

Monetary Policy Rules

Graduate Macroeconomics I

ECON 309

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Role of the fed funds rate term

- Taylor argued that the behavior of the federal funds rate incorporated in his rule is a reasonable approximation to the actual process of adjustment of the funds rate targets the FOMC used between 1987 and 1993—a period during which monetary that generates the operating instructions in the Fed's current practice.

Taylor Rule: Example

$$\begin{aligned} \textit{funds rate}(t) = & \textit{GDP price inflation}(t) \\ & + 2.0 + 0.5 \times (\textit{GDP price inflation}(t) - 2.0) \\ & + 0.5 \times (\textit{output gap}(t)) \end{aligned}$$

Inflation Targeting

- **Another approach to monetary policy, known as inflation targeting, has been instituted by the central banks in several foreign countries.**
- **Its application varies from country to country, started with the Reserve Bank of New Zealand, and has been adopted by the Bank of Canada, the Bank of England, the Bank of Finland, the Swedish Riksbank, and the Reserve Bank of Australia.**
- **These central banks announce in advance their policy objective for an inflation rate.**
- **In none of these cases has the central bank specified the decision rule that it will use to achieve the stated objective.**

Monetary Policy Rules

- A rule can be defined as “nothing more than a systematic decision process that uses information in a consistent and predictable way.”
- Poole’s purpose is to examine what we mean by a monetary policy rule followed by a central bank, and to examine what we know about the construction, or design, of the rule.

Types of Rules

- **Rules that govern our interaction with the environment.**
- **Rules that govern our interaction with others.**
- **A third type of rule involves the formulation of policy decisions.**
 - **Here, a systematic decision-making process is complicated because individuals and market participants observe or infer the actions of the policymakers and adjust their behavior in ways that work to their benefit, given their understanding of the policy regime.**
 - **This is the type of problem faced by monetary policy decision-makers.**
 - **Monetary policy is more like poker than like solitaire.**

What can Monetary Policy do?

- **There is now a consensus among economists and central bankers that the only long-run effect a monetary authority can have on an economy is to determine the sustained, or trend, rate of inflation.**
- **That rate will result from the rate at which the monetary authority injects money into the economy.**

What can Monetary Policy do?

- **The idea—that the general price level and its rate of increase depends primarily on the level of the money stock and its rate of increase—fell out of favor with the rise of Keynesian analysis in the 1930s and 1940s.**
 - **The idea was revived in the 1950s by Milton Friedman, who has lived to win the intellectual battle that sustained inflation is everywhere and always will be a monetary phenomenon.**
 - **Therefore one role of monetary policy is price stability.**

What can Monetary Policy do?

- **A consensus also exists that erratic monetary policy has sometimes produced instabilities in the economy.**
 - **Most analysts now agree that Federal Reserve actions contributed significantly to the severity of the Great Depression in the United States.**
 - **Monetary policies can make the economy either more or less stable.**
- **It is also generally accepted that central banks are responsible for acting as a lender of last resort in the event of a generalized liquidity crisis to maintain the soundness and function of the payments mechanism.**

Money Neutrality

- **A considerable amount of professional opinion, the general popular feeling, and financial-market commentary hold that monetary policy actions initially affect output, unemployment, and real interest rates, even though the long-run impact on these real variables is nil.**
- **Research efforts to quantify these initial effects, however, have failed to provide precise measures of the impact, and at least one school of thought maintains that such short-run effects are negligible.**

What is good Monetary Policy?

- **There is a compelling case, I believe, that the success or failure of monetary policy must be judged first and foremost by whether a central bank is able to achieve a low-inflation environment on a sustained basis.**
- **That environment is, in turn, conducive to maximum growth and efficient utilization of the resources available to a society.**
- **High growth and efficient utilization of resources depend on government policies beyond the central bank's control.**
- **Moreover, a central bank's contribution should be judged primarily by the average rate of inflation, and secondarily by the stability, or lack thereof, of the overall economy.**

FOMC

- Monetary policy decisions are the responsibility of the Federal Open Market Committee (FOMC).
 - The FOMC consists of the seven governors of the Federal Reserve System, the president of the Federal Reserve Bank of New York, and four of the presidents of the remaining 11 regional Federal Reserve Banks, on a rotating basis.
 - This committee meets eight times a year, to discuss the current state of the economy and the prospects for near-term developments.
 - The committee then votes on instructions—the Directive to the System Open Market Account Manager—that specify a target value for the federal funds interest rate.
 - The federal funds rate is the rate at which depository institutions borrow and lend to each other their reserves.

Open Market Operations

- **Once these instructions have been approved, it is the responsibility of the staff of the Open Market Desk at the Federal Reserve Bank of New York, in consultation with the Chairman and members of the Open Market Committee, to keep the actual funds rate close to the intended rate.**
- **The Desk proceeds by buying and selling U.S. government securities for the Federal Reserve's account, or by engaging in transactions that are the practical equivalent of buying and selling government securities.**

Expectations and Policy

- **An important development—if not *the* important intellectual development throughout the past 25 years in our understanding of how the macroeconomy works—is the recognition that expectations play a central role in affecting economic behavior.**
- **Previously, to the extent that expectations were considered at all, they were treated in a rather mechanical fashion.**
- **Contemporary analyses now postulate that individuals do not simply look to past economic outcomes to project the future path of important conditions like the inflation rate. Instead, individuals understand that it is in their self-interest to contemplate seriously what path the Federal Reserve likely will pursue for monetary policy and to align their expectations about future inflation with their perceptions of Fed actions.**
- **A monetary policy rule must take into account these market expectations and speculations.**

Expectations and Rules

“The fact that markets so often respond to comments and speeches by Fed officials indicates that the markets today are not evaluating monetary policy in the context of a well-articulated and well-understood monetary rule. The problem is a deep and difficult one. The Fed does not know how to specify its monetary policy decisions so that the market can look at the same data the Fed looks at and arrive at the same conclusion.”

Friedman Rule

- **Constant Growth Rate Rule**
- **Fixed Rule, invariant to the state of the economy.**
- **Not universally accepted as optimal.**
 - **Needs better definition of “money”.**
 - **Money demand is too erratic.**

Friedman Rule

- The rule calling for a constant growth rate of the money stock has many desirable features:
 - It is easy for the public to understand.
 - The rate of inflation cannot take off toward plus infinity or minus infinity if money growth is held constant.
 - Interest rates are free to fluctuate in response to changing market conditions.

Interest Rate Rules

- The policy rule for interest rates that has been discussed most often for several years now was proposed by Stanford economist John Taylor in 1993.
- His rule is an attractive one to consider because it is so closely linked to traditional Fed practice in setting an intended federal funds rate.

Taylor Rule

- The fed funds rate should equal an estimate of the economy's real rate of interest at a zero rate of inflation plus the Fed's target rate of inflation.
 - For example, with an estimate of an equilibrium real rate of interest of 2 percent, and a long-run target rate of inflation of 1 percent, the base rate for the federal funds rate would be 3 percent.
- An adjustment should be made to the intended federal funds rate when the inflation rate deviates from the FOMC's target inflation rate.
 - If the actual inflation rate is 2 percent, then the inflation deviation is 1 percentage point. The Taylor rule multiplies that deviation by a specified coefficient and adds the product to the intended federal funds rate.
- The third term in the Taylor rule is the deviation of real gross domestic product (GDP) from the path of potential GDP. We can call this quantity the GDP deviation.