

Improving the Use of Discretion in Monetary Policy

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OUTLINE

- Rules Versus Discretion Debate
 - The Case for Rules
 - The Case for Discretion
 - Constrained Discretion
- How Can Monetary Policy Discretion Be Made More Rule-Like
 - Adoption of a Nominal Anchor
 - Communicating a Monetary Policy Reaction Process
- Conclusions

RULES VERSUS DISCRETION DEBATE

- Rule:
 1. Automatic
 2. Precise prescription of how monetary policy instrument reacts to economic circumstances
- Discretion
 1. Monetary policy set on day-to-day basis
 2. No commitment

Case for Rules

- Monetary policy makers cannot be trusted
 - Made serious mistakes in U.S. monetary history
Friedman and Schwartz (1963), Meltzer (2004, 2014)
 - Great Inflation
 - Monetarists argue that money-growth rate rules would have avoided these mistakes

Case for Rules

- Rules avoid time time-inconsistency problem
 - Discretion leads to temptation to renege on optimal plan to exploit short-run tradeoff between unemployment and inflation
 - Problem does not come from monetary policymakers as in Barro and Gordon (1983), but from politicians who are short sighted (Mishkin-Westelius, 2008)
 - Commitment to instrument rule (i.e. Taylor, 1993 or money-growth rule) that embeds a nominal anchor prevents this temptation

Case for Rules

- Time-inconsistency problem can occur in other direction
 - When policy rate hits zero lower bound, want history-dependent policy of “lower for longer”
 - However, when inflation target is reached, there is temptation to renege.
 - Instrument rule that sets policy rate lower when price level is below target path solves this problem

Case for Discretion

1. A rule requires a reliable model of the macroeconomy
 2. A rule requires that the structure of the economy is stable
 3. A rule cannot foresee every contingency
 4. A rule does not allow judgement
- All four argue against rules and for some discretion

Case for Discretion: Rule Requires a Reliable Model

- Successful Taylor rule requires knowing
 1. Natural (equilibrium) rate of interest
 2. Potential GDP (natural rate of unemployment)
 3. Stable Phillips curve relationship
- Knowledge about all three is weak
 - Substantial recent downgrades of estimates of natural rate of interest, and don't really know why
 - Estimates of natural rate of unemployment highly uncertain and bad estimates led to serious past policy mistakes in past (e.g., 1970s)
 - Serious recent doubts about stability of Phillips curve

Case for Discretion Rule Requires Stable Economy

- Instrument rule only valid if economy is stable
- Example: Monetarist rules led to bad outcomes when structure of economy changed
- Switzerland example in late 1980s
 - Swiss National Bank adopted monetarist growth rate target for monetary base in 1980
 - New interbank payment system introduced in 1988 reduced demand for monetary base
 - Resulting upward shift in velocity led to very high Swiss inflation above 5%
- “We didn’t abandon monetary aggregates, they abandoned us.”

Case for Discretion

Rule Cannot Foresee Every Contingency

- Almost no one predicted that problems in one small part of the financial system (subprime mortgages) would lead to worst financial crisis since the Great Depression
- Required unprecedented measures by Fed and other central banks to contain the financial crisis.

Case for Discretion

Rule Does Not Allow Judgement

- Judgement is a key element of successful monetary policy (Svensson, 2003, 2005)
 - Example: Greenspan's maestro moment when he resisted raising rates in mid to late 1970s despite models saying rates should be raised.
- Judgement is inherently discretionary because rules necessarily are based on hard data

Case for Discretion

Monetary Policymakers Are Not Least Trustworthy than Rules

- Fed has learned a lot from past mistakes
- Beginning in the 1980s, monetary policy in U.S. has been quite good:
 - inflation low and until the global financial crisis muted business cycle fluctuations
 - Monetary policy was too easy in the runup to the global financial crisis(GFC), but was not primary factor driving housing bubble which led to the GFC, so monetary policy mistake was minor
- However, Fed actions during crisis and aftermath were far better than would have been dictated by instrument rules.

Case for Discretion

Illustration Using a Traditional Taylor Rule

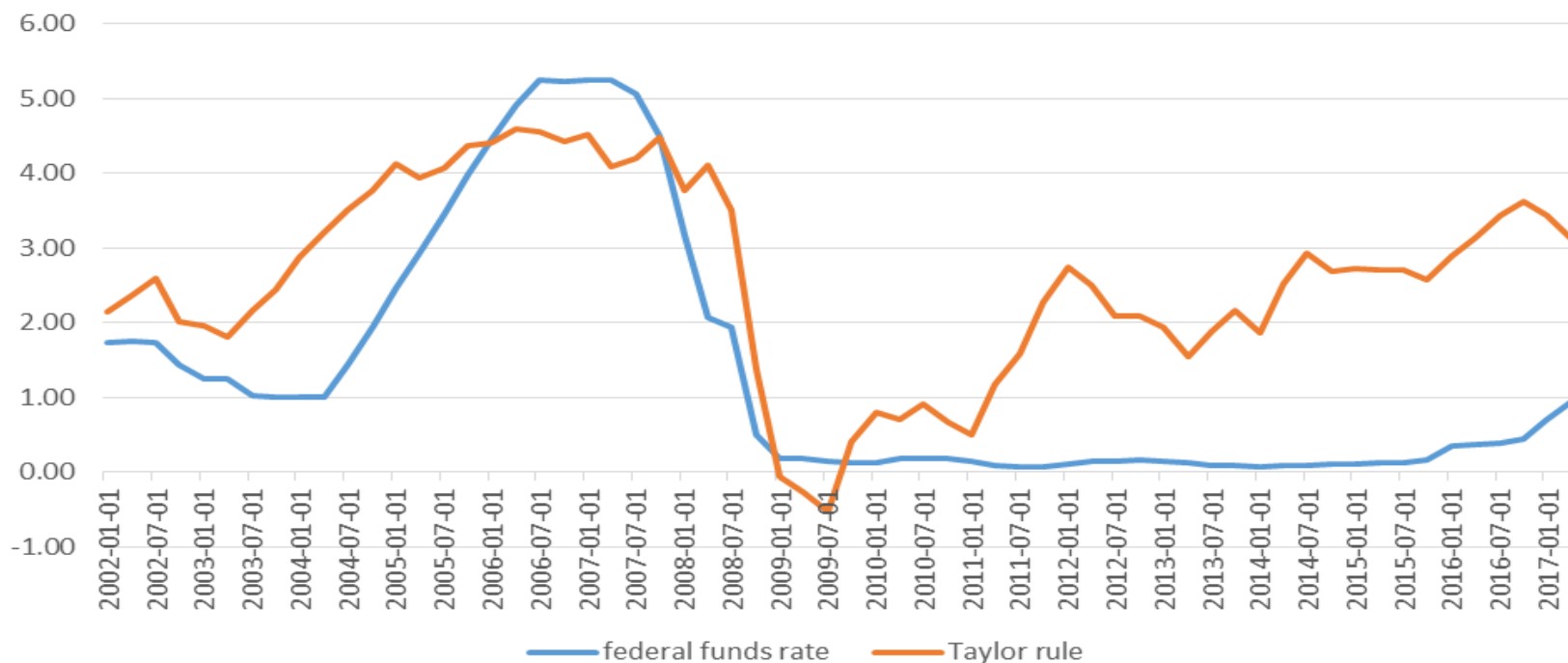
- To illustrate previous arguments, let's look at what a traditional Taylor (1993) rule would have recommended during the global financial crisis and its aftermath
- This is only an illustration because more sophisticated instrument rules might do a lot better than a traditional Taylor (1993) rule
- However, I suspect that any of those rules which would have reasonably been developed *before* the crisis would likely have run into similar problems

Case for Discretion

Illustration Using a Traditional Taylor Rule

Figure 1

Federal Funds Rate and the Taylor Rule, 2002-2017

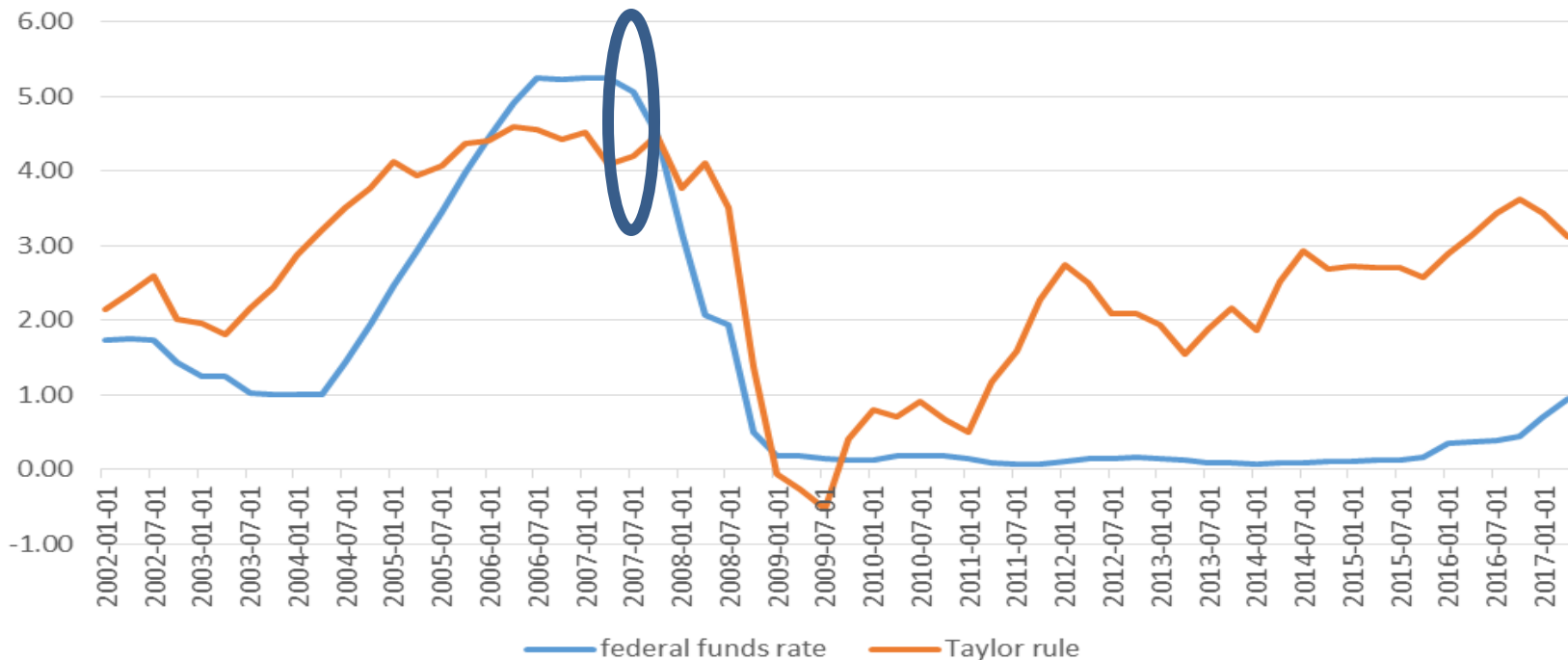


Case for Discretion

Illustration Using a Traditional Taylor Rule

Figure 1

Federal Funds Rate and the Taylor Rule, 2002-2017



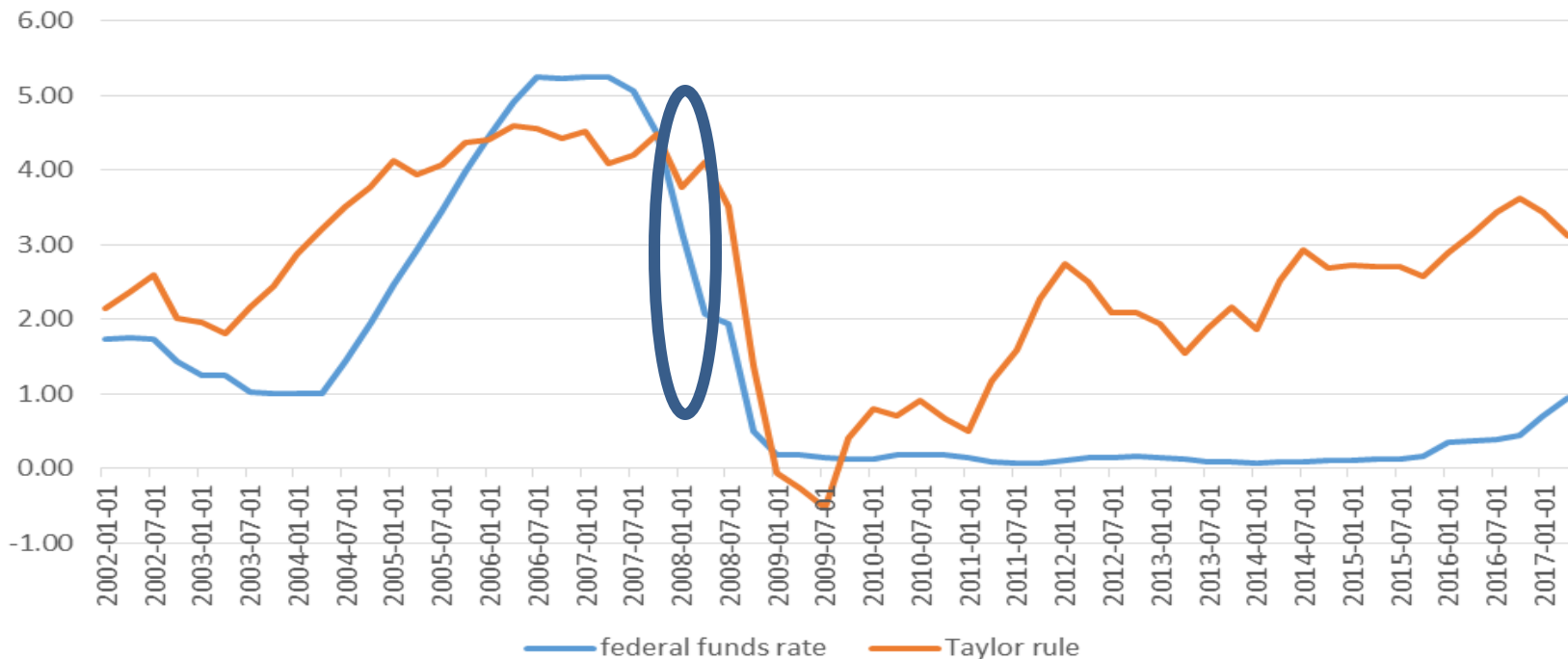
- From 2007Q2 to 2007Q4, Taylor Rule suggests 38 basis point fed funds rate increase, while Fed dropped it by 75 basis points

Case for Discretion

Illustration Using a Traditional Taylor Rule

Figure 1

Federal Funds Rate and the Taylor Rule, 2002-2017



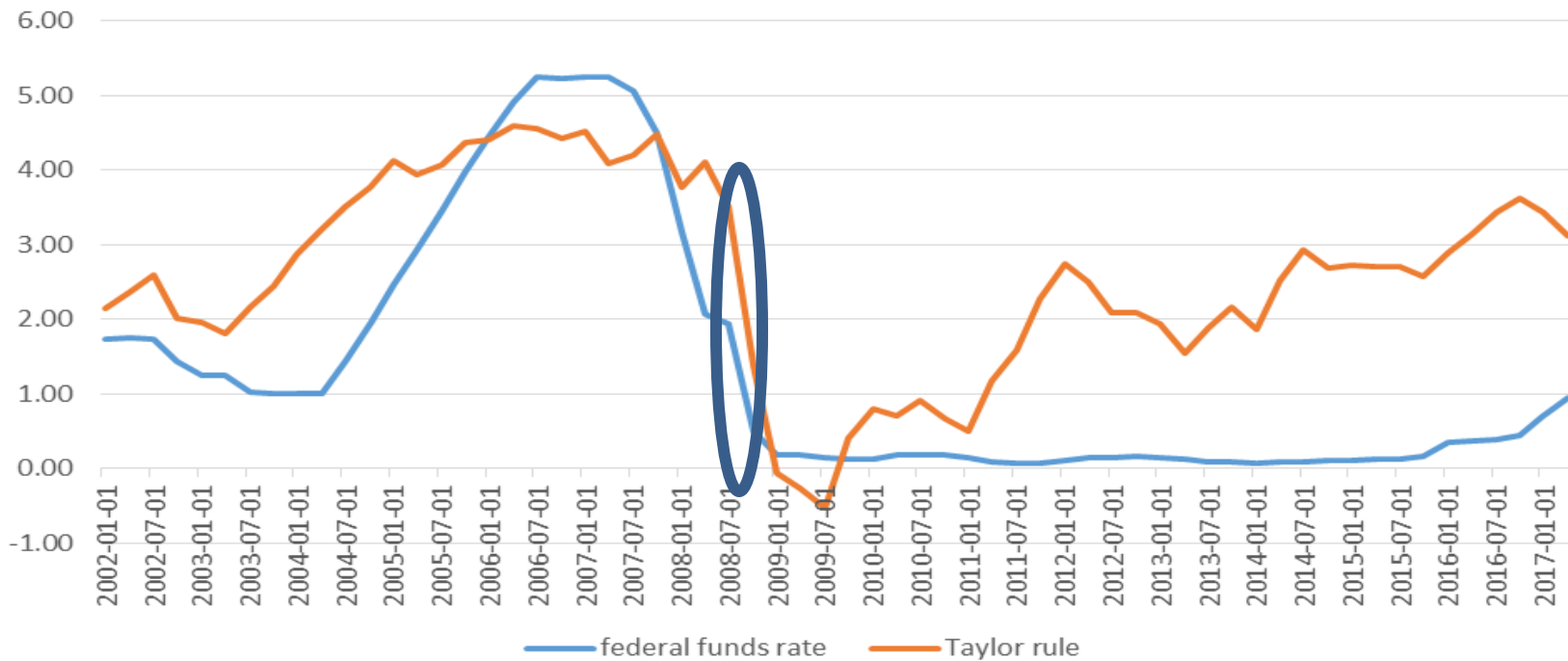
- From 2007Q4 to 2008Q2, Taylor Rule suggests fed funds rate stay near 4%, while Fed dropped it from 4.5% to below 2%.

Case for Discretion

Illustration Using a Traditional Taylor Rule

Figure 1

Federal Funds Rate and the Taylor Rule, 2002-2017



- From 2008Q2 to 2008Q4, Taylor Rule suggests fed fund rate decline, but still above actual fed funds rate rate

Case for Discretion

Illustration Using a Traditional Taylor Rule

- Very few economists would argue that Taylor rule produced better policy in this period than Fed
- Indeed, Fed should have acted even more aggressively as I and Eric Rosengren argued
- If Fed had not used discretion and departed from Taylor rule, economic outcomes more likely to have been horrendous

Case for Discretion

Illustration Using a Traditional Taylor Rule

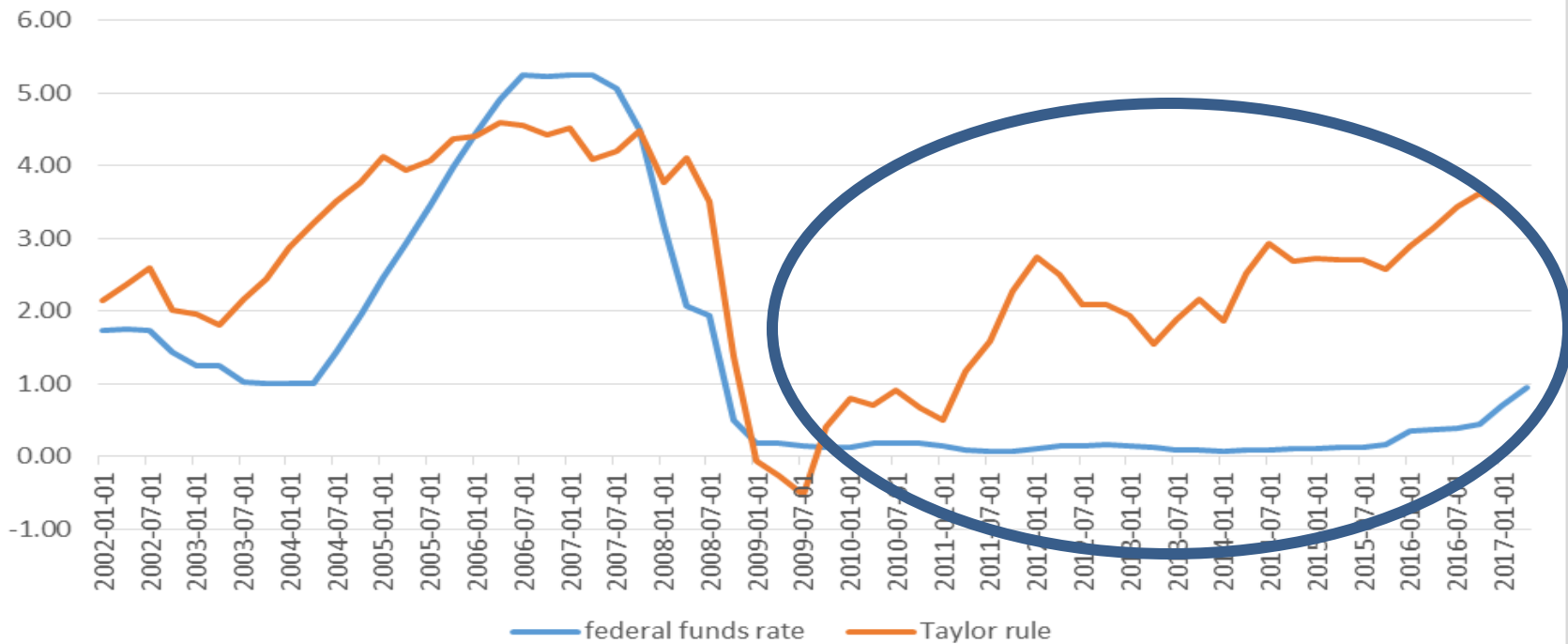
- Why was discretion needed?
 1. Standard DSGE models were wrong because they ignored effect of financial disruptions
 2. Financial crisis led to change in structure of economy, making it very nonlinear
 3. Financial crisis was not anticipated so contingency not contemplated
 4. Rapid reaction of Fed was not based on hard data but rather on judgement

Case for Discretion

Illustration Using a Traditional Taylor Rule

Figure 1

Federal Funds Rate and the Taylor Rule, 2002-2017



- From 2009Q2 to 2017Q2, Taylor Rule suggests fed fund rate rise by over 300 basis points, while Fed raises fed funds rate not at all until 2016Q2 and then gradually

Case for Discretion

Illustration Using a Traditional Taylor Rule

- Very few economists would argue that Taylor rule would have produced better policy in this period than Fed
- Why was deviation necessary?
 1. Natural rate of interest was falling below 2% in Taylor rule
 2. Inflation remained below 2% target despite low unemployment rates, suggesting unreliable Phillips curve or that natural rate of unemployment was lower.
- Again, Fed was using judgement

Case for Constrained Discretion; Making Discretion More Rule-Like

- So far case has been made against rules and against discretion with no commitment, but there is another alternative that is in between
- *Constrained discretion*, which disciplines monetary policy to be rule-like, but allows some flexibility, can avoid many of disadvantages of rules or pure discretion

HOW CAN MONETARY POLICY DISCRETION BE MADE MORE RULE-LIKE

- Adoption of a nominal anchor (inflation targeting, price-level targeting, nominal GDP targeting, or Woodford (2003) target criterion)
 - Sometimes referred to as *target rules*, but are not rules in the sense that they provide automatic prescriptions for how monetary policy should be conducted
- Increase accountability by communication of monetary policy reaction process

Adoption of a Nominal Anchor (Inflation Targeting)

- Inflation targeting has been successful in constraining discretion and its excellent inflation performance is strong argument against view central banks can't be trusted to conduct discretionary policy and so should adopt instrument rule
- Inflation targeting is a new technology for the conduct of monetary policy that avoids the time-inconsistency problem
- Advocates of instrument rules are fighting the last war: a problem that is no longer occurring, high inflation

Communicating a Policy Reaction Process

- Adopting a nominal anchor such as inflation targeting can constrain discretion, but might not have enough accountability
- Long lags in monetary policy mean that monitoring of central banks as to whether they have appropriate actions may take several years
- This is why advocates of rules do not view inflation targeting as sufficiently rule-like
- Can be addressed by better communication of monetary policy reaction process so markets and public can evaluate monetary policy actions in real time

Communicating a Policy Reaction Process

- Markets can glean info about reaction process from actual policy actions, as will see below
- More info can increase accountability by central bank explaining actions in terms of how it is consistent with a reaction process
- Can go further and get additional benefits by using data-based forward guidance

Communicating a Policy Reaction Process: Data-Based Forward Guidance

- Data-based forward guidance is not only providing info about future policy path, but also communicating how policy path would change as data and events evolves (reaction process)
- Norges Bank does this:
 - Provides future policy path with fan chart showing uncertainty
 - Explain scenarios showing why policy path would deviate from baseline when there are different economic outcomes

Communicating a Policy Reaction Process: Data-Based Forward Guidance

- Governance structure of FOMC does not speak with one voice as can Norges Bank, so can't provide probability distribution or reaction process for FOMC
- However, FOMC participants, particularly the Chair, could communicate how projections of policy path would react to economic events
- Even better if this task is delegated to the Chair

Communicating a Policy Reaction Process: Data-Based Forward Guidance

- Not only would data-based forward guidance improve discretion, but it has desirable expectations dynamics that improve economic outcomes
- Example of desirable expectations dynamics in Feroli et al (2017):
 - Negative shock leads to expectations that future policy path will be easier in future, so markets do heavy lifting by immediately lowering long-term rates, thereby stimulating the economy

Communicating a Policy Reaction Process: Data-Based Forward Guidance

- However, often have *time-based forward guidance*, in which central bank commits to a policy path at specific levels at specific calendar dates
- Not only provides less information about policy reaction process, but has perverse expectations dynamics

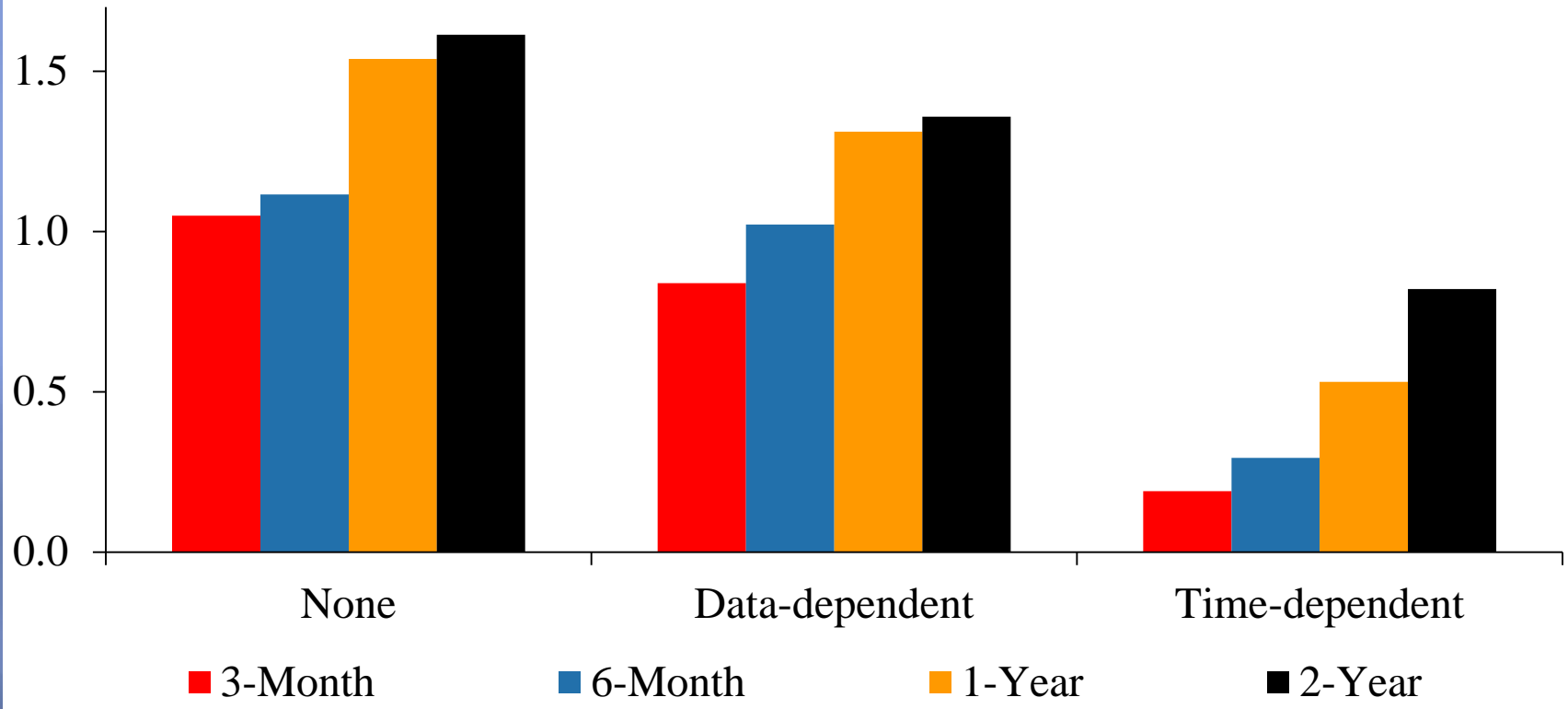
Communicating a Policy Reaction Process: Data-Based Forward Guidance

- Why time-based forward guidance has bad expectations dynamics
 - Because future policy path is fixed, negative shock does not lead to change in markets expectations of future policy, so no stimulatory effect from lowering of long rates
 - Even worse: negative shock likely to lower expected inflation, so real rate rises, which is in effect contractionary monetary policy that amplifies negative shock
 - Get same bad expectations dynamics as occurs with ZLB (Eggertson and Woodford, 2003)

Communicating a Policy Reaction Process: Data-Based Forward Guidance

Figure 2

Sensitivity Coefficient and Forward Guidance, 2001- 2015



- Empirical evidence supports theory that time-based forward guidance has bad expectations dynamics

Communicating a Policy Reaction Process: Data-Based Forward Guidance

- Data-based forward guidance should NOT be interpreted as a Taylor Instrument Rule
 - Policy reaction process changes over time, as policy makers learn how economy works or when structure of economy changes; and allows judgement
 - Example: August 2007, Fed would have explained that disruption in financial markets required a shift to much more expansionary reaction process and that judgements about financial disruption would affect future policy path.
 - If understood and credible, long-term rates would fall more rapidly in response to news that the financial disruption was getting worse, making monetary policy even more expansionary

Conclusion

- Both instrument rules and pure discretion lead to bad outcomes
- Alternative is to improve discretion by constraining it to be rule-like
- Constrain discretion by adopting a nominal anchor such as inflation targeting and communicating a monetary policy reaction process, especially through data-based forward guidance, which has additional benefits