chapter 25

Transmission Mechanisms of Monetary Policy: The Evidence

Two Types of Empirical Evidence

Structural Model Evidence

$M \text{——>} \; i \text{—>} \; I \text{—>} \; \text{——>} Y$

Reduced Form Evidence

$M \text{——>} \; ? \; \text{——>} Y$

Structural Model Evidence

Advantages:

1. Understand causation because more info on link between *M* and *Y*
2. Knowing how *M* affects *Y* helps prediction
3. Can predict affects of institutional changes that change link from *M* to *Y*

Disadvantages:

1. Structural model may be wrong, negating all advantages

Reduced Form Evidence

Advantages:

1. No restrictions on how *M* affects *Y*: better able to find link from *M* to *Y*

Disadvantages:

1. Reverse causation possible
2. Third factor may produce correlation of *M* and *Y*

Early Keynesian Evidence

Evidence:

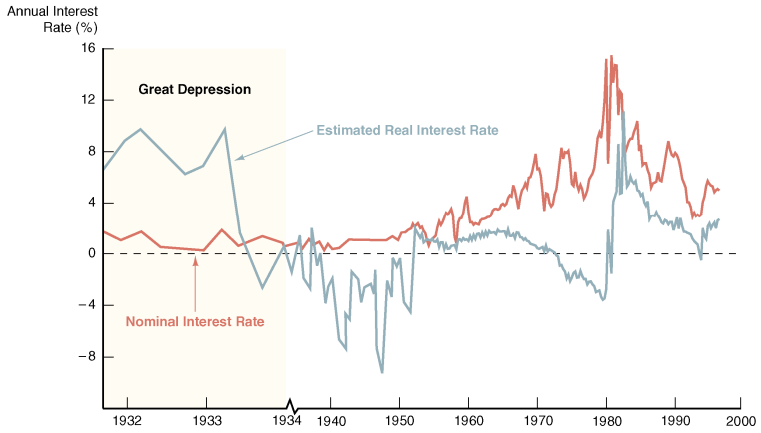
1. Great Depression: *i* ↓ on T-bonds to low levels ⇒ monetary policy was "easy"
2. No statistical link from *i* to I
3. Surveys: no link from *i* to I

Objections to Keynesian evidence

Problems with structural model

1. *i* on T-bonds not representative during Depression: *i* very high on low-grade bonds.
2. i_r more relevant than i: i_r high during Depression: Figure 1
3. M^s ↓ during Depression (Friedman and Schwartz): money "tight"
4. Wrong structural model to look at link of *i* and I, should look at i_r and I: evidence in 1 and 2 suspect

Real and Nominal Interest Rates



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Early Monetarist Evidence

Monetarist evidence is reduced from

Timing Evidence

(Friedman and Schwartz)

1. Peak in M^s growth 16 months before peak in Y on average
2. Lag is variable

Criticisms:

1. Uses principle: Post Hoc, Ergo Propter Hoc
2. Principle only valid if first event is exogenous: i.e., if have controlled experiment
3. Hypothetical example (Fig 2): Reverse causation from Y to M and yet M^s growth leads Y

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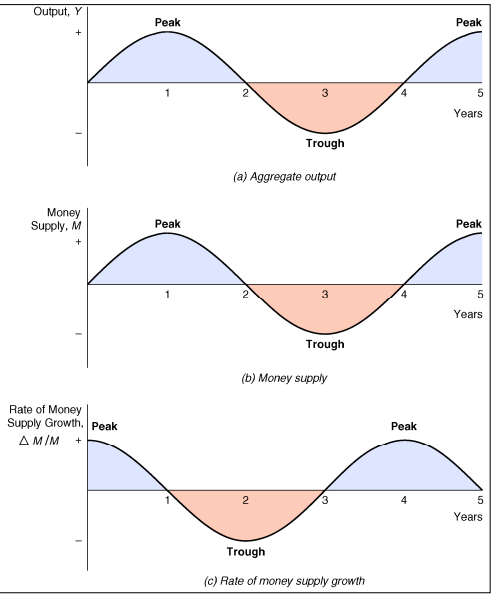
Hypothetical Example in Which □m/*M* leads *Y*



Statistical Evidence

Horse race: correlation of *A* vs *M* with *Y*; Friedman and Meiselman, *M* wins

Criticisms:

1. Reverse causation from *Y* to *M*, or third factor driving
   M and *Y* are possible
2. Keynesian model too simple, unfair handicap
3. *A* measure poorly constructed

Postmortem with different measures of *A*: no clear-cut victory

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Historical Evidence

Friedman and Schwartz: *Monetary History of the U.S.*

1. Important as criticism of Keynesian evidence on Great Depression
2. Documents timing evidence

More convincing than other monetarist evidence:

Episodes are almost like "controlled experiments"

1. Post Hoc, Ergo Propter Hoc applies
2. History allows ruling out of reverse causation and third factor: e.g., 1936–37 rise in reserve requirements and 1937-38 recession

Monetary Transmission Mechanisms

Traditional Interest-Rate Channels

$M \uparrow, i \downarrow, I \uparrow, Y \uparrow$

$M \uparrow, P^e \uparrow, \pi^e \uparrow, i_r \downarrow, I \uparrow, Y \uparrow$

Other Asset Price Channels

International Trade

$M \uparrow, i \downarrow, E \downarrow, NX \uparrow, Y \uparrow$

Tobin's q

$M \uparrow, P_s \uparrow, q \uparrow, I \uparrow, Y \uparrow$

Wealth Effects

$M \uparrow, P_s \uparrow, W \uparrow, C \uparrow, Y \uparrow$

Credit View

Bank Lending

$M \uparrow$, deposits $\uparrow$, bank loans $\uparrow$, $I \uparrow$, $Y \uparrow$

Balance-Sheet

$M \uparrow$, $P_e \uparrow$, adverse selection $\downarrow$, moral hazard $\downarrow$, lending $\uparrow$, $I \uparrow$, $Y \uparrow$

Cash Flow

$M \uparrow$, $i \downarrow$, adverse selection $\downarrow$, moral hazard $\downarrow$, lending $\uparrow$, $I \uparrow$, $Y \uparrow$

Unanticipated Price Level

$M \uparrow$, unanticipated $P \uparrow$, adverse selection $\downarrow$, moral hazard $\downarrow$, lending $\uparrow$, $I \uparrow$, $Y \uparrow$

Liquidity Effects

$M \uparrow$, $P_e \uparrow$, value of financial assets $\uparrow$, likelihood of financial distress $\downarrow$, consumer durable and housing expenditure $\uparrow$, $Y \uparrow$

Lessons for Monetary Policy

1. Dangerous to associate easing or tightening with fall or rise in nominal interest rates.
2. Other asset prices besides short-term debt have info about stance of monetary policy.
3. Monetary policy effective in reviving economy even if short-term interest rates near zero.
4. Avoiding unanticipated fluctuations in price level important: rationale for price stability objective.