The evolution of the monetary policy regimes in the U.S.

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Abstract The existing literature on U.S. monetary policy provides no sense of a consensus regarding the existence of a monetary policy regime. This article explores the evolution of U.S. monetary policy regimes via the development of a Markov-switching model predicated on narrative and statistical evidence of a monetary policy regime. We identified five regimes for the period spanning 1956:I–2005:IV and they roughly corresponded to the Chairman term of the Federal Reserve, except for the Greenspan era. More importantly, we demonstrate that the conflicting results regarding the response to inflation for the pre-Volcker period in the existing literature is not attributable to the different data but due to different samples, and also provided an insight regarding the Great Inflation—namely, that the near non-response to inflation in the early 1960s appears to have constituted the initial seed of the Great Inflation. We also find via analysis of the Markov-switching model for the U.S. real interest rate, that the regime changes in the real interest rate follow the regime changes in monetary policy within 2 years and that the evolution of real interest rate regimes provides a
good explanation for the conflicting results regarding the dynamics of real interest rate.

**Keywords**  Monetary policy rule · Markov switching · Great Inflation · Real interest rate · Evolution

**JEL Classification**  E5 · C32

1 Introduction

Modeling the Fed’s monetary policy strategies in terms of responses to economic development has long been a subject of great interest to Macroeconomists. Since Taylor (1993) specified a Fed’s reaction function, wherein the real federal funds rate reacts to deviations in contemporaneous inflation from an inflation target and deviations in real output from its long-run potential level, a great deal of research has examined various versions of backward-looking and forward-looking Taylor rule for the U.S. monetary policy. Examples include the studies of Clarida et al. (1998, 2000), Judd and Rudebusch (1998), Taylor (1999), Orphanides (2001, 2002, 2004), Primiceri (2005, 2006), Boivin (2006), Kim and Nelson (2006), and Sims and Zha (2006), among others. Despite the substantial volume of useful research, however, there is far less of a consensus regarding the nature, evolution, or even the existence of monetary policy regime than should be the case.

Clarida et al. (2000) find that there are significant differences in the manner in which monetary policy was conducted pre- and post-late 1979 and the pre-Volcker rule that the Fed typically raised nominal rates by less than any increase in expected inflation permits greater macroeconomic instability than does the Volcker–Greenspan rule. Orphanides (2001) argues that estimating monetary policy rules based on *ex post* revised data, which were not available to policymakers in real-time, can generate a very distorted picture of historical monetary policy, and Orphanides (2004) shows that, using real-time information, there have been broad similarities in the monetary policy reaction function for the period prior to and after Volcker’s appointment as chairman in 1979 and a strong reaction to inflation forecasts during both periods, in contrast to Clarida et al. (2000). Thus, the conflicting results of these studies of the pre-Volcker monetary policy are associated with the nature of *ex post* revised data versus real-time data.

On the other hand, Sims and Zha (2006) employ the structural VAR models that explicitly allow for changes in the policy regime, and find that the best-fitting model is one that evidences only regime change in the variance of structural disturbances, but no change at all in the coefficients of the policy rule. Their results support the empirical practice of combining the samples prior to and after the Volcker period to estimate the model, so long as heteroscedasticity is properly taken into consideration. From the estimation of a time-varying structural VAR, Primiceri (2005) finds evidence of time variation in both systematic and non-systematic monetary policy; however, there appears to be little evidence for a causal link between changes in interest rate systematic responses and the high inflation and unemployment episodes, thereby indicating...