

## THE FEDERAL RESERVE SYSTEM

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**Date:** October 13, 2015  
**To:** Federal Open Market Committee  
**From:** David Altig, Stephen A. Meyer, and Daniel G. Sullivan  
**Subject:** Background Material for  $r^*$  Discussion

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During the April FOMC meeting, a number of participants suggested that the Committee should have a discussion of the meaning of  $r^*$ , of its current level and how its level might be expected to evolve, and of its implications for the Committee's policy decisions. The attached four memos, listed below, address these issues.

1.  $r^*$ : Concepts, Measures, and Uses
2. Real Interest Rates Over the Long-Run
3. Estimates of Short-Run  $r^*$  from DSGE Models
4. Monetary Policy at the Lower Bound with Imperfect Information about  $r^*$

The first of the four memos identifies various concepts of  $r^*$ ; it also discusses the connection between  $r^*$  and simple policy rules such as the Taylor rule. The second memo focuses on factors that have contributed to persistent, longer-run, movements in  $r^*$ , and on empirical estimates of longer-run trends in  $r^*$ . The third memo focuses on shorter-term variations in  $r^*$  using insights derived from research on dynamic stochastic general equilibrium (DSGE) models; this memo emphasizes the effect of economic disturbances on  $r^*$  at business cycle frequencies. The fourth memo addresses the policy implications of uncertainty about the level and persistence of movements in  $r^*$ ; it includes a discussion of the implications of adjusting simple rules by incorporating a time-varying intercept term that proxies for movements in  $r^*$ .

Staff will provide short briefings on these four memos at the upcoming FOMC meeting. Participants will have an opportunity to ask questions and to provide comments (not a full go-round). If you would like to comment, it would be helpful if you would address some or all of the following questions:

1. What does your estimate of the current level of  $r^*$  imply for the degree of accommodation provided by current monetary policy?
2. How, in your view, has  $r^*$  been affected by recent changes in financial conditions, especially by movements in the exchange value of the dollar?
3. How do you expect  $r^*$  to evolve, and what are the implications for the appropriate path of policy going forward?