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**HETEROGENEOUS AGENTS, THE FINANCIAL CRISIS AND
EXCHANGE RATE PREDICTABILITY****Abstract:**

We construct an empirical heterogeneous agent model which optimally combines forecasts from fundamentalist and chartists agents and evaluate its out-of-sample forecast performance using daily data covering the period from January 1999 to June 2014 for six of the most widely traded currencies. We use daily financial data such as level, slope and curvature yield curve factors, equity prices, as well as risk aversion and global trade activity measures in the fundamentalist agent's predictor set to obtain a proxy the market's view on the state of the macroeconomy. Chartist agents rely upon standard momentum, moving average and relative strength index indicators in their predictor set. The individual agent specific forecasts are computed using the recently proposed flexible dynamic model averaging framework and are then aggregated into a model combined forecast using a forecast combination regression. We show that our empirical heterogeneous agent model produces statistically significant and sizable forecast improvements over the standard random walk benchmark, reaching out-of-sample R^2 values of 1.41, 1.07, 0.99 and 0.74 percent at the daily one-step ahead horizon for 4 out of the 6 currencies that we consider. Forecast gains remain significant for horizons up to three-days ahead. We show further that for 5 out of the 6 currencies, a substantial part of the forecast gains are realised over the September 2008 to February 2009 period, that is, around the time of the Lehman Brothers collapse. The time series evolution of the dynamic model combination weights shows that for the first half of the out-of-sample evaluation period, fundamentalist agents dominated the combination forecasts, while the last third of the out-of-sample period was driven by chartist agents.

Keywords:

Empirical heterogeneous agent model, forecasting, time varying parameter model, state-space modelling, model combination, exchange rate predictability, financial crisis.

JEL Classification: C22, C52, E17