Abstract
This paper compares the quality of inflation forecasts generated by various models. These forecasts are generated over multiple horizons (3 months, 6 months, 12 months) and across multiple decades of United States inflation data. The performance of these forecasts is measured against the performance of a “naïve” (random walk) forecasting model and an AR(1) model. The metric of choice is the root mean squared error. The models considered are a random forest machine learning model, built on lags of inflation and other important macroeconomic variables; a standard vector autoregressive model; and an ARIMA model, optimized by AIC. The purpose of the paper is to compare the forecasting potential of the machine learning model to that of some more-traditional models. In general, the random forest model does outperform the others. This is especially true at lower forecasting horizons.