

Monetarism

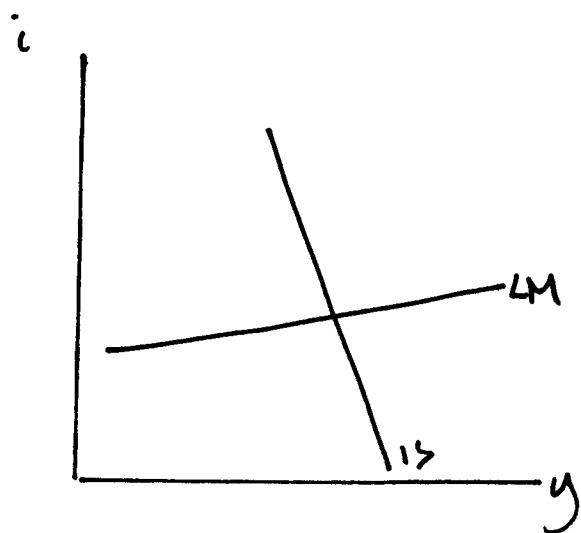
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- Early Keynesians attached little importance to money
 - in times of recession especially, LM curve is flat and monetary policy is not very effective.
 - consumption and investment not believed to be highly sensitive to the expected real rate of interest, so there is little crowding out to worry about. Thus, fiscal policy is effective.
 - in addition, Keynesians did not have much faith in the stability of the money demand equation. While monetary policy is not very helpful in stimulating output, the Fed can usefully adjust the money supply to counteract variations in money demand and keep interest rates constant.
- Milton Friedman (U. of Chicago 1946-77, now at Stanford) was the major proponent of an alternative view in which money plays a central role.

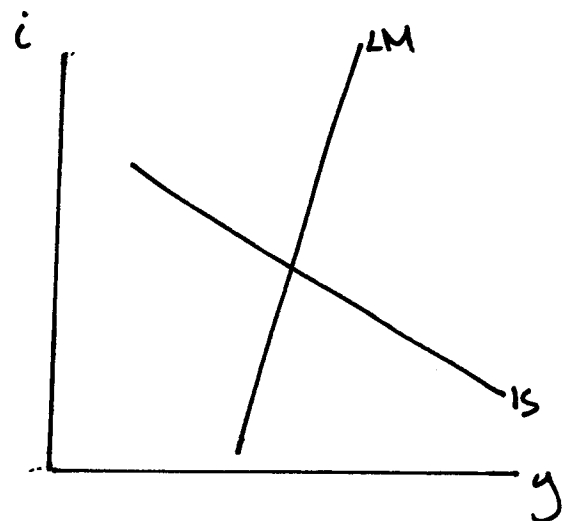
Main tenets of monetarism

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- A. The interest-sensitivity of money demand is not extremely large. Hence changes in the supply of money do have important effects on output.
- B. The interest-sensitivity of C and I is quite large, so the IS curve is quite flat: fiscal policy is not too effective, and a flat IS curve serves to make monetary policy even more effective.



Keynesian view, c.1960



Monetarist view, c.1960

So, these different views are largely empirical in nature.

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- So, the monetarist position is that money supply changes, rather than fiscal policy changes, have the greater impact on the economy.

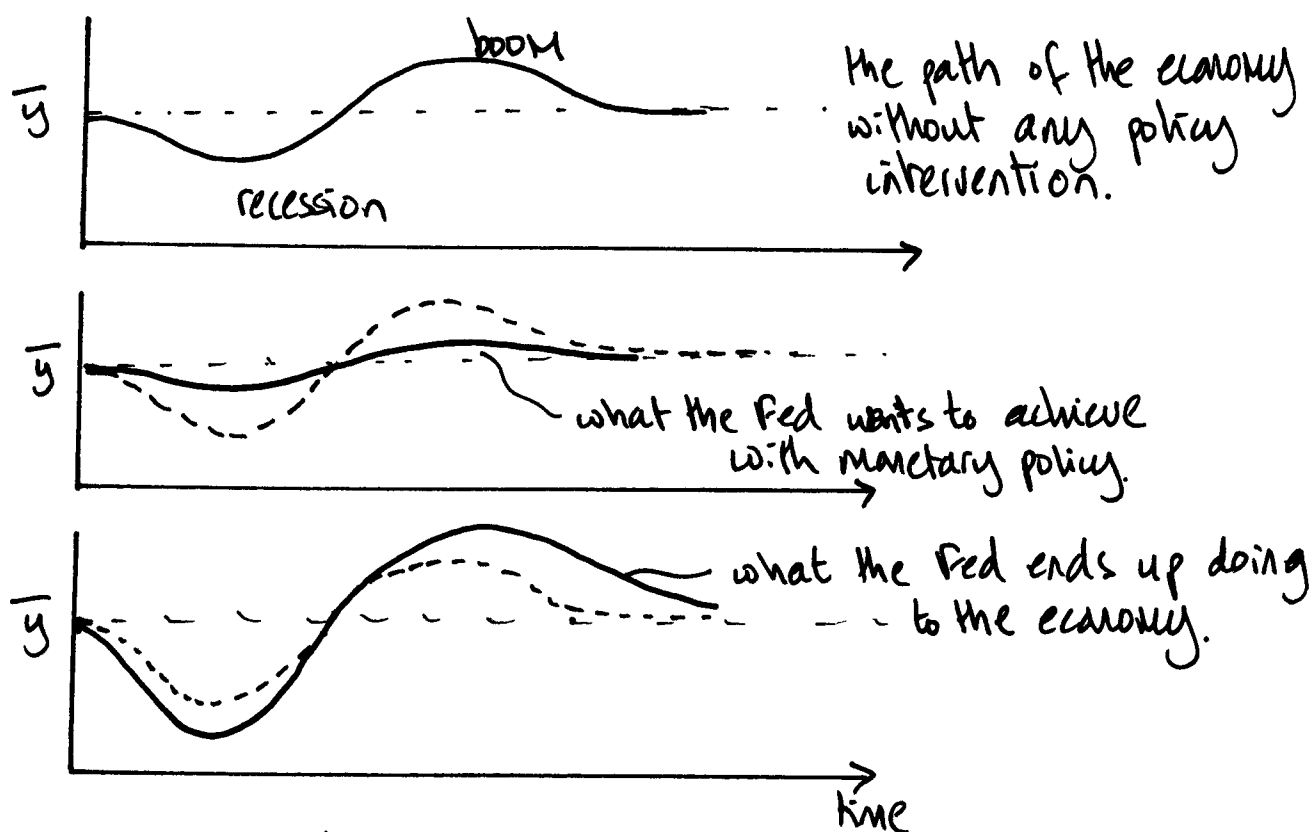
Does this mean that monetarists favored using money supply policy to "fine tune" the economy?

No, because of two additional tenets of the monetarist position:

C. Monetary policy affects output only with a lag. The duration of the effects of output are not certain - "long and variable lags." Thus, the monetary authority needs to choose policy on the basis of where it thinks the economy will be in the future.

But:

D. Forecasting is extremely difficult. Thus, a central bank trying to use monetary policy to cure a recession will more often than not get the timing all wrong. So even, though monetary policy has large impacts on output - it is effective in Keynesian terms - attempts to use it are more likely to destabilize the economy than to help it.



THE MONETARIST VIEW OF THE DESTABILIZING EFFECTS OF ACTIVIST MONETARY POLICY

NOTE: We should distinguish between early Keynesians (c. 1950) who thought monetary policy was largely ineffective, from 'modern' Keynesians (c. 1965) who thought money matters, but that it could be used to stabilize the economy.

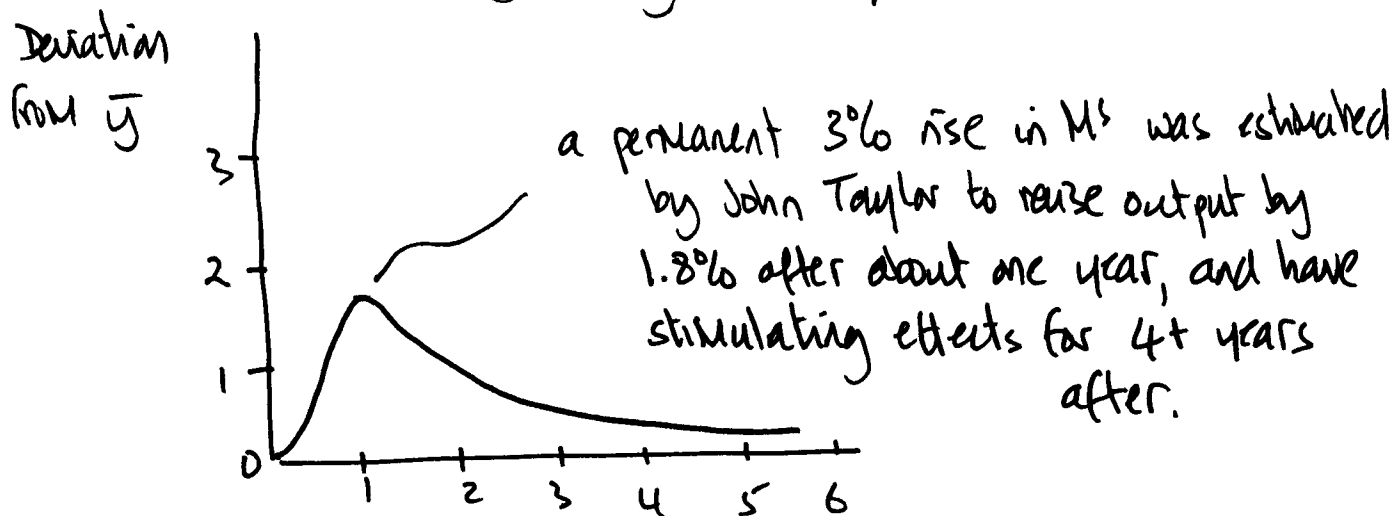
OLD DEBATE: monetary vs. fiscal policy

LATER DEBATE: how monetary policy should be used.

Long + Variable lags.

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- We have already produced a graph estimating the effects of monetary policy on output.



- Economic stabilization would be easy if the effects of policy were immediate. Like driving a car, policy makers could adjust to immediately change course.
- But monetary policy is more like piloting a large ship: the ship begins to change course long after the rudder is turned, and continues to change course long after the rudder is returned to normal. A novice is likely to oversteer, and then to overcorrect, creating an erratic course.

while we're on transportation analogies: (B)

- conducting monetary policy is like driving a car in which all except the rear window have been blacked out:

The driver does not know where he is going, nor even where he is, and the only way to predict what lies ahead is to make a guess on the basis of what happened in the past.

- Milton Friedman: "what we need is not a skilled monetary driver of the economic vehicle continuously turning the steering wheel, but some means of keeping the monetary passenger who is in the back seat as ballast from occasionally leaning over and giving the steering wheel a jerk that threatens to send the car off the road."

OK. Enough of these. Let's get back on track, and remind ourselves of two problems:

- policy has long and variable lags.
- forecasting is difficult.

→ This would be less of a problem if we knew precisely what these lags were. We have seen one graph, from John Taylor. But different models give different estimates:

Estimated Effects on GDP of a 1% increase in the nominal interest rate.

MODEL	1ST YEAR	2ND YEAR		3RD YEAR	
	WITHIN YEAR	WITHIN YEAR	CUMULATIVE	WITHIN YEAR	CUMULATIVE
I	-0.20	-0.70	-0.90	-1.10	-2.00
II	-0.47	-0.53	-1.00	-0.13	-1.13
III	-0.24	-0.25	-0.49	+0.03	-0.46
IV	-0.55	-0.19	-0.74	+0.04	-0.70
MEAN	-0.37	-0.42	-0.79	-0.29	-1.08

Model I maintained by Federal Reserve Board.

Model II by DRI, is a commercial product.

Model III by Roy Fair at Yale (available free on the internet).

Model IV maintained by the Federal Reserve Bank of San Francisco.

Source: Glenn Rudebach, "What are the Lags in Monetary Policy," FRBSF Weekly Letter, 95-05, 3 February 1995.

Models vary in sophistication - smallest has 30 equations, largest 1000+.

- different models give very different results on size and timing of effects.
- problem is that size of the effects in each year are equivalent to only one or two days' GDP. So small differences in models can lead to large relative differences in estimated impacts of policy.

Forecasting.

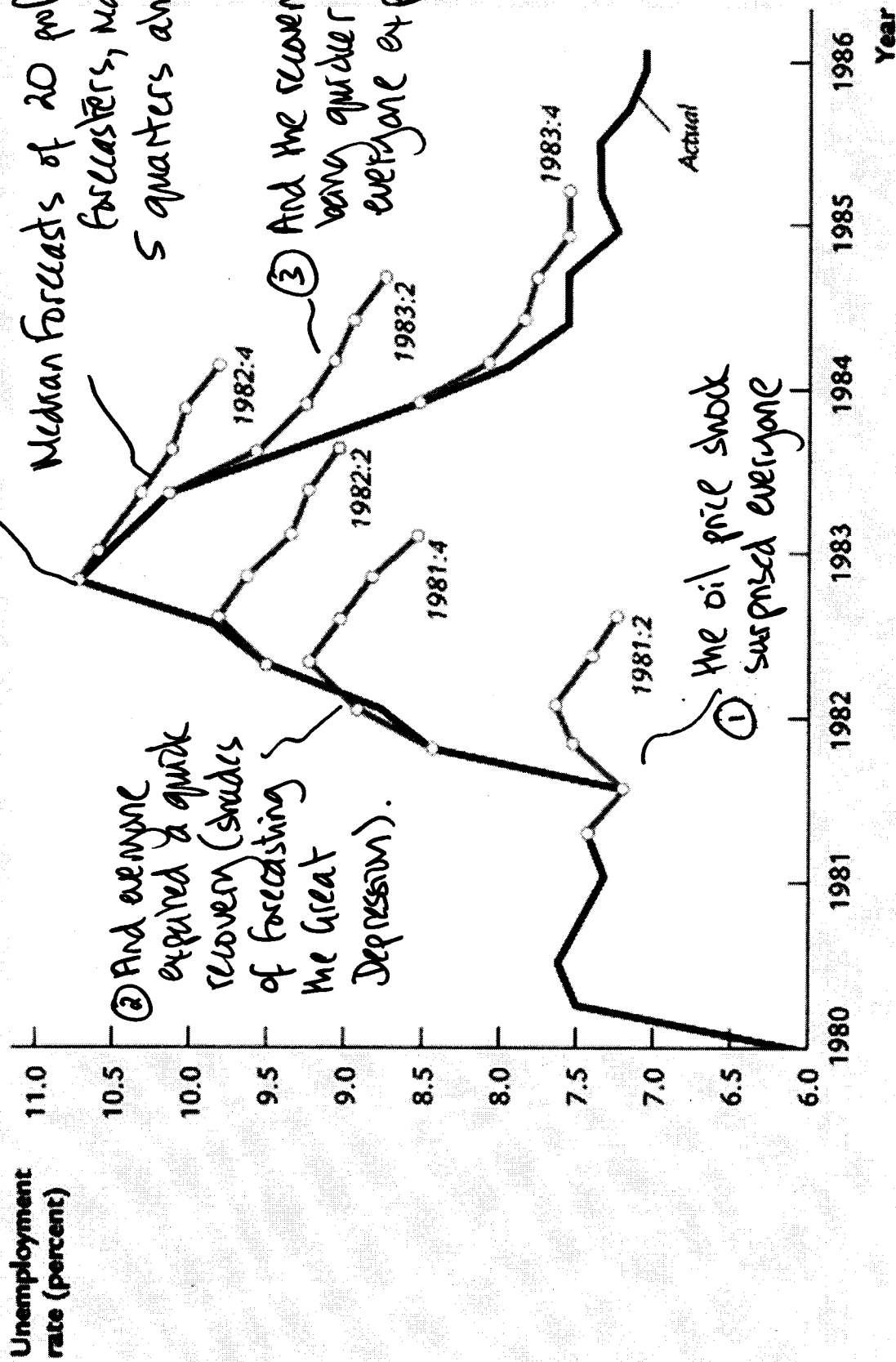
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- Changes in monetary policy today affect the economy only in the future.
- So, to get policy right, we need to have some idea of where the economy will be in the future.

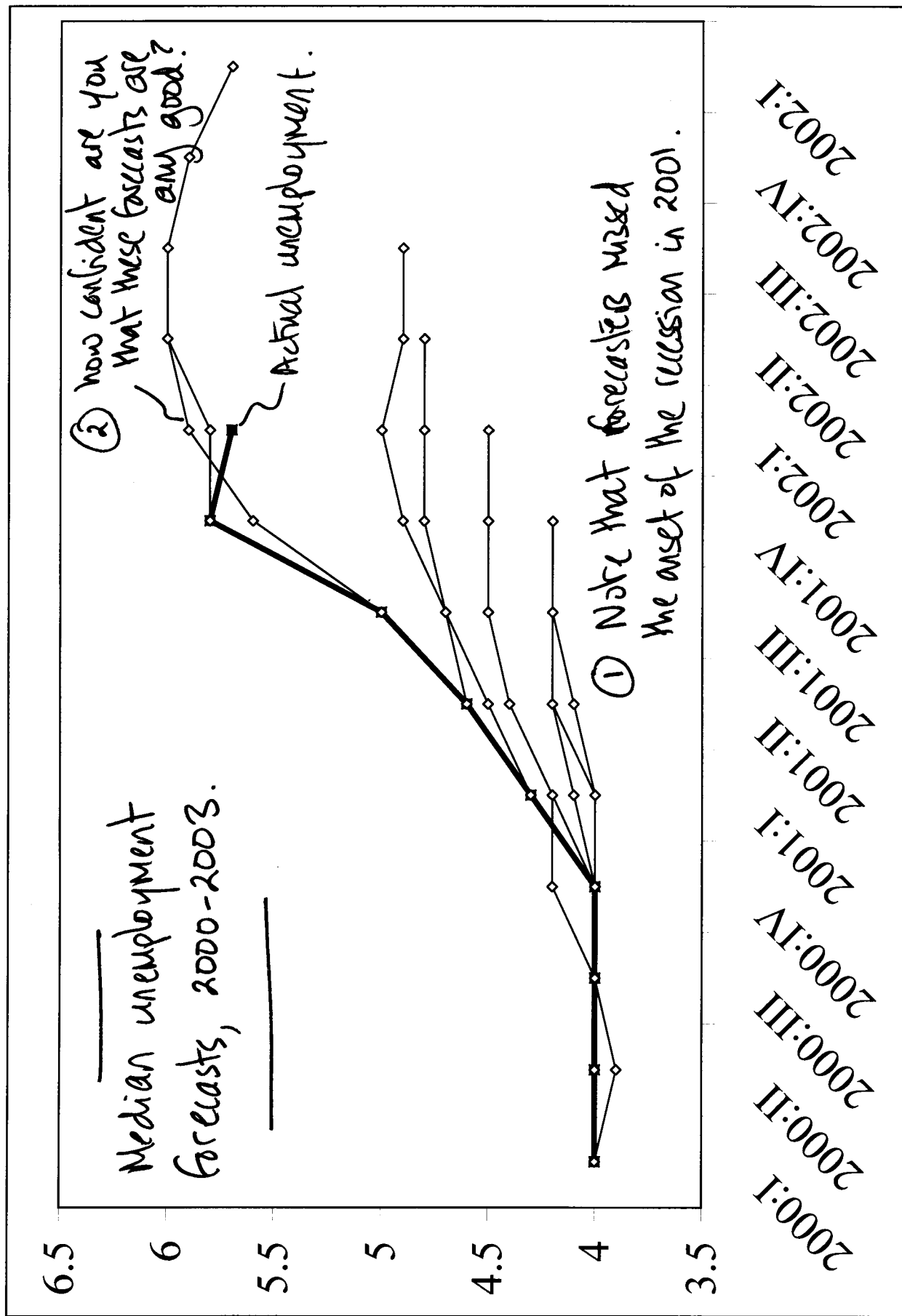
But forecasting turns out to be very difficult to do well.

- SEE NEXT TWO FIGURES.
- On average, professional forecasters tend to underadjust in times of economic change (note that this is just what the adaptive expectations framework would predict).
- More generally, professional forecasters don't do a very good job at all.

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Forecasting the Recession of 1982



Friedman + The Great Depression.

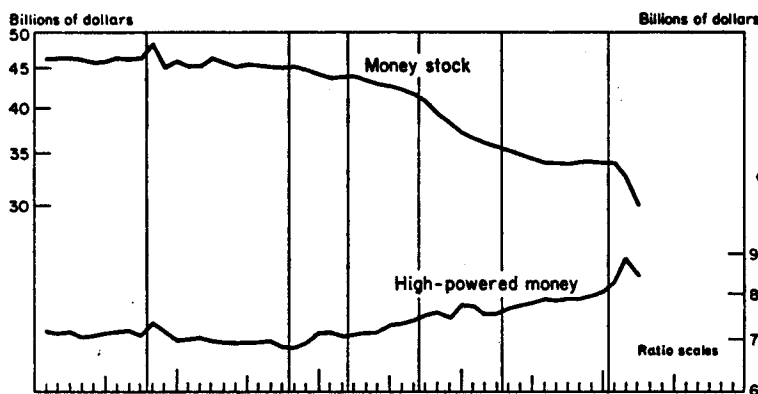
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Classical model: negative shocks in the labor market caused the great depression.

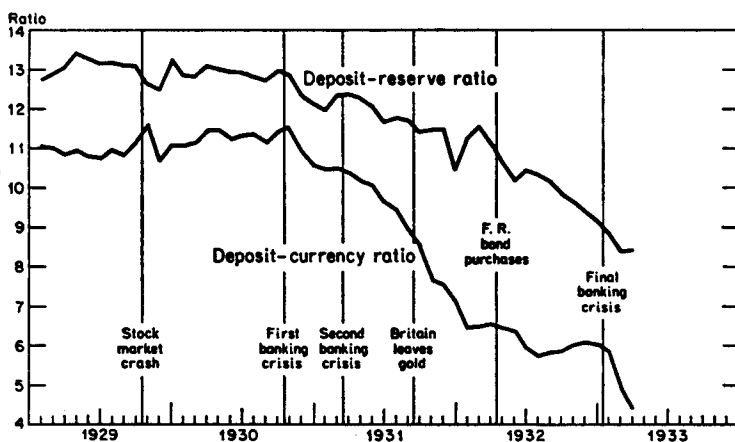
Keynesian model: drop in consumption and (especially) investment caused a leftward shift of the IS curve.

Friedman: Failure of the Fed to intervene during banking panics of 1930, 1931 and 1933 induced a contraction of the money supply.

When there is a run on banks, customers convert deposits to cash raising δ , the currency / deposit ratio. For a given monetary base, this lowers MS.



Even though Fed reuses monetary base, MS still declines.



This is the inverse of $\delta = \frac{C}{D}$.

Runs on banks

There were three runs on banks: October 1930
 Jan-Mar 1931
 March 1933.

By the end 10,000 banks who did not have enough cash reserves to meet customer demands went bust. Over \$2 billion in lost deposits.

Effect of runs on MS.

Imagine I have \$100 each - part of "high powered money." I deposit it in my bank account.

Bank puts 10%, \$10, in the reserve account to meet the reserve requirement. It then lends \$90 to others. They put this in their bank accounts; the bank deposits 10% - \$9 - in its reserve, and lends \$81. By the time we have finished, \$1000 has been created out of my decision to deposit my hundred dollars rather than hold it as cash.

Now imagine the process in reverse. As we all run to the bank to convert our deposits to cash, the money supply declines drastically.

What could the Fed have done?

- ↳ This is the Fed did after the crash of 1937.
- Increase the monetary base very rapidly to ensure banks had enough cash to meet customer demands. The monetary base was increased but not by enough.
 - Provide guarantees that the Fed would protect customer deposits if the bank closed. This is the basis of FDIC, but it was not introduced until after the banking panics. The Fed had no legal power to provide such guarantees.

But, if the money supply collapsed, why did interest rates go down?

- Deflation. Prices were dropping so fast that M^s/P rose.

So how could money cause the depression?

- One explanation is that the drop in M^s caused the drop in P (à la quantity theory), ~~which~~ make π^e negative.
- This increases $i - \pi^e$, even though i has fallen.
- The rise in the expected real interest rate caused the slump in investment that the Keynesians trumpet as the main cause of the depression.

The Friedman Rule for Money

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Friedman's position is essentially:

- we don't know the size and timing of monetary policy effects - but the size is large.
- we can't forecast well.

so, the Fed should be forced to follow a rule in which it tries to get the money supply to grow at a constant rate.

- yes, there will be booms + recessions. But the Fed can't help here, so it should not even try.

How big should this growth rate be?

A sensible objective is stable prices. so, given the quantity theory:

$$MV = PY$$

or

$$\frac{dM}{M} + \frac{dV}{V} = \frac{dP}{P} + \frac{dY}{Y}$$

with a target of $dP/P = 0$, we should have

$$\underline{\underline{\frac{dM}{M} = \frac{dY}{Y} - \frac{dV}{V}}}$$

Monetarist Experiments.

Monetarism entered the practical policy arena in 1979

- October 1979, the Fed announced a decision to target the growth of the money supply instead of interest rates. The policy was continued through 1982.
- In 1979 the British government under Thatcher also adopted a money target policy.

The expectation by monetarists was a reduction in inflation while the economy followed a more or less stable path.

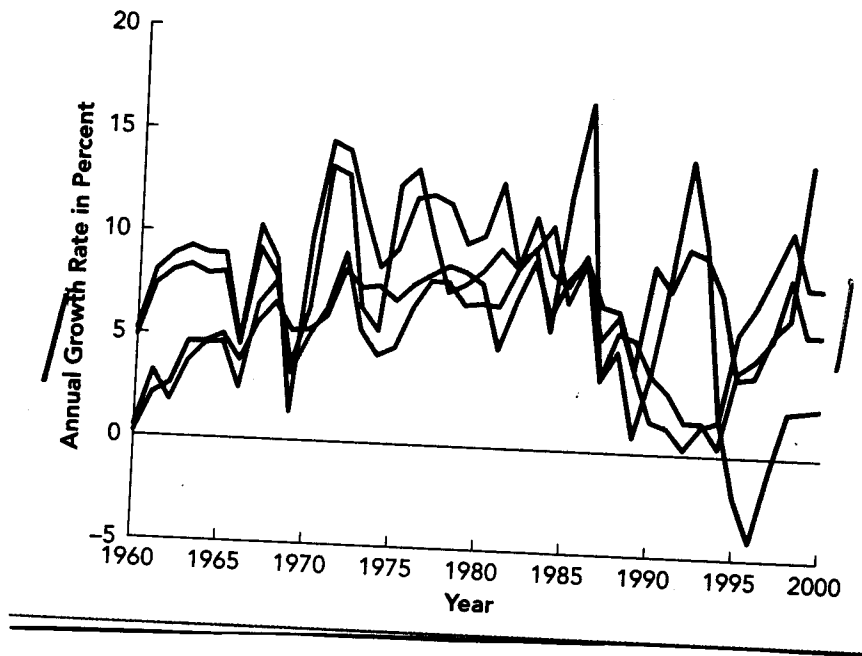
The outcome was a sharp rise in unemployment in both countries, coupled with an inability to respond in any substantive way to the second oil-price shock.

Politically, by the mid-1980s, monetarism as a serious policy tool had been rejected.

What went wrong?

Not all measures of money move together...

...so it is hard to know which measure of money to target.



M1,
M2,
M3 +
Monetary
base
in the U.S.

The monetarist view required that the velocity of money be stable. Before 1980, it had a smooth trend, as new technology was introduced into the banking system. Keep money growing smoothly, and the smooth trend of velocity will keep the economy stable. After 1980, the velocity of money became very unstable. Money growth targeting isn't helpful under these circumstances.

