

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

DIVISION OF MONETARY AFFAIRS

Date: April 12, 2018
To: Trevor Reeve
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Subject: The Neutral Rate and the Summary of Economic Projections: An Update

The table below updates Bongard and Johannsen (2016) by analyzing recent releases of the Summary of Economic Projections (SEP).¹ I find that SEP projections are consistent with the assessment that the short-run neutral rate (r_t^*) in 2018 and 2019 rose by a little more than one percentage point between the December 2017 and March 2018 SEPs. With relatively little change in the projected paths for the federal funds rate and inflation, the implied projected gap between r_t^* and the real federal funds rate has widened.

Table 1: Estimates of SEP-Implied r_t^*

	2018	2019
March 2018 SEP	2.15	1.68
December 2017 SEP	0.83	0.67
September 2017 SEP	0.63	0.47

Model Addendum: To extract implied estimates of r_t^* , I assume that the unemployment rate gap (\tilde{u}_t), defined as the deviation of the unemployment rate from its longer-run value, is determined by its own lagged value and the difference between the lagged real federal funds rate (r_{t-1}) and r_{t-1}^* , so that

$$\tilde{u}_t = \alpha \tilde{u}_{t-1} + \beta (r_{t-1} - r_{t-1}^*) + \epsilon_t. \tag{1}$$

The innovation term (ϵ_t) captures events at time t that were not predictable in earlier periods. I rearrange equation (1) and take expectations to obtain

$$E_t \{ r_{t+h} - r_{t+h}^* \} = \frac{1}{\beta} E_t \{ \tilde{u}_{t+h+1} - \alpha \tilde{u}_{t+h} \}. \tag{2}$$

For comparability with Bongard and Johannsen (2016), I assume that $\alpha = 0.86$ and $\beta = 0.14$.² Using median SEP projections, I construct $E_t \{ \tilde{u}_{t+h} \}$ as the difference between the unemployment rate at the end of year $t + h$ and its longer-run level, and I construct $E_t \{ r_{t+h} \}$ as the difference between the nominal federal funds rate and one-year-ahead core PCE price inflation. The resulting implied values of $E_t \{ r_{2018}^* \}$ and $E_t \{ r_{2019}^* \}$ for the three most-recent vintages of the SEP are displayed in Table 1.

¹ Bongard, Michelle and Benjamin K. Johannsen (2016). "The Neutral Rate and the Summary of Economic Projections," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, November 28, 2016, <https://doi.org/10.17016/2380-7172.1890>.

² Updated estimates of α and β are similar.