

Monetary Policy Targets (11/2/2010)

Econ 310-004

Definitions

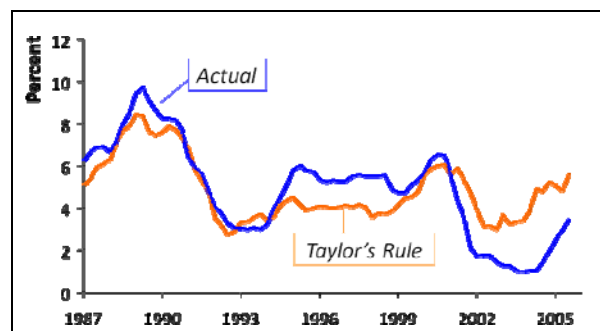
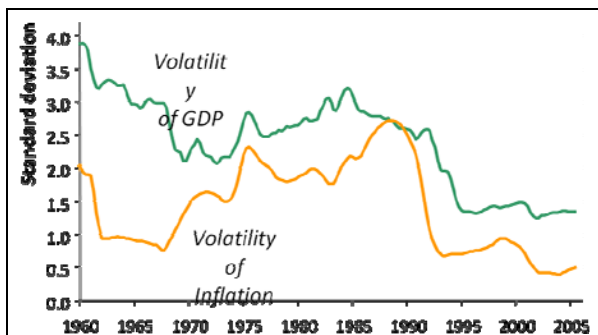
- **policy instrument** – variable that responds to tools and indicates stance (easy, tight) of monetary policy
- **intermediate target** – stands between the instruments and goals of monetary policy
- **monetary targeting** – central bank announces targets for annual growth rate of a monetary aggregate
- **real bills doctrine** – creation of paper or credit money will not cause inflation as long as the money is issued in exchange for sufficient security (thoroughly discredited)
- **procyclical** – economic quantity positively correlated with state of economy; up in booms, down in busts
- **countercyclical** – economic quantity negatively correlated with state of economy
- **automatic stabilizers** – policies that stimulate or depress the economy when necessary without any deliberate policy change (designed to reduce lags)
- **rules** – policymakers announce in advance how policy will respond in various situations, and commit themselves to following through
- **discretion** – as events occur and circumstances change, policymakers use their judgment and apply whatever policies seem appropriate at the time
- **time inconsistency** – policymakers have an incentive to renege on a previously announced policy once others act

Equations

- $i_{ff} = \pi + 2 + 0.5(\pi - 2) + 0.5[100(y - y_n)/y_n]$ Taylor Rule
- $i_{ff} = (\text{inflation rate}) + (\text{equilibrium real fed funds rate target}) + 0.5(\text{inflation gap}) + 0.5(\text{GDP gap})$

Variable definitions

- $i_{ff} \equiv$ nominal federal funds rate target
- $\pi \equiv$ inflation rate
- $y \equiv$ real GDP
- $y_n \equiv$ real GDP at natural rate of unemployment
- equilibrium real federal funds rate = 2
- inflation gap = $\pi - 2$
- GDP gap = $100(y - y_n)/y_n$
 - percent GDP below natural rate



Monetary policy

- tools
 - open market operations
 - discount rate
 - required reserve ratio
- instruments
 - reserve aggregates
 - reserves
 - non-borrowed reserves
 - monetary base
 - interest rates
 - short-term interest rates
 - federal funds rate
- targets
 - monetary aggregates
 - M1
 - M2
 - interest rates
 - inflation rate
 - long-term interest rate
 - short-term interest rate
- goals
 - price stability
 - high employment
 - economic growth
 - financial market stability
 - interest-rate stability
 - foreign exchange stability

Policies

- Active policy advantages
 - monetary policy can stabilize economy
 - fiscal policy can stabilize economy
- Passive policy advantages
 - long & variable lags to policies
 - Milton Friedman emphasized this
 - may de-stabilize when takes effect
- Rules advantages
 - distrust of policymakers & political process
 - time inconsistency

Targeting

- monetary targeting (United States)
 - money supply growth targets announced
 - Arthur Burns in 1975
 - often missed targets
 - focus on non-borrowed reserves
 - Paul Volker in 1979
 - won't use monetary aggregates
 - Greenspan in 1993
- inflation targeting
 - medium-term numerical target for inflation
 - public announcement
 - commitment to price stability
 - primary, long-run goal
 - many variables are used in making decisions
 - increased transparency of the strategy
 - increased accountability of the central bank
- no explicit nominal anchor
 - no overriding concern for the Fed
 - used by the Fed recently
 - "just do it" approach
 - forward looking behavior
 - periodic "preemptive strikes"
 - goal: prevent inflation from getting started

Monetary policy rules

- constant money supply growth rate
 - advocated by monetarists
 - Friedman k-percent rule
 - 4% per year
- target growth rate of nominal GDP
- target the inflation rate
- the Taylor Rule
 - target the federal funds rate
 - based on
 - inflation rate
 - GDP gap
 - inflation gap
 - proposed by John Taylor
 - examples
 - if $\pi = 2\%$ & $y = y_n$, $iff = 4\%$
 - $\pi \uparrow$ by 1% \rightarrow $iff \uparrow$ by 1.5%
 - $(y - y_n) \uparrow$ by 1% \rightarrow $iff \uparrow$ by 0.5%

History of Federal Reserve policy

- Early years of the Fed (1913-1921)
 - discount loans the primary policy
 - real bills doctrine (discredited)
- Discovery of OMO (1921-1929)
 - Federal Reserve needed more revenue
 - invested in income earning securities
 - open market operations
 - accidentally discovered
- Great Depression (1929-1941)
 - raised discount rate too late
 - bank failures reduced money supply
 - Fed didn't understand
 - M1 contracted 25%
 - believed was expanding M^s
 - Fed didn't act as LOLR
- Reserve requirements (1933-1941)
 - reserve requirements power
 - got 1933, expanded 1935
 - ER hurt monetary policy
 - raised reserve requirements
 - caused 1937-1938 recession
 - "double dip"
- Pegging of interest rates (1942-1951)
 - skyrocketed government spending
 - finance WWII cheaply
 - pegged interest rates
 - if interest rates on bonds rose
 - open market purchases
 - interest rates would fall
 - rapid growth in MB & money supply
- Targeting money market (1950s, 1960s)
 - intuitive judgment
 - money market feel
 - i.e., interest rates
 - pro-cyclical policy (for M)
 - $Y \uparrow \rightarrow i \uparrow \rightarrow MB \uparrow \rightarrow M \uparrow$
 - $\pi \uparrow \rightarrow \pi^e \uparrow \rightarrow i \uparrow \rightarrow MB \uparrow \rightarrow M \uparrow$
 - monetarists criticized
- Targeting monetary aggregates (1970s)
 - wasn't really monetary targeting
 - actually used fed funds rate
 - still pro-cyclical policy (for M)
- New operating procedures (1979-1982)
 - de-emphasis on fed funds rate
 - main: non-borrowed reserves
 - still used interest rates
 - Paul Volcker was Fed chair
 - not serious about aggregates
 - avoided blame for high interest rates
 - anti-inflation strategy
- De-emphasis of monetary aggregates (1982-1993)
 - borrowed reserves main instrument
 - discount loans
 - pro-cyclical policy (for M)
 - breakdown in M:GDP relationship
- Federal funds targeting II (1993-present)
 - monetary aggregates not used
 - federal funds rate main instrument/target
 - announced starting 1994
- Other considerations
 - pre-emptive strikes against inflation
 - pre-emptive strikes against recessions
 - international considerations