**

© 2011 Gary R. Evans. May be used only for non-profit educational purposes only without permission of the author.

Key Interest Rate Definitions

(see handout!)



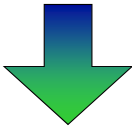
- ✓ Federal Funds Rate
- ✓ Discount Rate
- ✓ U.S. Treasury Securities Rates
- ✓ Prime Rate
- ✓ Corporate Securities Rates
- ✓ Municipal Note and Bond Rates
- ✓ Mortgage Rates

answer ... The Federal Funds Market

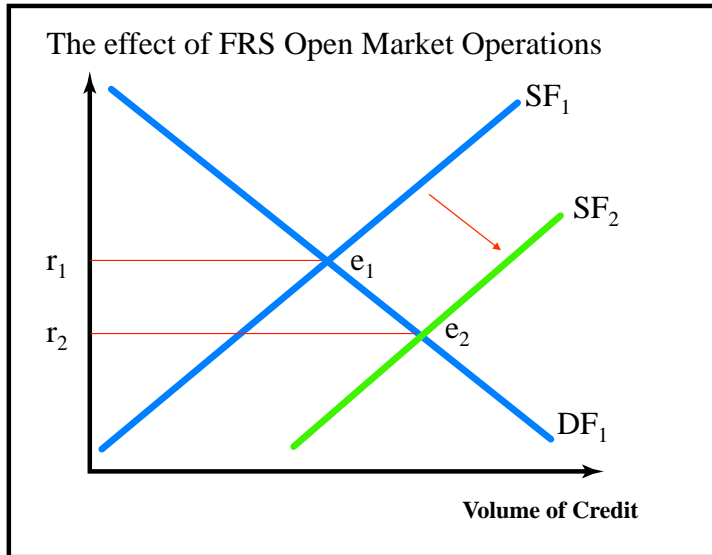
- At the end of the day
 - some banks have excess reserves
 - some banks with heavy lending have shortages
- In the Federal Funds Market
 - reserves are lent "overnight" (short maturity)
 - the interest charged is the **Federal Funds Rate** (always expressed as an annual rate)

The important effect? This keeps the system running tight.

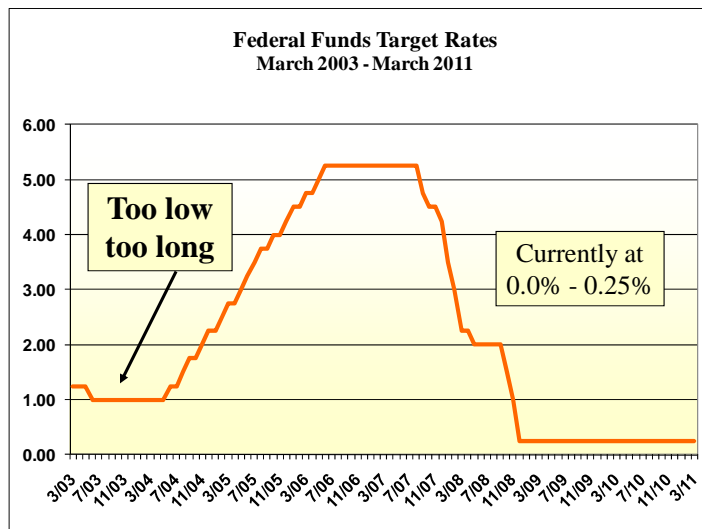
Net Effect of Open Market Operations

-  1. **Increases Reserves**
-  2. **Increases Lending (Money and Credit)**
-  3. **Decreases Interest Rates**

Loanable Funds – Case 2

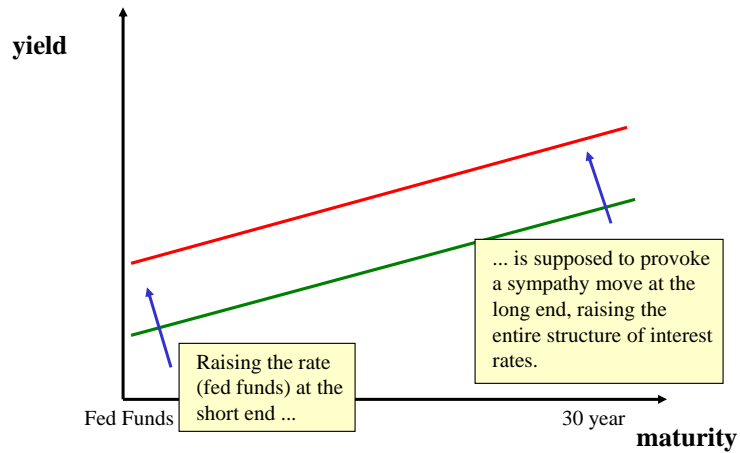


The FRS Target Rate

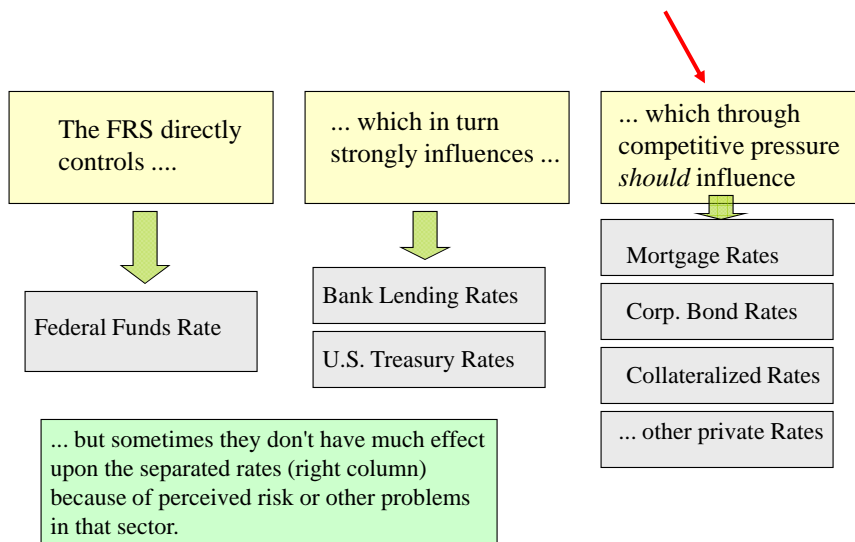


... a general tightening after June 30, 2003, to forestall inflation and curb low interest speculation, then a severe reduction beginning September 2007 to curb effects of the credit crunch.

How OMOs *should* affect all rates ...



... but the influence may not be felt here.

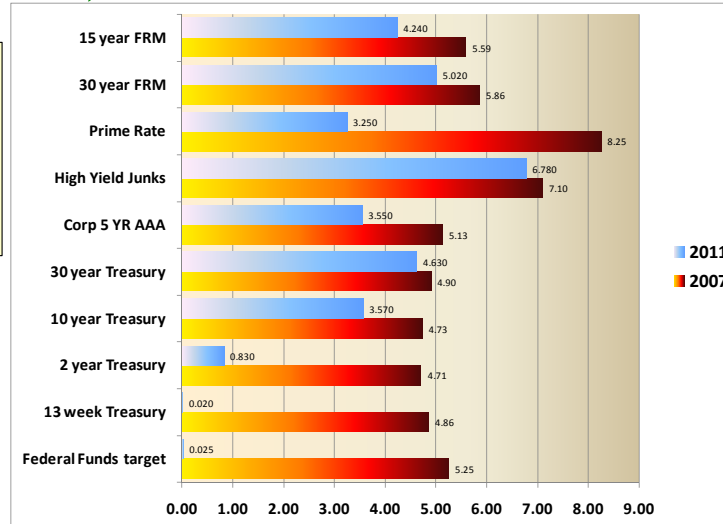


Select Interest Rates 2007 vs. 2011

(April comparisons)

Interest rates are lower, but more so short-term rates rather than long-term rates.

Look at the bottom end compared to the stuff at the top.



Source: *The Wall Street Journal* select dates

The Term Structure of Interest Rates (yield spreads)

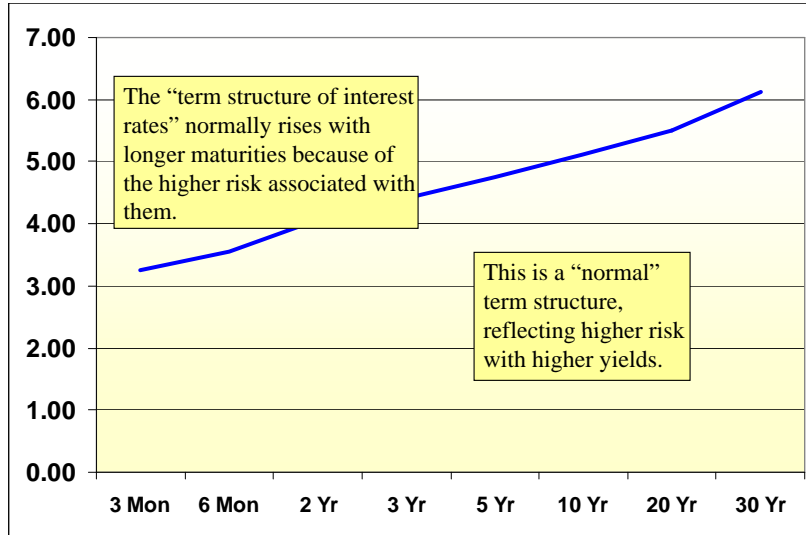
When comparing different maturities of the same class of interest bearing securities, like U.S. Treasury securities, the yields (interest paid) of securities with longer maturities are *normally* higher than the yields of shorter maturities. For example, we would expect a 20 year bond to have a higher yield than a 26-week bill.

This is because there is a greater risk associated with holding a long-term security (such as the risk imposed by inflation).

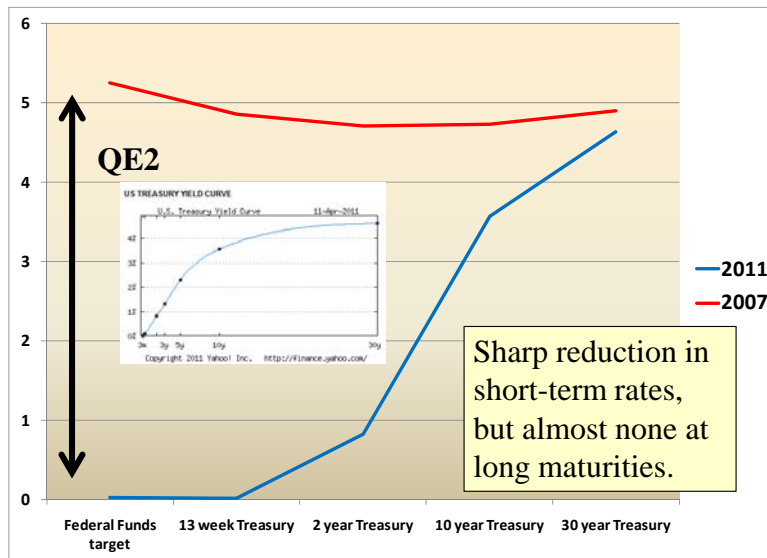
The mapping of these yield spreads, shown in the next slide, is called the “term structure of interest rates,” and it normally slopes up.

Treasury Yield Spreads (example)

(term structure of interest rates)

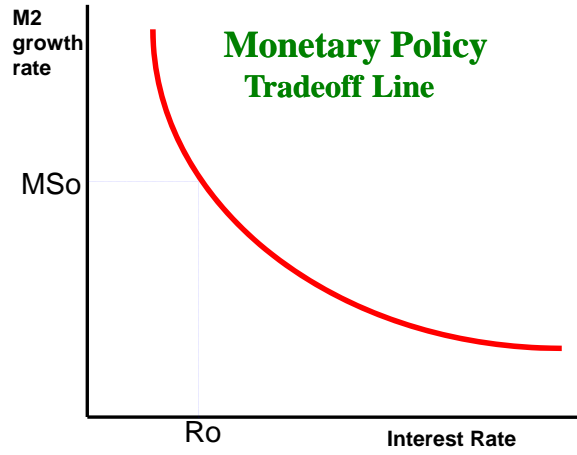


The Treasury Yield Curve 2007 vs. 2011



The Trade-off between targeted interest rates and money/credit growth rates in monetary policy

Mudd Economics



M2 growth rate

Mudd Economics

... OMO target ranges

6%
5%

3% 4%

Fed Funds Rate

M2 Range: 5% to 6%
FFR Range: 3% to 4%

©1998mpe2.drw

Meeting the targets

Remember, the FOMC will always desire net expansion of reserves and net expansion of any monetary or credit target. An expansionary policy might involve raising the reserve growth rate from 4% to 7%. A contractionary policy might involve lowering the reserve growth rate from 6% to 3%, but not reducing it below zero.

How does the FOMC contract, which will reduce the reserve growth rate and raise interest rates? By reducing the frequency and size of individual OMOs.



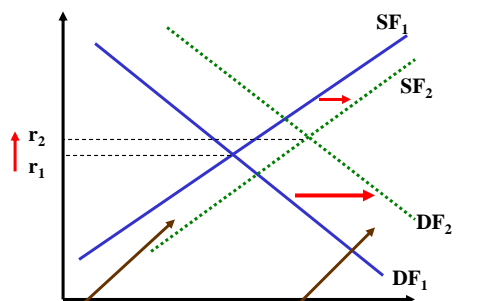
... think of this as regulating a flow through a faucet; tighten up a little and the flow slows down, ease up a little and the flow increases. But there is always a flow.

The subtlety of a "contraction"

The original simplistic loanable funds model suggested that to raise interest rates, the FRS contracted the supply of funds.

In a robust economy where credit demand is always growing, as shown here, the FRS can and does raise interest rates by *increasing* the supply of funds modestly.

Generally, if the FRS keeps reserve growth below the growth of credit demand, rates should rise.



Modest growth in supply of funds ...

.. robust growth in credit demand ...

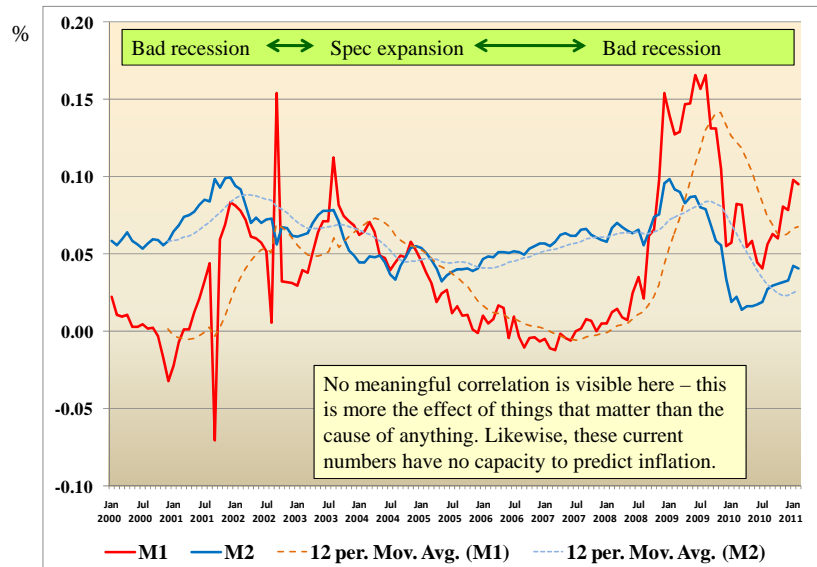
... results in an increase in interest rates, even though there has been an increase in the supply of funds.

Why FFR Targets are Emphasized over monetary targets

- ✓ You can't "see" money operationally
 - .. long lags in data
- ✓ Money growth rates wildly volatile
 - .. definitions imperfect
 - .. fickle public use of monetary assets
- ✓ Endogenous money supply

Money Supply Growth Rates

Jan 2000 – Feb 2011, monthly, annualized previous 12 months, LN continuous, SA



Source: Federal Reserve Statistical Release H.6 Money Stock Measures

Earlier slide repeated.

The Endogenous Money Supply (your teacher's contribution)

The use of freely-exchangeable monetary and financial assets have become so widespread and so easy to convert from one asset to the other, at low cost and online, that the growth rate of any single component can be very volatile and unpredictable.

For example, you can make an online or ATM transfer from your checking account (M1) to your savings account (M2), causing M2 to grow without causing M1 to fall. (Banks can do the equivalent with their exotic assets causing M3 to grow).

Also, because of credit cards and the extreme liquidity of all financial assets, you are no longer constrained any longer by the size of your M1 or M2 monetary balances.

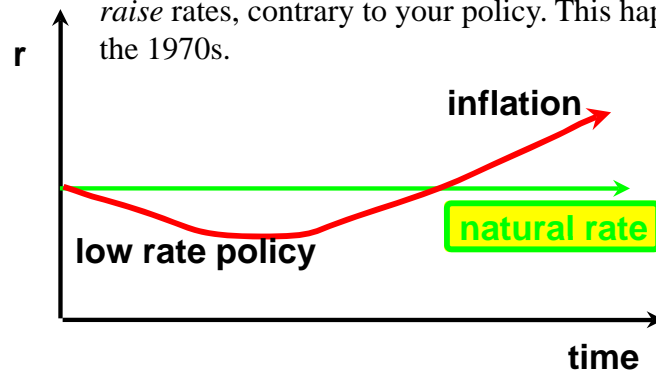
Curing an existing inflation rather than preventing an inflation

- The problem is seriously compounded by **inflationary expectations**
 - this inflation pushes interest rates up, building in an **inflation premium**, keeping real rates of return positive;
 - this also causes a decline in bond values and often stock values.
- In an extreme inflation (more than double digit) the correctional policy is necessarily Draconian and does severe damage to the economy.

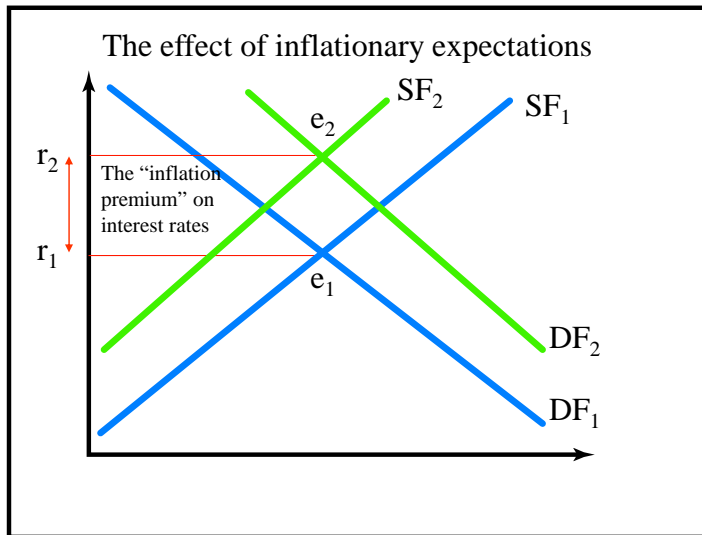
Over Time ..

.. policy abuse

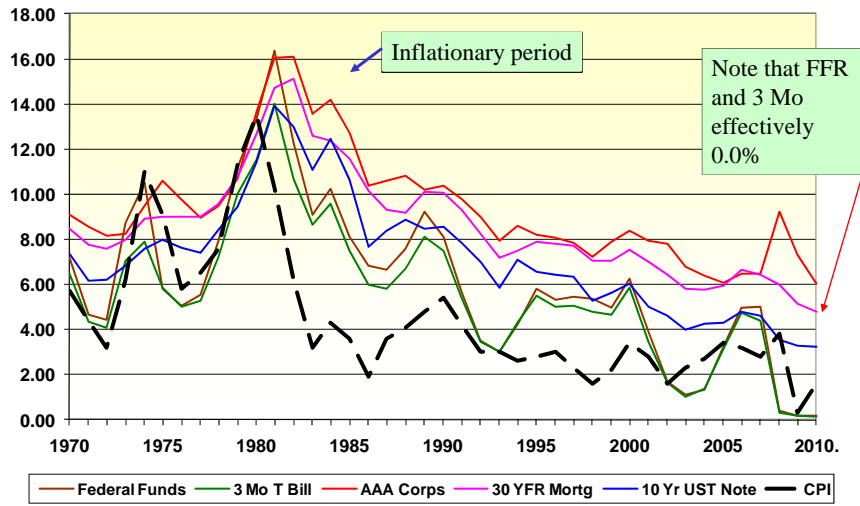
The effort to keep interest rates artificially low can introduce inflationary expectations and eventually *raise* rates, contrary to your policy. This happened in the 1970s.



Inflationary expectation in the loanable funds model



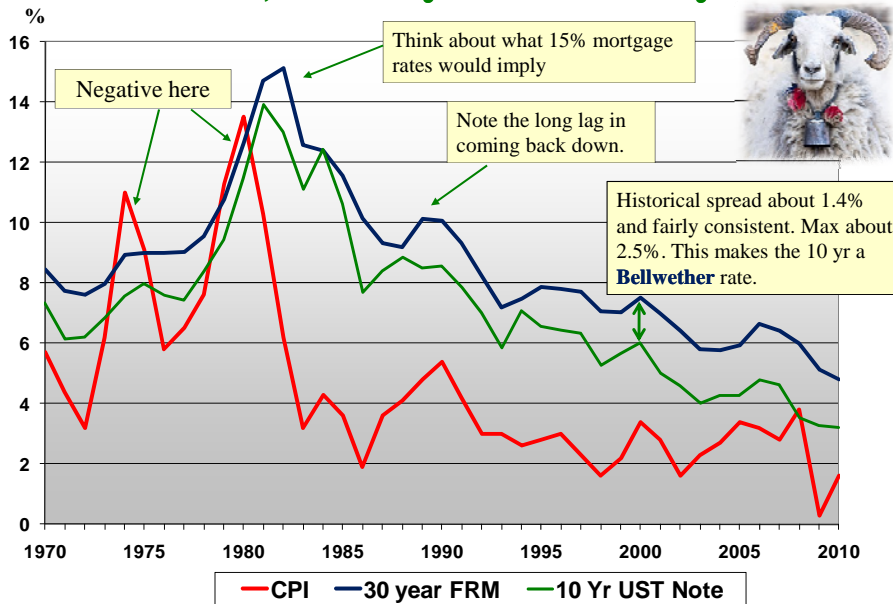
Select Interest Rates and CPI 1970-2010



Source: Economic Report of the President, 2011.

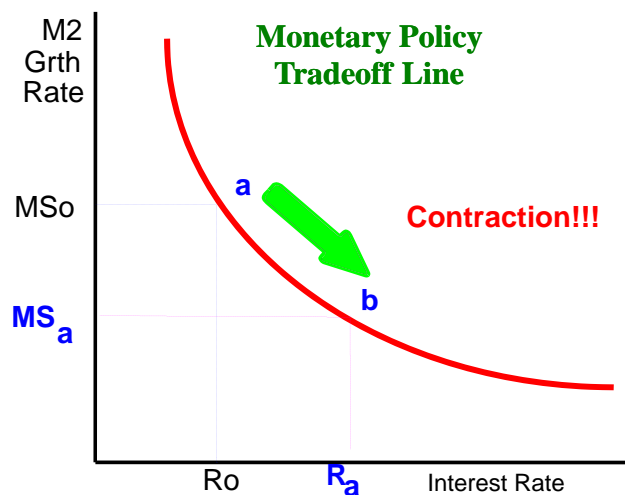
Data kept with 104 slides.

The CPI, the 10 yr UST & 30 yr FRM

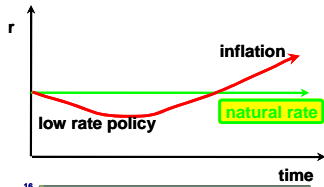


Important Theoretical Point

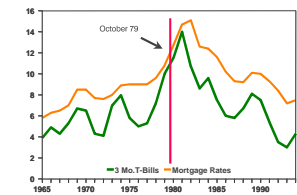
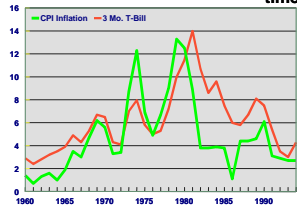
- ✓ IF inflation emerges ...
.. and interest rates are rising as a result
- ✓ The only policy option is contraction
... which will cause rates to rise more!!
- ✓ The problem must be made worse to make it better.



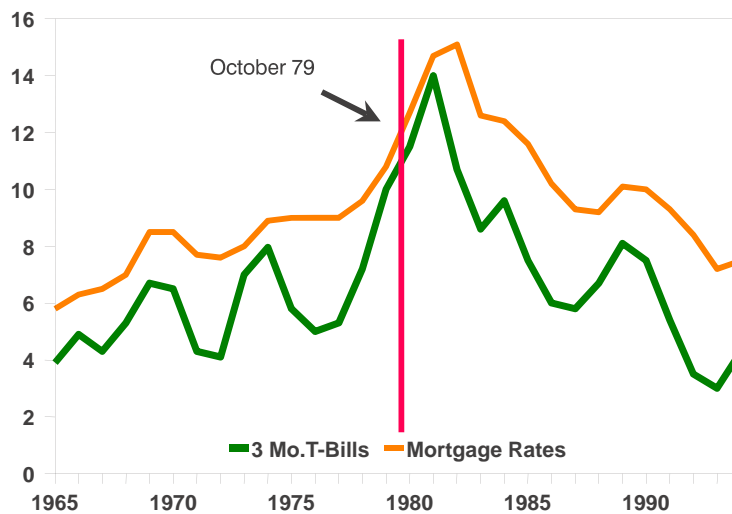
The Volcker Correction of 1979



- Under previous FRS chairs FRS had been running a policy that was too loose and generous.
- Inflation, inflationary expectations, and interest rates were well into double digit levels.
- Policy activist Paul Volcker appointed FRS chair.
- October 1979 FRS enacted a severely contractionary policy, Fed Funds rate goes to 23% at one point.
- Banks finally crack down on credit in 2nd quarter 1980.
- Severe recession finally squeezes inflation out by 1982.



The Volcker Correction of October 1979



Modern Policy Lessons from the Volcker Correction

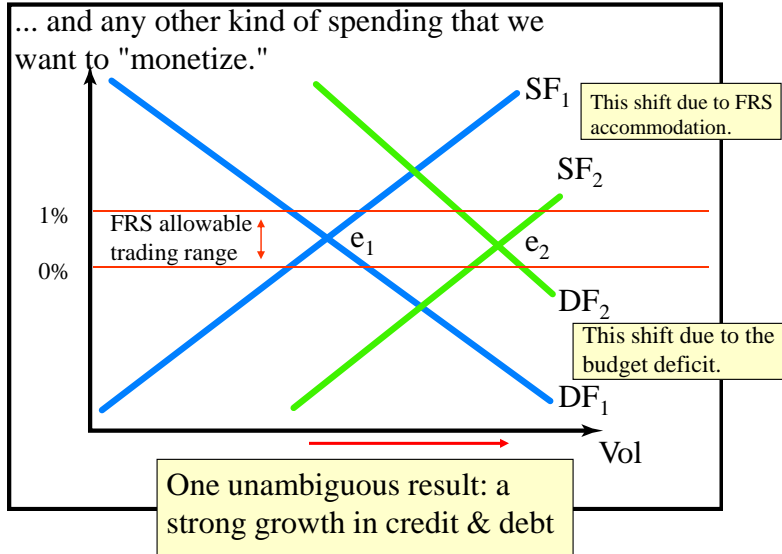
- Inflation control is the primary goal
 - low interest rates are secondary
- Anti-inflation policy must be preemptive and preventive
 - tighten as you approach the inflationary region
- Err on the side of caution
- Recognize and respect the long lags between action and result

Primary long-term problems in monetary policy

1. Using expansionary monetary policy to offset problems being caused elsewhere
 - such as offsetting the interest rate effects of chronic budget deficits
 - bailing out screwups in the private sector
2. Targeting interest rates too low too frequently
 - which leads to too much debt formation

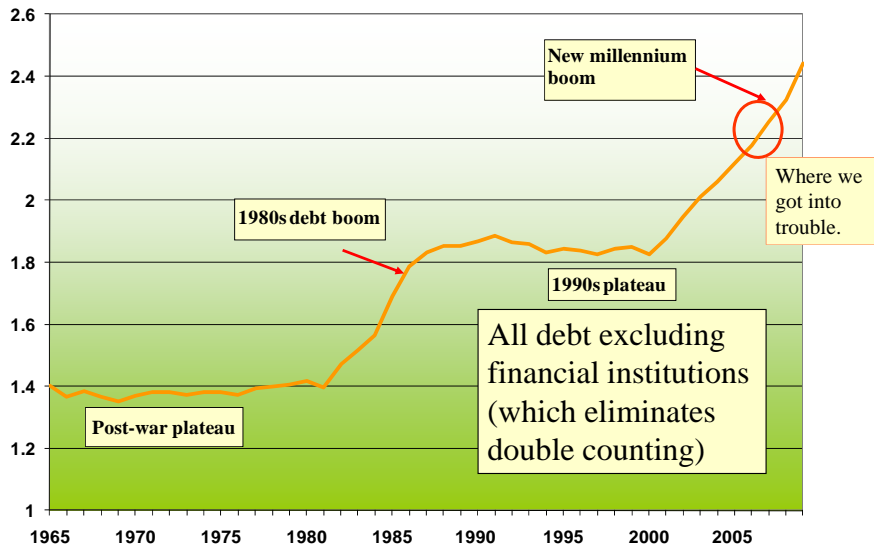
This will be a lead-in to our topical lecture as you might imagine.
Do you remember doing this in MS2?? What magic!!

Loanable funds: "monetizing" the budget deficit



Domestic Non-financial Debt/GDP

1960-2009



Final comment before we move into policy in 2008 and 2009

We keep reading terms like "the FRS is printing money" and they are "monetizing the deficit" or "monetizing the crisis recovery." We now know that these are only metaphors. Once one insists upon a precise definition of money, and then measures whatever that happens to be, you realize that the wild fluctuations in "money" measures have nothing to do with what has happened recently or presently.

To be precise, when we now use the term "monetizing" we really mean that they are creating copious amounts of net new *credit*, which implies higher levels of *indebtedness*, even (especially) when normalized against our national output as represented by *national income* or *GDP*.

And when the Federal Reserve System is doing it, the credit is being created from nothing - erasing a number and writing a bigger number in its place.

Is this undesirable? Only if it is done to excess. Has it been done to excess?