#### Comments on "The Federal Reserve's Current Framework for Monetary Policy: A Review and Assessment" by Janice Eberly, James Stock, and Jonathan Wright

John B. Taylor

Conference on Monetary Policy Strategy, Tools, and Communication Practices (A Fed Listens Event)

June 4, 2019

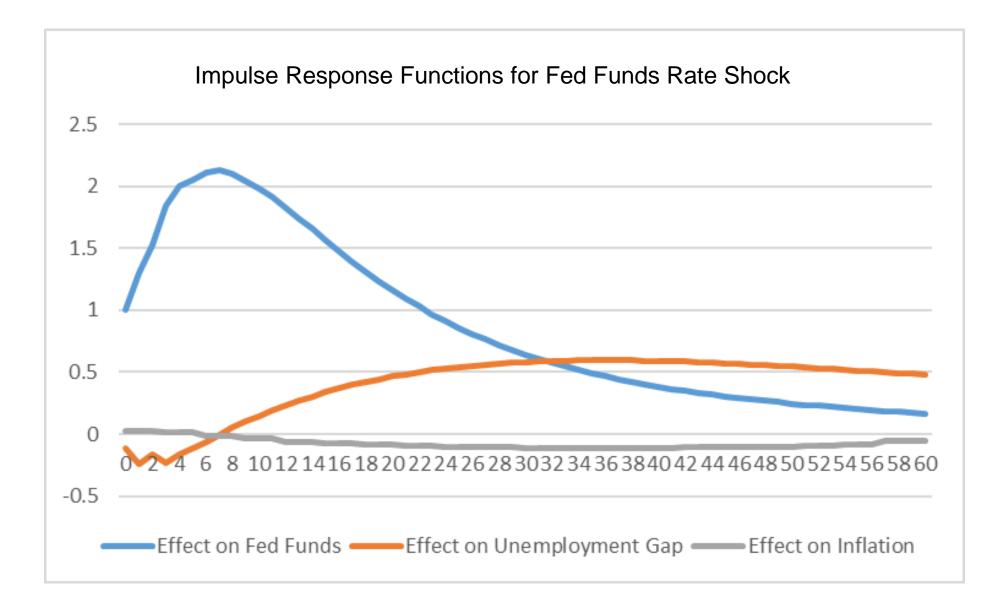
Federal Reserve Bank of Chicago

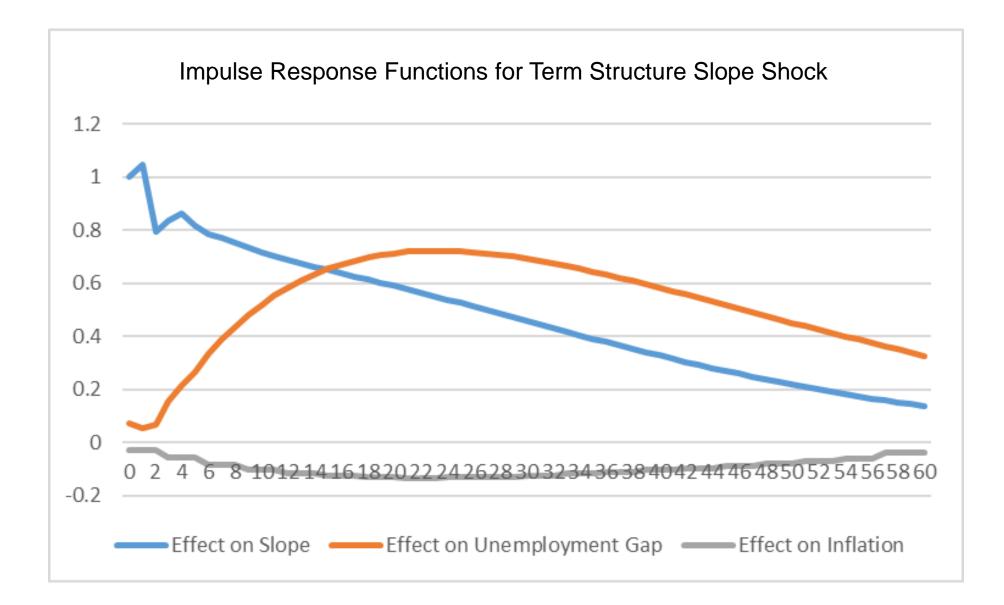
"This paper reviews and assesses the current monetary policy framework"... "formally adopted in 2012"

- But is 2012 the best line of demarcation?
- Bigger changes since 2017:
  - Publications: policy rules sections of *Monetary Policy Reports*
  - Actions: normalizing back towards rule-like policy that worked well in the past
  - Appointments
  - Speeches
- Deviations from rule-like policy began in 2003-2005
  - Leading up to great recession (too low for too long)
  - Other countries too: O. Jorda, M. Schularick, A. Taylor (2015)
  - Fed forward guidance began then, before the crisis
    - "considerable period" and "measured pace" periods.

# Centerpiece: A model "newly developed for this paper" Consists of

- Impulse response function (from VAR) relating unemployment to monetary policy "level" & "slope"
  - Instrument for the level is the <u>difference</u> between the federal funds futures and announced target
  - Instrument for the slope is a residual from a regression of a announcement window change in 10-year yield on <u>difference</u>
  - Stated objective: measure a "collective effect" of Forward Guidance, Summary of Economic Projections, and Large Scale Asset Purchases on the spread
- Phillips curve--replaces inflation equation in VAR
  - See next two charts for reason
  - But still driven by shocks (Cochrane, Taylor, Wieland (2019))
- Policy rule for "level" and fixed "slope" policies
  - implemented with sequence of unanticipated shocks





#### Rules from Fed's Monetary Policy Report, Feb. 2019, p. 37

#### A. Monetary policy rules

$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
$R_t^{T93adj} = maximum \left\{ R_t^{T93} - Z_t, 0 \right\}$
$R_t^{PL} = maximum \{r_t^{LR} + \pi_t + (u_t^{LR} - u_t) + 0.5(PLgap_t), 0\}$
$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

NOTE:  $R_t^{T93}$ ,  $R_t^{BA}$ ,  $R_t^{T93adj}$ ,  $R_t^{PL}$ , and  $R_t^{FD}$  represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, adjusted Taylor (1993), price-level, and first-difference rules, respectively.

#### Problems

- Empirical evidence shows separate "slope" policy does not work
  - Slope cannot be arbitrarily pulled apart from level as suggested in the model.
  - There is an interrelated term structure of policy rules
    - Smith & Taylor (2009)
- Consider papers by Stroebel and Taylor (2012), or better yet, by Hamilton (2019) at Hoover monetary policy conference held in May as shown here...

### Jim Hamilton (2019)

 "On net this rate rose during each of the episodes QE1-3 in which Fed actions were attempting to bring it down, and fell when the Fed was not making new purchases."

Figure 2. Interest rate on 10-year Treasury bond.

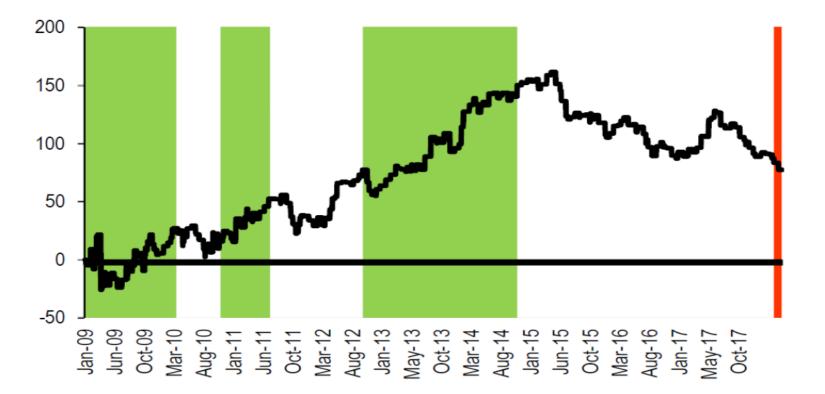


Hamilton (2019) Hoover Monetary Conference Strategies for Monetary Policy, May 3

#### Jim Hamilton (2019)

 "yields on average rose, not fell, during QE1-3, even if we focus on just days in which the Fed made an announcement."

Figure 3. Cumulative change in 10-year yield on Fed Days.



Notes to Figure 3. Cumulative change in interest rate on 10-year Treasury bond on FOMC meeting days days when FOMC minutes were released, or days with speech by Fed chair on economy or monetary policy, Jan 1, 2009 to Dec 29, 2017. Data source: Greenlaw et al. (2018).

#### More Problems

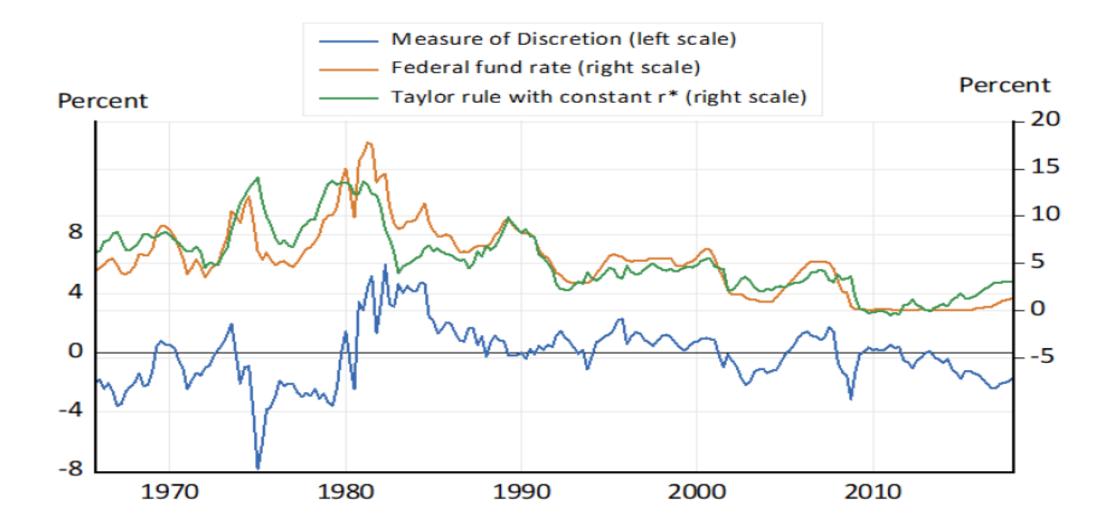
- Not a "structural" model suitable for evaluating different monetary policy rules
  - Just reduced form dynamics
  - Contrary to monetary policy evaluation models developed for 40 years—e.g. Taylor (1979)
- At the least, there's a need for rigorous checks of robustness of the results using the other models

### Example: Checking for robustness

- Cochrane, Taylor Wieland (2019) also evaluated rules in Fed's *Report*
- Used 7 structural models (Macro Model Data Base)
  - OK: small 3-equation old-Keynesian model
  - NK: small 3-equation new-Keynesian model
  - SW: Smets Wouters (2007) medium-size policy model
  - TMCM: Taylor (1993) multi-country model with rational expectations, staggered contracts
  - CCTW10: Cogan, Cwik, Taylor and Wieland (2010), model which extends the SW model.
  - CMR14: Christiano-Motto-Rostagno (2014), which model with financial frictions
  - IN10: Iacoviello and Neri (2010) model which adds a housing market and financial frictions.
- Results show that most rules in Fed's *Report* would have worked well.

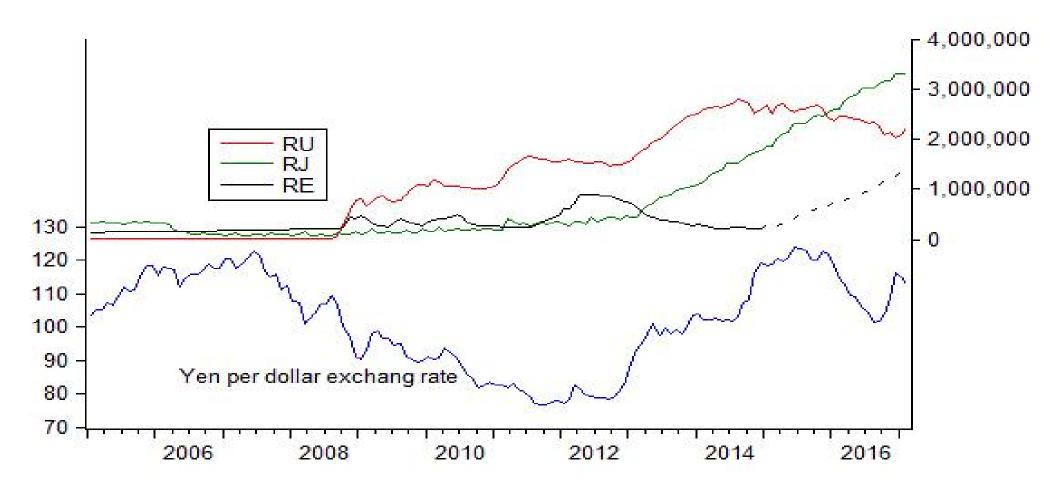
### Measures of Discretion

- Created by comparing rules in the *Report* to actual policy.
- Longer history
  - Much discretion in the 1970s:
    - Time of poor performance.
  - Little discretion in most of the 1980s and 1990s:
    - Time of good performance.
  - Discretion rose again in the early 2000s:
    - Occurred just prior to the great recession.



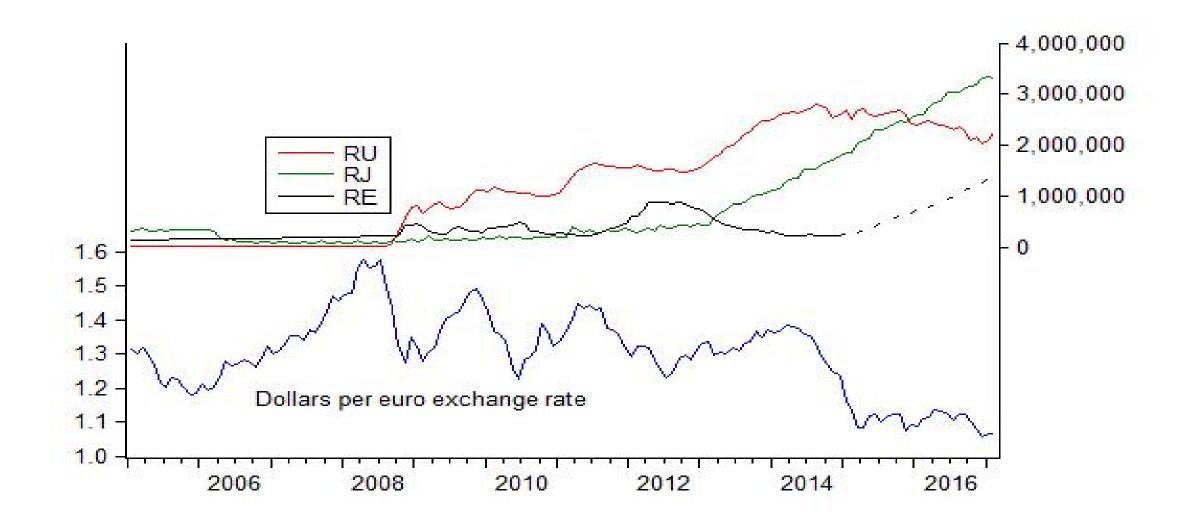
What about exchange rates and QE?

Need global normalization & international monetary reform



Yen Dollar Exchange Rate & Reserve Balances at Fed(Ru), BOJ(RJ), ECB(RE)

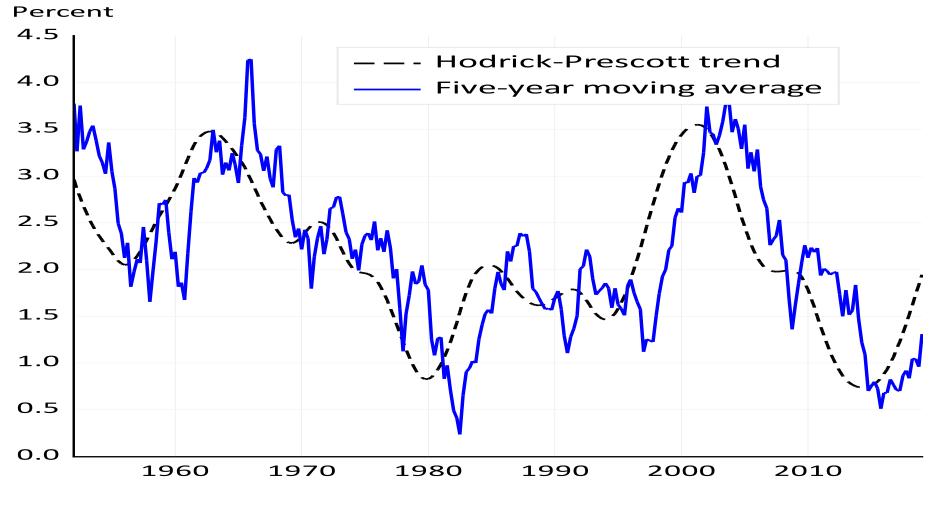
Source: Taylor (2019)



Euro-Dollar Exchange Rate & Reserve Balances: Fed(Ru), BOJ(RJ), ECB(RE)

Source: Taylor (2019)

An aside, but disagree with paper's view that slow growth from 2009-16 after great recession was due to secular headwinds rather than policy



Productivity growth

## Conclusion

- Evidence is weak that "new suite of slope policies" played an important role in supporting the recovery
  - Robustness studies are essential for good policy analysis
- The zero lower bound need not have forced policy away from rules or strategies
  - certainly not in the 2003-2005 period
- The Fed should not raise its inflation target or accept opportunistic reflation
- It should continue with the normalization process
- Internationally, the Fed and other central banks should aim for
  rule-like policy
  - flexible exchange rates between currency zones
  - open capital markets

#### References

Cochrane, John H., John B. Taylor and Volker Wieland (2019), "Evaluating Rules in the Fed's Report and Measuring Discretion," paper presented at the conference, *Strategies for Monetary Policy*, Hoover Institution, Stanford University, May 3.

Federal Reserve Board (2019), Monetary Policy Report, February, Washington, DC

Greenlaw, David, James D. Hamilton, Ethan Harris, and Kenneth D. West (2018), "A skeptical view of the impact of the Fed's balance sheet." National Bureau of Economic Research working paper 24687,.

Hamilton, James D. (2019), "Perspectives on U.S. Monetary Policy Tools and Instruments," presented at the conference, *Strategies for Monetary Policy*, Hoover Institution, Stanford University, May 3.

Jordà, Òscar, Moritz Schularick, Alan M. Taylor (2015) "Betting the House" *Journal of International Economics*, Vol. 96(S1), pp. 2-18.

Smith, Josephine and John B. Taylor (2009), "The Term Structure of Policy Rules," *Journal of Monetary Economics*, 56 (7), pp. 907-917

Stroebel, Johannes C. and John B. Taylor (2012), "Estimated Impact of the Federal Reserve's Mortgage-Backed Securities Purchase Program," *International Journal of Central Banking*, 8 (2), June, pp. 1-42

Taylor, John B. (1979), "Estimation and Control of a Macroeconomic Model with Rational Expectations," *Econometrica*, 47 (5), September,, pp. 1267-1286.

Taylor John B. (2019), Reform of the International Monetary System: Why and How, MIT Press, Cambridge