


The Fed verses The Farm



2007 Risk and Profit Conference
August 16-17, 2007

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The Federal Reserve Bank of the United States
The U.S. bank of banks

Who Owns the Federal Reserve System?



- The Fed is an arrangement between the U.S. government and the private sector.
- **The Fed is actually owned by the 12 Regional Banks within the Federal Reserve System.**

What The Fed Does:



1. Regulates the banking industry
2. “Lender of Last Resort”
3. Regulates the money supply
4. Provides banking services for the federal government
5. Check clearing

Who Runs the Fed?

- The Open Market Committee - FOMC
 - 7 Fed governors (appointed by the President) + 5 regional bank presidents
- Policies of the Federal Reserve System
 - Employment Act of 1946
 - Humphrey-Hawkins Full Employment and Balanced Growth Act of 1978

The Politics of the Fed:

Answers to the financial markets

Failing on inflation is trouble

Failing on unemployment is not so bad

At Fed, Inflation Is Top Worry, Making Rate Cuts Unlikely

By GREG IP

WASHINGTON—Don't expect interest-rate cuts anytime soon.

That was Federal Reserve Chairman Ben Bernanke's message when he testified before Congress yesterday. The nation's underlying inflation rate has dropped and the housing slump has deepened, but inflation remains the Fed's biggest worry.

"Upside risks to inflation are [the Fed's] predominant policy concern," the Fed chief told lawmakers.

Mr. Bernanke added a new inflation risk to the ones he has cited in the past: Productivity growth has "slowed somewhat," he said.

Slower productivity growth means it takes companies more labor to produce an additional unit of output. That raises their production costs and makes them more likely to raise prices.

Though expected, the hawkish tone of Mr. Bernanke's remarks unnerved investors, and helped to send the Dow Jones Industrial Average down 53.33 points to 13918.22. Treasury-bond prices rose, however, pushing their yields down; the 10-year note finished at 96 3/32, up 17/32, to yield 5.009%.

Since February, core inflation, which excludes food and energy prices, has slowed to about 2%. But forecasts released in connection with Mr. Bernanke's testimony yesterday before the House Financial Services Committee showed that he and his Fed

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The Wall Street Journal
Thursday, July 19, 2007

A14 Wednesday, August 8, 2007

Fed Walks P

Continued from Page One
Fed dashed those expectations, though, and the odds plunged to 25% yesterday, as indicated by futures-contracts pricing.

The Fed said its "predominant policy concern remains the risk that inflation will fail to moderate as expected," as it also said in June. That suggests a bias toward higher interest rates, which can keep inflation in check as they damp spending by making borrowing more expensive. But the Fed added that "the downside risks to growth have increased somewhat"—meaning it sees a slightly higher probability of weaker economic growth.

The Wall Street Journal
Wednesday, August 8, 2007

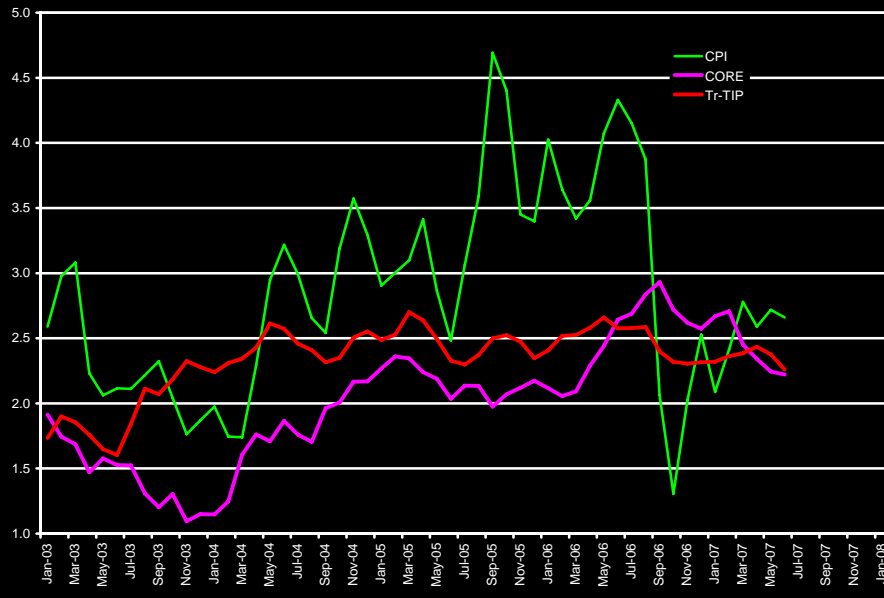
Consumer Price Index, Year to Year



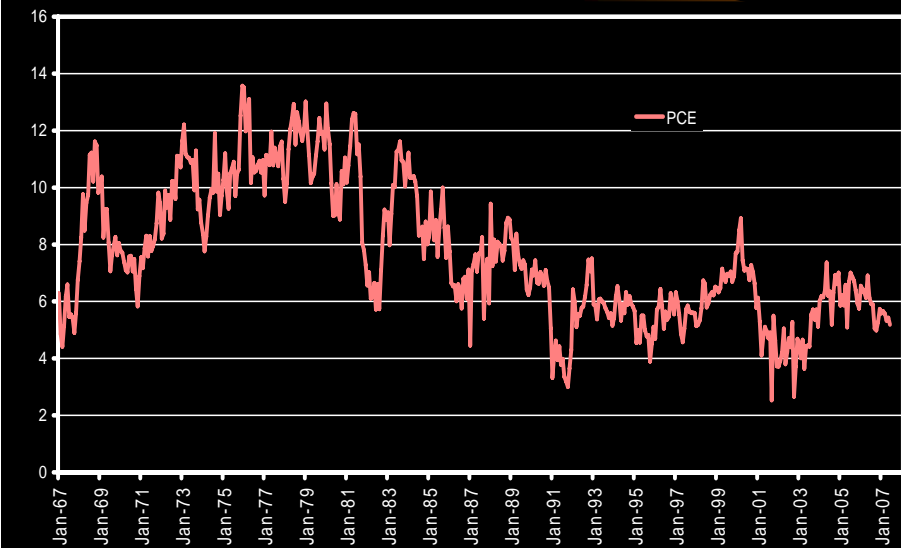
CPI and Core Inflation, Year to Year



CPI and Treasury - TIPS



Personal Consumption Expenditures



The Politics of the Fed:

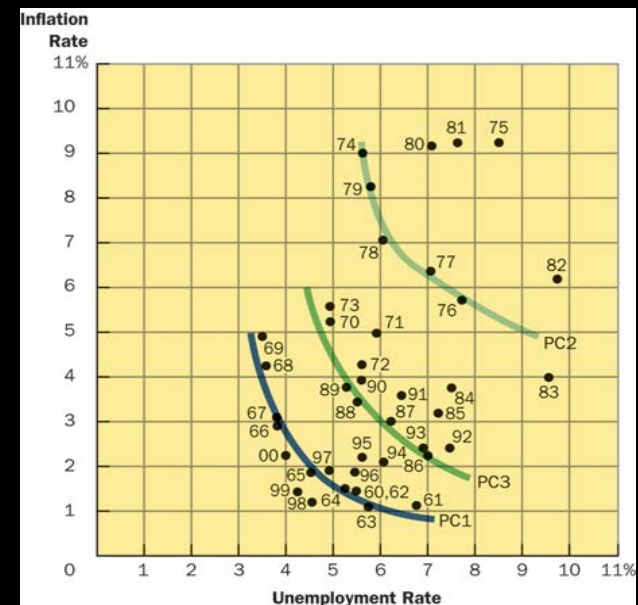
- Higher unemployment or higher inflation
 - Political decision
 - Different people bear these costs
- Wall Street does not like public debates over Fed policy.
- The public is very poorly informed about the Fed and how it affects them.

CPI and Unemployment



Phillips Curve:

- A curve showing an inverse relationship between the inflation rate and the unemployment rate in the short run.



Annual Rates of Unemployment and Inflation in the United States for 1960–2004 and Representative Phillips Curves

Fed's Big Stick:

- Federal Fund Rate**

Rate at which banks lend to each other
Overnight basis

Key Federal Reserve Policy Variable

Market Rate, not fixed

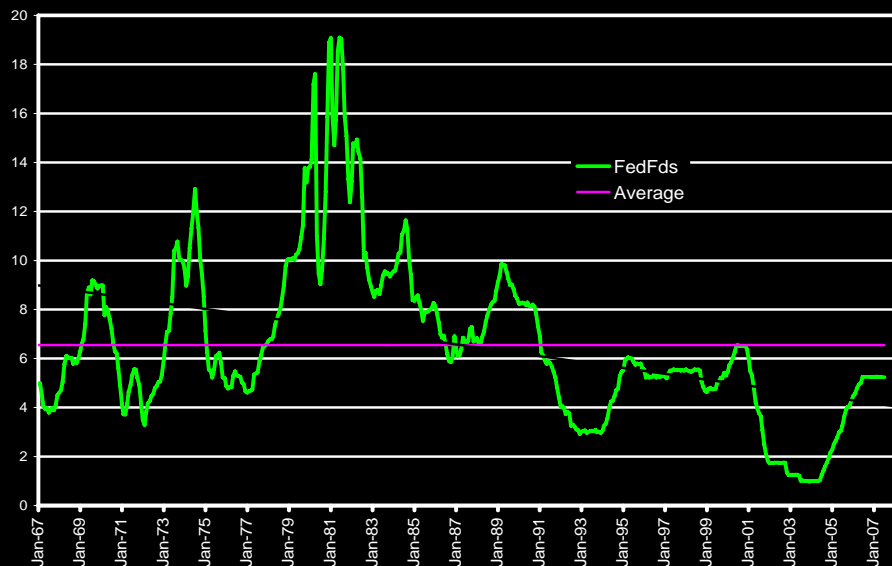
Little Federal about it !

Will disappear as policy variable as
LIBOR proliferates

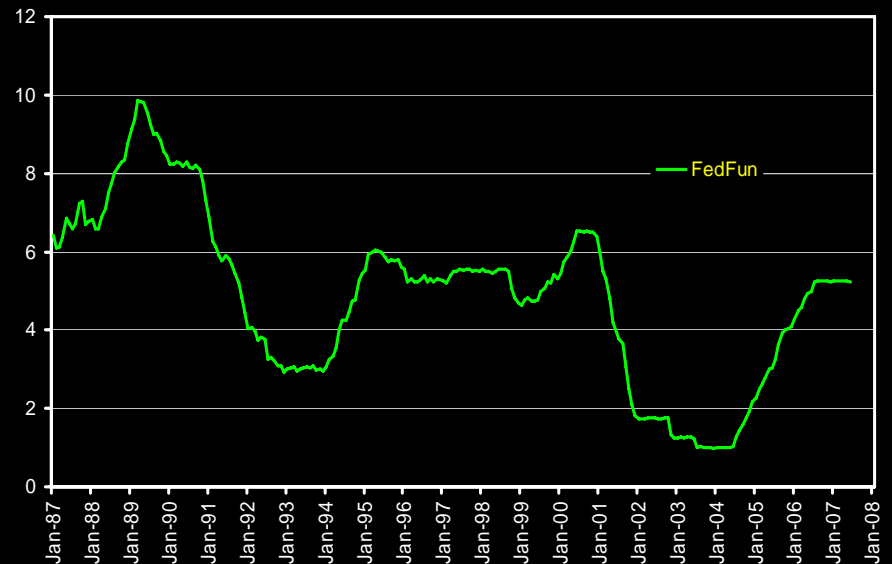
Federal Funds Rate



Federal Funds Rate

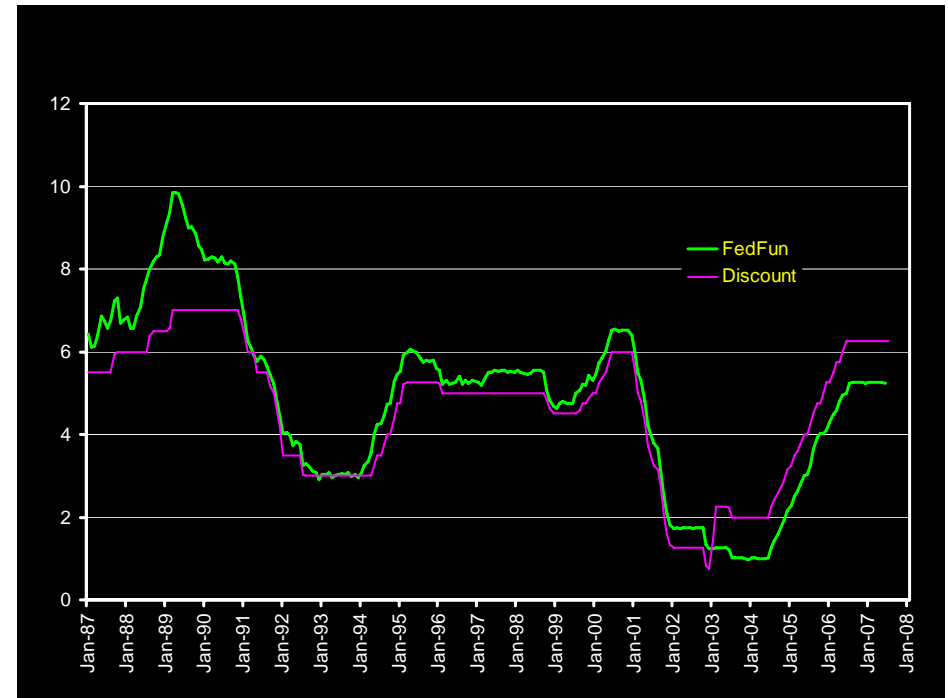


Federal Funds Rate



Important Interest Rates

- **Discount Rate**
 - Charge on overnight loans to depository institutions by Federal Reserve Banks
- **Prime**
 - Base rate on corporate loans posted by at least 75% of the nation's 30 largest banks
- **10 Year Treasury**
 - Rate on 10 yr. Treasury notes or bonds

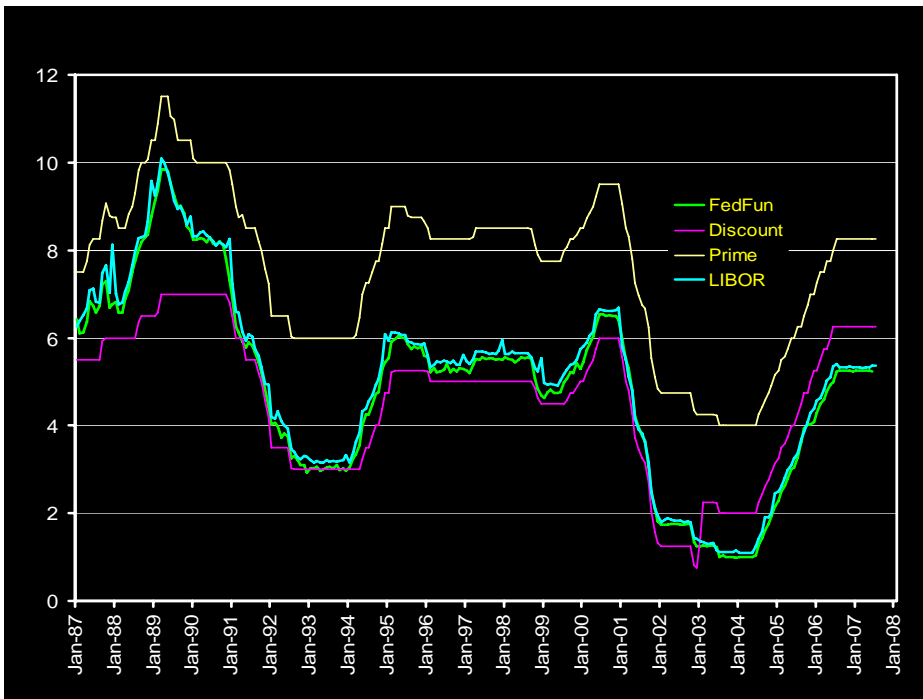


Interest Rate Facts:

- **Until January 2003, the Discount Rate was usually below Fed Funds about 100 basis points or so.**
 - Was always the best rate in town
 - Now it is a penalty rate as in European Banks
 - Sometimes referred to as a Lombard facility

Important Interest Rates

- **LIBOR**
 - London InterBank Offered Rate
 - The interest rate offered for U.S. dollar deposits by large London banks



Current Monetary Policy:

- Currently, the Federal Reserve follows a discretionary monetary policy.
 - Interest rate (Fed Funds) targets
 - Primary goal: Low inflation economy
Maintain full employment
- This type of monetary policy can be summarized by a Taylor rule.

The Taylor Rule:

- The Taylor rule explicitly models the two Fed goals:

$$\begin{aligned} \text{Fed Funds} = & (\text{Inflation}) \\ & + .5(\text{GDP gap}) \\ & + .5(\text{Inflation} - 2\%) \\ & + 2\% \end{aligned}$$

The Taylor Rule:

$$\text{Fed Funds} = (\text{Inflation}) + .5 (\text{Output Gap}) + .5 (\text{Inflation} - 2\%) + 2\%$$

An economy with full employment and a 2% annual inflation rate (the goal) would have a Fed Funds rate equal to 4%.

Using Okun's law, we can write the Taylor rule in terms of unemployment (1% cyclical unemployment = 2.5% output gap)

$$\text{FF} = 2\% + (\text{Inflation}) + 1.25(\text{Unemployment} - 5\%) + .5(\text{Inflation} - 2\%)$$

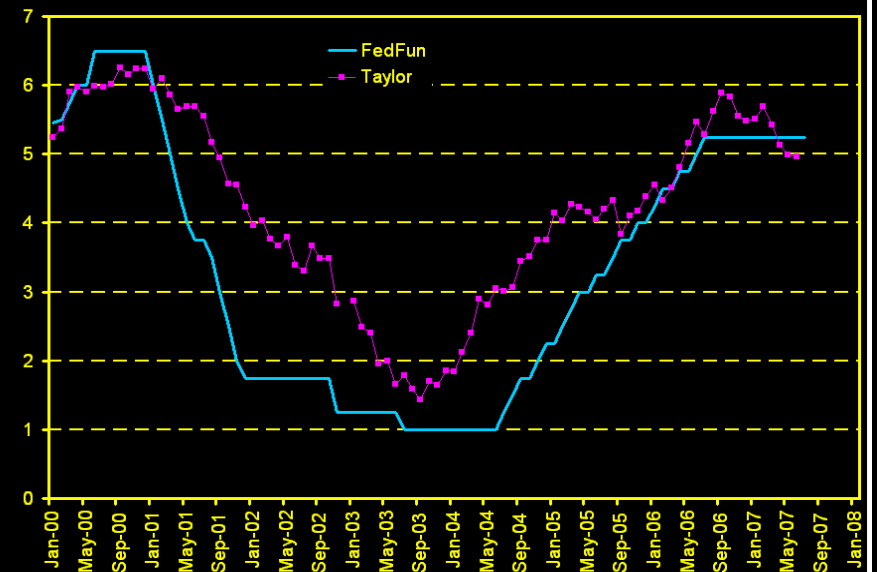
The Taylor Rule:

- The Taylor rule explicitly models the two Fed goals:

$$FF = (\text{Inflation}) - 1.25(\text{Unemployment} - 5\%) + .5(\text{Inflation} - 2\%)$$

$$\text{Target FF} = 2\% + 2\% - 1.25(4.6) - .5(1.0) = 5\%$$

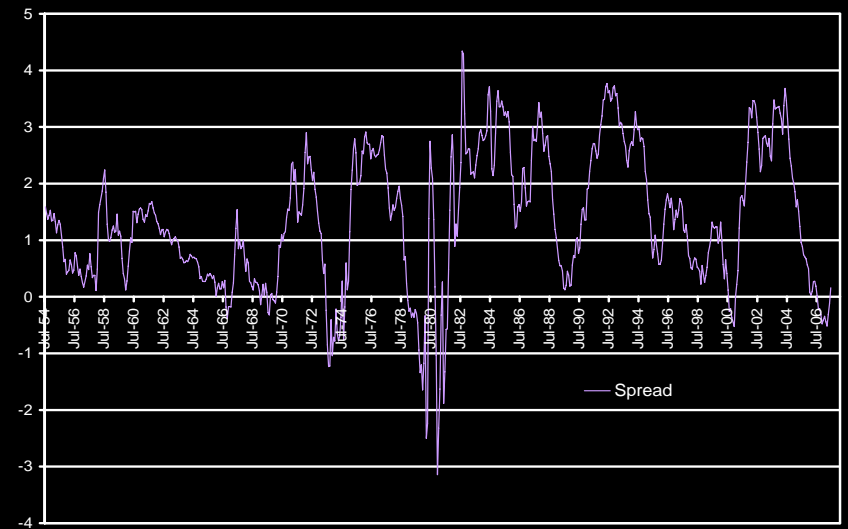
Taylor Rule Rate



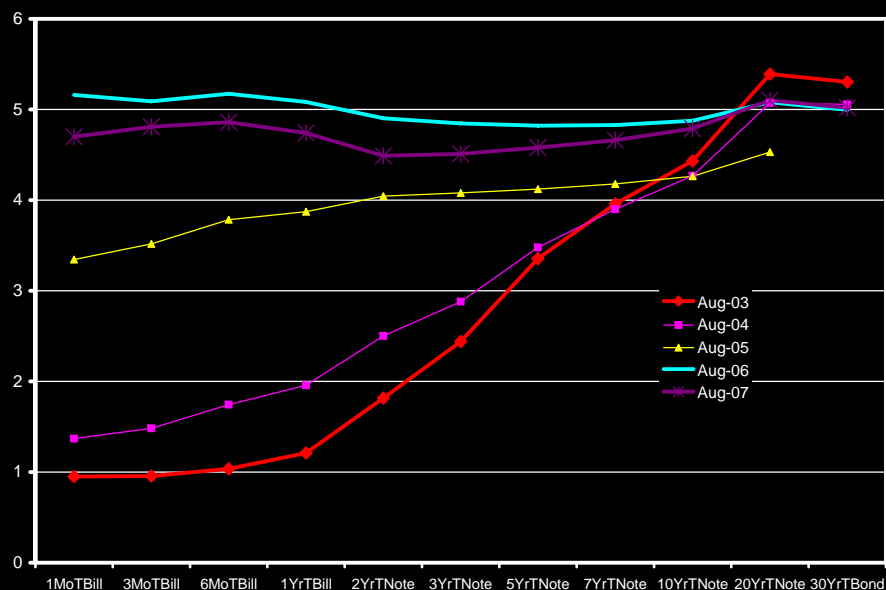
Interest Rate Targeting:

- To target the interest rate, the Fed must correctly identify the nature of market disturbances and then act accordingly.

10 year Treasury Yield and 3 Month Treasury Discount



US Term Structure of Interest Rates:



Treasury Yield Spread:

- Typically low right before a recession
 - Boom raises short term real rates
 - Inflation has raised short rates
 - Higher short term rates kill consumer demand

Treasury Yield Spread:

- Spread widens in recession.
 - Slowdown in economic activity depresses short term rate.
 - Investors expect interest rates to go up again when economy recovers so longer term rates are higher.

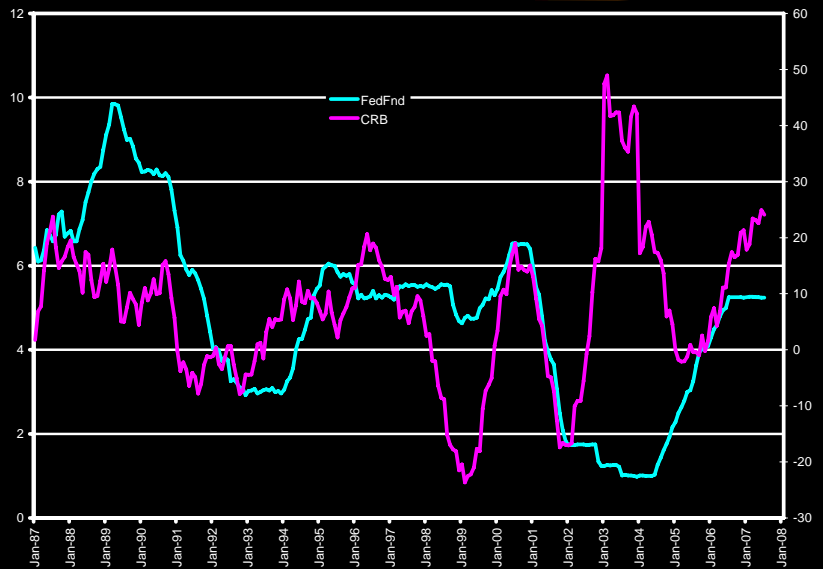
The spread can fall either because short rates rise, or long rates fall.

- If the former (i.e. short rates rise), then falling spread reliably forecasts recession because borrowing cost increase means less borrowing, fewer car loans, fewer cars, etc.
- But, if the latter (i.e. falling long rates) it is much less clear.

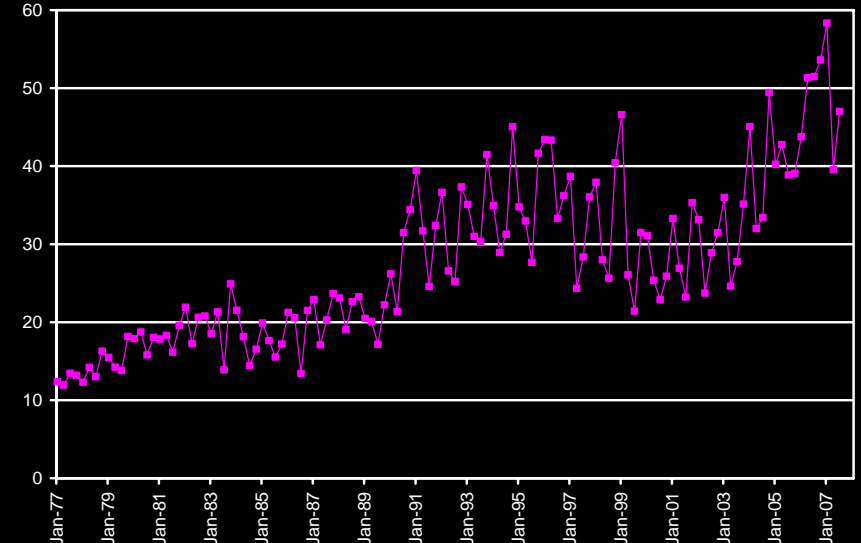
NOTE: Longer term rates can fall (thus narrowing the spread) because of good things

- inflation has been reduced permanently.
- government is borrowing less to finance deficits.

Fed Funds and CRB Index



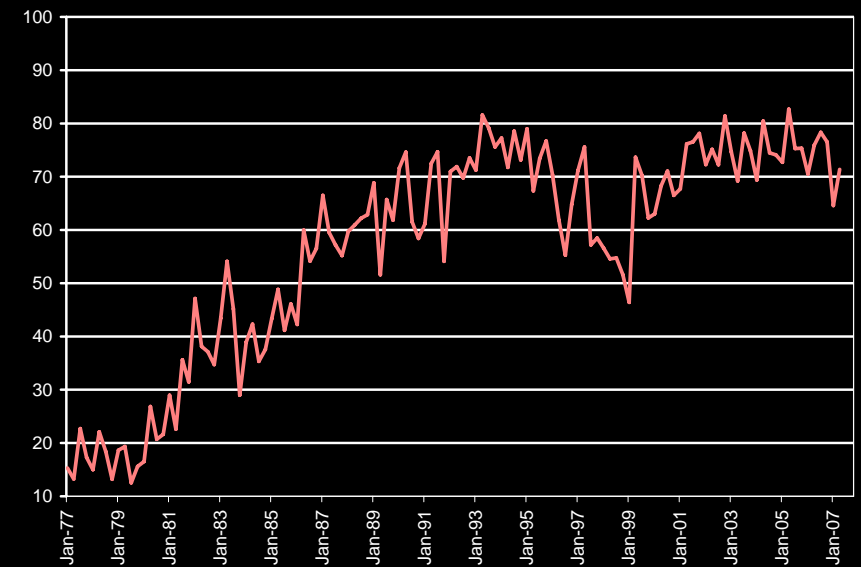
Average size of non-real-estate farm loans - \$1,000



Average effective interest rate on non-real-estate farm loans



Farm loans with floating interest rate



The Yield Curve as a Predictor of U.S. Recessions

Arturo Estrella and Frederic S. Mishkin

Estimated Recession Probabilities for Probit Model Using the Yield
Curve Spread

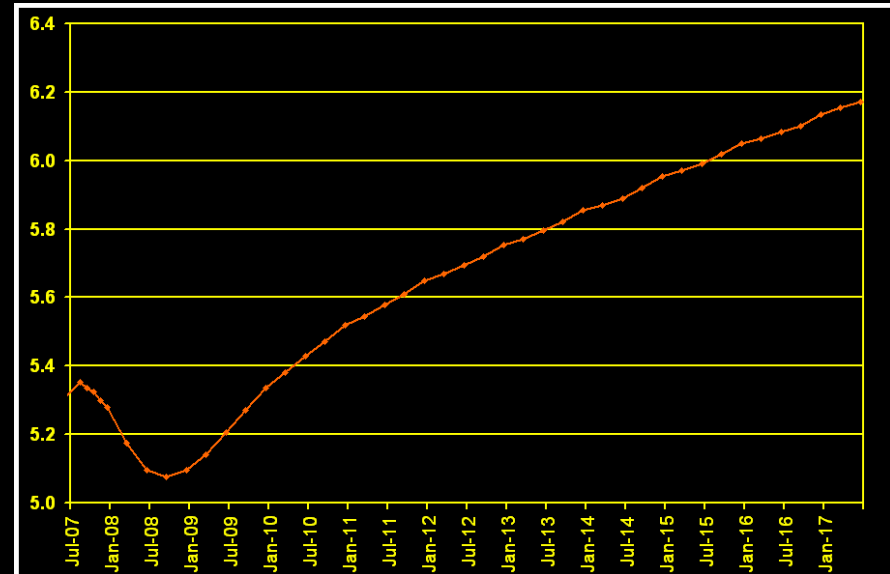
Four Quarters Ahead

Recession Probability (Percent)	Value of Spread (Percentage Points)
5	1.21
10	0.76
15	0.46
20	0.22
25	0.02
30	-0.17
40	-0.50
50	-0.82
60	-1.13
70	-1.46
80	-1.85
90	-2.40

Federal Reserve Bank of New York

Current Issues in Economics and Finance, June 1996, Vol. 2, No. 7

Interest Rate Forecast



Conclusion – Know What the Fed is Doing to You!

1. Keep track of Fed decisions.
2. The Fed can have a huge impact on commodity prices.
3. The public has a right to hold the Fed accountable for its performance.

Some Problems with Model

- Whose inflation rate?
- Even the **CPI** (**C**onsumer **P**rice **I**ndex) may not be correct measure of inflation; probably biased upwards due to technological change
- Do not know inflation rate in advance, so inflation rate must be expected, but that ignores inflation risk
- Nominal rate must be greater or equal to zero (mattress investment strategy)