Discussion of "Policy Rules and Economic Performance" by Nikolkso-Rzevskyy, Papell & Prodan

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Disclaimer: The views expressed herein are solely those of the author and do not necessarily reflect the views of the Bundesbank or the Eurosystem.

In A Nutshell

- Research question: How can we evaluate monetary policy rules by using economic outcomes associated with deviations?
- Loss ratio (LR) as new metric:

$$LR^m = \frac{\text{Avg. loss in periods with policy deviations from rule m}}{\text{Avg. loss in periods with policy close to rule m}} \quad (1)$$

- Evaluate policy rules of the form

$$i_t = \mu + (1 + \alpha)\pi_t + \gamma y_t \qquad \alpha > 0, \gamma > 0 \quad (2)$$

relative to observed FFR using realized values for inflation and output gap to calculate loss.

Main Results

1. Almost all policy rules feature $LR > 1$.

   $\Rightarrow$ Economic performance is better in low deviations periods than in high deviations periods.

2. Rules with $\alpha > \gamma$ have higher LRs.

   $\Rightarrow$ Macro stabilization of inflation gap tilting rules is superior.

   $\Rightarrow$ Fed should add such a rule to its reference rules.

What I Liked

- Intuitive and straightforward metric.
- Innovative view on rule evaluation: "How costly is it to deviate from this rule?"
- Perspective closer to actual policy-making process where rules are used as reference.

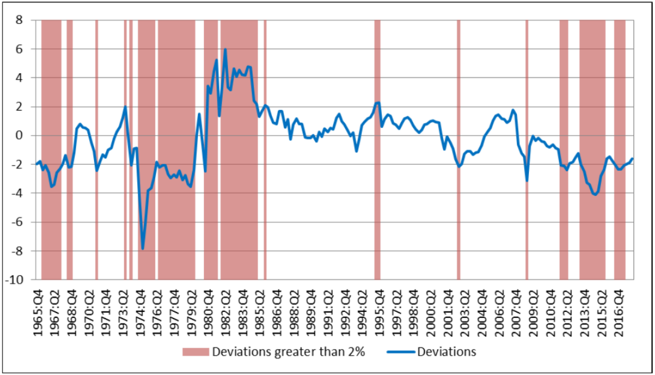
Comments

1. An alternative view on what the LR based on empirical outcomes tells us.
2. Some questions related to the superiority of inflation gap tilting.

The Message of the LRs (1/3): Taylor (1993) Rule

Your approach: Evaluate rules **relative to observed FFR** based on **realized** macroeconomic outcomes (sample: 1965Q4 - 2017Q3).

Figure 6. Deviations from the Original Taylor Rule



The Message of the LRs (2/3): Realized Outcomes

- No counterfactual evaluation = "What is the macroeconomic stability under rule m relative to rule n (or FFR)?"
- LR based on empirical outcomes = "How was macroeconomic stability after FFR was inconsistent with rule m relative to the macroeconomic stability after FFR was consistent with rule m?".
- By using realized macro outcomes, you implicitly associate these completely to the deviation between rule and actual FFR.
- Realized losses might be independent of policy choice (extreme case: RBC world or good luck story of Great Moderation).

The Message of the LRs (3/3): Alternative Phrasing

1. Historical deviations of FFR from Taylor rules tend to be followed by a deterioration of macroeconomic stability.

   ⇒ Evidence that (discretionary) deviations from policy rules are suboptimal.

2. Macroeconomic stability was better during the Great Moderation compared to 1965-1985 (where FFR should be inconsistent with most rules).

   ⇒ Taylor rule principle from a different angle (Taylor, 1999; Clarida et al., 2000).

The Optimality of Inflation Gap Tilting

- Lots of argument and previous evidence that inflation gap tilting is preferred to output gap tilting (uncertainty, misperception, many NK models...).
- But why/how does the LR detect this using the empirical data?
    - In which periods did the FFR deviate from strong inflation gap tilting rules? In which periods from output gap tilting rules?
    - What is the overlap between those periods?
    - How does this relate to the finding that the FFR is more consistent with output gap tilting?

Conclusion

- Innovative new metric to evaluate monetary policy rules against the backdrop of constrained discretion.
- Metric can be calculated using empirical data and within models.
- Evidence that discretionary deviations from policy rules were suboptimal in the US.
- Inflation gap tilting rules seem to perform better.
- Many compelling open questions: Superiority of inflation gap tilting, application of metric in models, Fed behavior vs. specific rules, alternative variants of the loss ratio (absolute, median, max-min...)

Minor Comments

- Disclaimer: These are some smaller comments, mostly with respect to the exposition. Purely based on my taste, so feel free to ignore them in case you have different preferences.
- Typo in the last sentence of the abstract, "direction" should probably be "discretion"
- You could probably add Orphanides (2001, AER) to the references in the first paragraph of the introduction which justify Fed behavior.
- It took me relatively long to make sure you are talking about deviations **from the rule** under consideration. This does not immediately follow from the abstract and is clarified for the first time in paragraph 7 of the introduction – a bit too late for my taste.
- In the introduction, you write that the superiority of inflation gap tilting rules is robust to different society objectives. However, I could not find the respective tables in the draft I received.

Minor Comments (cont.)

- You could add a footnote clarifying that you are not evaluating welfare.
- The sum in the loss function at the beginning of Section 3 is puzzling me. I think you are referring to the loss in period t, not the sum over all periods, especially as there are no subscripts. This is the formulation I used in my discussion.
- You could think of looking at alternative definitions of the loss ratio. For example, take the absolute sum of losses instead of the average, the median or the maximum loss.
- You might want to look at Orphanides and Wieland (2013, IJCB) and Binder et al. (2019, Oxford Handbook on the Economics of Central Banking). They derive some results on optimal policy rules in the presence of model uncertainty. From my viewpoint, their results are not quite supportive of your point on inflation gap tilting. But they also consider an additional term in the Taylor rule which is the output gap growth. In that case, the coefficient on inflation is mostly lower than the one on the output gap.

Minor Comments (cont.)

- This should be an accurate representation of the loss ratio.

$$LR^m = \frac{\frac{1}{\sum_{t=0}^{T} DH_t^m} \sum_{t=0}^{T} L_t DH_t^m}{\frac{1}{\sum_{t=0}^{T} DL_t^m} \sum_{t=0} L_t DL_t^m} \tag{3}$$

$$DH_t^m = 1 \quad \text{if} \quad \mid i_t^m - FFR_t \mid > 2 \tag{4}$$

$$DL_t^m = 1 \quad \text{if} \quad \mid i_t^m - FFR_t \mid < 2 \tag{5}$$

$$L_t = (\pi_{t+j} - \pi^*_{t+j})^2 + (U_{t+j} - U^*_{t+j})^2 \qquad j = 6 \tag{6}$$

- Rule m is preferred to rule n if $LR^m > LR^n$.