

Friedman, Milton, 1968, The Role of Monetary Policy *American Economic Review* 58,

JC preface: This paper includes a lot of history of thinking about monetary policy, as well as how m affects economy. It's interesting how little things change; most current issues like inflation targeting, commitment, rules, etc. are in there

Read it page by page, figure out what the views alluded to are. There is a long verbal tradition in monetary economics; models try to capture it. To do macro you have to understand the verbal tradition and associated experience, not just push equations around.

Background: The mechanics of an open market operation. Helicopter drops (printing money to finance Government purchases).

Questions

- What is “liquidity preference” or a “liquidity trap?” How does this make money “like a string?”

A: p.2, top. best I can figure out, if people get more money they just hold it. Most clearly when $r = 0$ money = bonds, so an open market operation does nothing.

- What does Friedman say Keynesians believed was the cause of the great depression?

A: p. 2, top. “collapse of investment, shortage of investment opportunities, stubborn thriftiness”

- p.2, bottom pp. What's the “wealth” or “pigou” effect vs. the “liquidity” effect of monetary policy? Why do they not work when “liquidity preference is absolute” but they do work “by other means?”

A: A helicopter drop of money (or bonds) looks like wealth, so people spend it. An exchange of money for bonds still has no effect. The equilibrium point: deflation makes money = bonds worth more so people spend. (This all ignores the government budget constraint).

- What lesson does Friedman take from the Fed-Treasury accord experience?

- A: you can't peg interest rates. “Liquidity preference” isn't “absolute” after all.

- What new evidence does Friedman bring to the question of the cause of the great depression?

A: In fact M did fall in great depression. Friedman says this was the cause. Facts: Very low riskless interest rates. (Deflation means high real rates?) M base did not change much, but checks decline dramatically, so M1 fell a lot. Of course, why this correlation means causation is another thing

- What did people think in the 1920s that monetary policy should do (according to Friedman)?

- A: The fed brought stability relative to system of 1900s.

A: p. 5 promote price stability and to preserve the gold standard. = Inflation target (right now!) also monitor “the extent of speculation” raising interest rates to choke it off if need be. No mention of stabilizing output.

- What can monetary policy *not* do?
- p. 5-6 1) M cannot peg nominal interest rates for long

2) M cannot peg unemployment

In 60s both were thought true – Phillips curve and interest rate peg. (Note: this is a classic technique: caricature your opponents. In fact, Samuelson and Solow said no such thing as a stable Phillips curve.) Mostly, this is about people’s confusions between real and nominal rates.

- How does Friedman believe monetary policy affects the real economy and then the price level?

p. 6 Account of monetary policy.

i) Buy securities to issue more money – open market operation. This raises bond prices. By reducing the quantity of bonds? But open market is tiny in bond market, and MM. Thus, the “academics” point out $M(r)$ is really the mechanism. (JC but open market ops are a drop in the bucket of money too!)

ii) More money -> more “spending” Mentions $i(r)$, but emphasizes “the impact on other spending and thereby relative prices of higher cash balances than are desired.”

Finally, inflation – and now nominal interest rates rise. “Price expectation will be slow to develop and also slow to disappear” Decades! (Note this is *exactly* what Greg Mankiw’s latest neo-keynesian article says!)

Thus – “can’t peg [nominal!] interest rates” – well, maybe but the point is that the long run relation is different than the short run relation.

- Why is money not neutral in Friedman’s view?
- A: It looks to me like sticky prices, or maybe just sticky actions. It takes time to get around to rebalancing your portfolio and dumping extra money on the market.
- Why can’t the Fed peg unemployment?

- A: if below the “natural rate” inflation will explode.

This is what the paper famous for. Old Phillips curve is unemployment (output) vs. inflation, a statistical relation mistakenly viewed as stable. Friedman says the *structural relation* is u vs. $\pi - \pi^e$. Predicts shifting Phillips curve, which is exactly what happened in the 1970s. This is an out of the park home run.

“Structure” vs. “reduced form,” foreshadows Lucas critique

The phillips curve is still with us. Lucas is the same with $\pi^e = E_{t-1}(\pi)$; new Keynesians with $\pi^e = E_t\pi_{t+1}$. Mankiw wants to go back to $\pi^e = \pi_{t-1}$.

Causality in the Phillips curve? – Friedman and Lucas see causality from unexpected inflation to unemployment. Fed view goes from u to inflation. Does this matter?

- What *can* monetary policy do?
- Money like oil in the car: when it’s right you don’t notice, when it’s wrong it really messes things up. Money should provide a sound background.
- Money is neutral in the long-run.
- p.11 ff. Target *one* nominal quantity.
- What *should* monetary policy do? What should the Fed worry about? What should it ignore?
- p.12 Avoid causing depressions and inflations. (Note p.12 every major inflation comes from war taxation! – even monetarists note fiscal roots.) “*avoid major mistakes*” JC: Cause and effect?

p.13. Stable price level is good for economy – it closes gaps. in modern language “Inflation target” ignoring output

p.14 in theory “offset major disturbances? pp2. But hard to do

- *How* should the Fed conduct monetary policy?
- Bottom line: $k\%$ money growth rule ignoring everything else read p. 16 “my own prescription”
- Why, according to Friedman, should the Fed not look at interest rates as a sign of “tightness” or “looseness”?
- A: best I can see is you can’t tell nominal from real rates. But they are in fact not that hard to distinguish.

- If we write down an optimal control problem it gives something like $m_t = f(y_t, \pi_t, \dots)$ to minimize $var(y_t)$ or $var(p_t)$. Does Friedman think we should do this? If so, how? If not, why not?
- Since Friedman seems to think the price level is the main goal of monetary policy, would he agree with an inflation target?
- A: no, p. 15. Too much long and variable lags. It's not clear how the modern literature solves this issue.
- Friedman is a Chicago, free-market type. Why is Friedman a “monetarist” emphasizing the power and necessity of the Fed rather than a “classical economist” in the pre-20s (and post 80 Minnesota) style?
- A: Friedman is a Chicago microeconomist, but very influenced by Keynesians. He accepts the “Failure” of classical economists to say much about GD. Thus he needs *something* to address this important (in his lifetime) episode. RBC really goes back to pre 1929 theorizing, and still has little to say about great depression, but we don't seem to care anymore.

Some summary points of Friedman's views

1. $MV(r) = PY$.
2. The correlation is causal. M to Y; V will not change.
3. Short run: Y effects because prices are sticky (and actions, expectations too). In the long run money is neutral.
4. Most output and inflation problems come from poor M control. The major thing is “avoid mistakes”
5. Fed should control the quantity of money (not just base, M1 or M2). It should look only at M (maybe a bit at P) not interest rates of output.

A central question: Is an open market operation the same as a helicopter drop?

Brad DeLong “The Triumph of Monetarism ”

Big fun point: “New Keynesians” are 90% “Monetarists”

Questions for DeLong:

- What do “New Keynesians” think? How is this different from “old Keynesians”, “monetarists” or “RBC”?

A:83. Points 1-5.

1. Price frictions are a key cause of recessions (JC: not a cause but a mechanism.)
2. Monetary policy is better than fiscal for stabilizations.
3. Fluctuations are around a trend, not gaps to be filled. (“Harberger triangles vs. Okun gaps” Now the triangles affect the growth rate too. This is part of why macro has *much* less prestige now. But ask Mexicans if nominal stuff doesn’t matter!)
4. Rules, not decisions at each point in time. (This is the heart of rational expectations revolution, and *very* hard to explain to a layman! It’s why newspapers are still 60s Keynesian.)
5. Optimal policy must recognize lags and “low multipliers” of fiscal policy; long variable and uncertain lags of money

These are “New Keynesian” in contrast to RBC, and a stark repudiation of 1960s “Keynesians”’ belief in budget deficits, multipliers, activist fiscal policy, discretion, action for each instance of “insufficient demand” and the welfare consequences of “output below potential.” NO! (Q: difference? New Keynesians do R targets not M though)

- To what stylized history does DeLong attribute the decline of monetarism?

84. Fed and Bank of England did supposedly change to M targets rather than R targets in 1979-1982. A big part of monetarism was M rather than R. The stylized history is that money demand became “unstable” so this didn’t work; it led to wild interest rate gyrations and the recessions of the early 80s, motivating the return to interest rate rules.

(Think of interest rates vs. m graph. Suppose demand shifts a lot for reasons unrelated to the inflation you’re trying to control; Christmas for example. With vertical supply, either the Fed has to be very good at accommodating the shifts or you get great interest rate variability, and bad output volatility. With horizontal supply, shifts in demand are accommodated automatically. The danger of course is that so are shifts in demand due to the inflation you’re trying to control.)

Obviously, old monetarists think it wasn’t tried right (like old communists). Anyway, controlling aggregates ignoring other things is gone. Moral: make sure the historians are on your side.

- Which parts of monetarism died?

A: p.89

1. Cites Friedman for advocating tight control of Banks to make Md more stable, ms more controlled. 100% reserves (this runs counter to usual Chicago free market) Now instead we have much financial deregulation. (free market happy, but can't control M)
 2. Control of money aggregates. No central bank anywhere is doing that.
 3. p.91 "political monetarism" (an extreme caricature)
- Define the following views; the central points of each economic model; key historical events in favor and opposed.
 1. Classical economists
 2. (Irving Fisher and Old-Chicago monetarists – BDL's history of thought)
 3. Old Keynesians
 4. Monetarists
 5. Rational expectations (in the form of the Lucas supply curve)
 6. RBC modelers
 7. New Keynesians

More DeLong/Friedman

Frame: Why are there recessions?

1. Keynesians said “insufficient demand”, and government needs to provide more. (Together with a larger philosophy of near-socialist government planning.)
2. Monetarists said “Fed mistakes”. (This keeps the government down to one God-king at the Fed, but constrained by rules.)
3. Rational expectations gives one formal version of Friedman’s view that money can have a short-run output effect. But it gave no persistence, as expectational errors only last one period.
4. RBC and technology shocks had a great advantage: technology shocks can be persistent, and so they give persistent output fluctuations. But this is back to Pareto-optimal recessions that were (rhetorically, at least) untenable for Friedman.
5. Now “New-Keynesians” are reviving 68 address with sticky prices. Sticky prices give persistence to. But they learned key Lucas questions and methodology.

Another frame: the same discussions have been going on 100 years!

(I skipped over the history of though on monetarism. My notes:)

85. First monetarism as in Irving Fisher. It’s characterized here by no output effects (except a debt-deflation channel; deflation makes borrowers default) and constant velocity. It’s characterized as having failed to deal with the great depression

p.86 87 Old Chicago monetarism stressed the variability of velocity, its correlation with inflation ($V(r)$, real money demand declines when nominal interest rates are high) and instability in money supply through banks. Thus, control of M is not easy. Deflation = Depression by causing “Banks to fail” (This previews Bernanke’s famous “nonmonetary effects”)

p.88 Classic monetarism (says DeLong) features 1) Stable money demand (Stable $M(r)$, so stable through hyperinflations) 2) Lags, so no fine tuning (even with M) 3) Natural Rate (no Phillips curve) 4) “The start of the process that cut the multiplier from 4 to 1” (0!)

Some monetary questions

1. Is an open market operation = a helicopter drop?
2. $MV = PY$. Is M causal or is this a demand? Is V fixed or endogenous? (If P rises will V just rise? If you push on M will V just decline?)

3. M to output effects? 1) Friedman expectations 2) Lucas Expectations 3) Sticky price models 4) non-monetary; financial crises lower output directly. What is the evidence for output *effects*? (Not just reverse causality; things that make output go down lead to less money demand).
4. Why should we have $k\%$ money growth for cyclical fluctuations but interest rate targets and extreme accommodation for seasonal money demand (Christmas, Tax day) ?
5. What M? What Y in a money demand function? Is “Asset demand” ok substitute for transactions demand? All the models specify *transactions* motives, period.
6. Why $M(Y, P, r)$. In all other finance we do portfolio theory, never curves for one asset alone. (Tobin)
7. M base, M2? Transactions vs “Income” vs “permanent income” in money demand functions. The latter fit better, but make less sense given that theory only has a transactions motive.
8. Do we get much if we substitute “collapse in investment” “thriftiness” with “artificial scarcity of the medium of exchange?”

Christiano Eichenbaum and Evans, “Monetary Policy Shocks: What Have we Learned and To What End?”

Prelude: The number one point of this paper is to produce IRs and Variance decompositions. It will help tremendously if you understand how IRs and VDs are computed first, i.e. do problem set 1. The rest is interpretation chat. Keep in mind that VARs just summarize history: on average, after the event represented by the shock, what has output been x quarters later?

Things to read lightly:

p. 16-19 makes a mess of a simple thing, orthogonalizing variables

4.3 review of effects on other macro aggregates

4.5 Coleman, Gilles and Labadie, Bernanke-Mihov identifications

5.1 Sims-Zha

- Why do we care about IRs?

A:

1. Give advice to the Fed: “what if you raise rates” (but just this time, and if followed by the customary rise in subsequent rates!)
2. Point of contact for models. Ask models to produce the responses to monetary policy. (The “Lucas Program”)

- (p.6) Identification (ordering) is really strained. What’s CEE’s response?

A: The basic results are robust across lots of schemes

- (p.6) What results are previewed to agree with Friedman, and what don’t?

A: signs of output, interest rate, money, and price (with long delay). Variance decomposition shows not much volatility due to M shocks. VD is not totally satisfactory here; Taylor rule people and many models will say the *systematic* part matters to y variance too.

- What do we do about identifying assumptions that give the wrong signs?

A: p.6. Ignore them. Refer to this as theory imposed identification to then measure magnitudes.

- “Throughout this paper we identify a monetary policy shock with the disturbance term in an equation of the form $S_t = f(\Omega_t) + \sigma_s \varepsilon_t^s$.” Yet the Fed *never* says “25 bp to counteract the resurgence of inflation, and another 25 bp just for the hell of it.” If you believe the Fed *there are no shocks*, there are just omitted variables. Furthermore an optimizing agent (Fed) never introduces shocks in a control variable.

Optimal policy must always be $\text{policy} = f(\text{economy}) + 0$. How do CEE justify using regression errors as shocks anyway?

A: 1) shocks to preferences, “political power”. But are these uncorrelated with future output?

2) “strategic considerations..social cost of disappointing private sector explanations..” I have no idea what this is.

3) Measurement error in preliminary data.

This is a *deep* problem which they do not resolve here. (More coming in RR, JC paper).

- p.20 JC history and the schemes. The literature started with M shocks, which as you see in problem set 1 don’t work well. (A great case of looking at equations and not out the window – the Fed has been targeting interest rates all along.) Then, Strongin did the nonborrowed reserves / borrowed reserves bit. When the Fed intervenes, it reduces NBR, but lets BR take up the slack so there is no change in TR. Then it squeezes BR out. Thus you see the shock in NBR. Finally, the right responses! Sims had also got the right responses by looking at interest rates but with a complex Keynesian story. Bernanke etc. used interest rates (not M) to measure shocks, looking out the window, and got the right responses. Thus you’re seeing a survey of “new shock measures that give the right answer.”

- Benchmark VAR: $[Y \ P \ Pcom \ \mathbf{FF} \ TR \ NBR \ M]$. and $[Y \ P \ Pcom \ \mathbf{NBR} \ FF \ TR \ M]$.

- Are you surprised that monetary policy seems to have no impact effect on output, price level or commodity prices?

A: No. That’s the orthogonalization assumption

- How can the impact effect on TR be zero or positive?

A: Wow. So much for the interest elasticity of demand for reserves. There’s a complex argument about nonborrowd reserves (which do go down) vs. borrowed reserves, and the liquidity premium showing up as the disincentive for borrowing reserves.

- p.22, Figure 1 review responses. This is the most important point of the paper.