

Expectations and the UIP Puzzles when Foresight is Limited*

Seunghoon Na[†]

Yinxi Xie[‡]

This version: February 27, 2024

Abstract

This paper investigates exchange rate dynamics and its forecast errors by incorporating bounded rationality in a small open-economy New Keynesian model. Decision-makers possess limited foresight, capable of planning only up to a finite distance into the future. This yields dynamic overshooting of forecast errors in the real exchange rate across different time horizons. It also distinguishes between short- and long-term expectation formations, where the Law of Iterated Expectations breaks. This framework provides a micro-foundation for understanding time- and forecast-horizon variability in uncovered interest parity (UIP) puzzles. Our model predictions on these UIP violations align both qualitatively and quantitatively with empirical estimates.

Keywords: Finite planning horizon; value function learning; small open economy; exchange rate; UIP violations

JEL codes: E43; E70; F31; F41

*We thank Sushant Acharya, Julien Bengui, Giacomo Candian, In-Koo Cho, Edouard Djeitem, Stéphane Dupraz, Fabio Ghironi, Jinill Kim, Mario Crucini, Charles Engel, Kuang Pei (discussant), Nicholas Sander, Hwei Shen (discussant), Kwanho Shin, Rosen Valchev (discussant), Donghoon Yoo, and seminar participants at the Bank of Canada, the University of Illinois Urbana-Champaign, Baruch College-CUNY, Southern Methodist University, Purdue University, Hanyang University, Korea University, Sejong University, Yonsei University, University of Hawai'i, University of Seoul, University of Ottawa, National Taiwan University, as well as participants at various conferences and workshops for valuable comments. This paper was previously circulated under the title “A Behavioral New Keynesian Model of a Small Open Economy under Limited Foresight.” All errors are our own. The views in this paper are those of the authors and do not necessarily reflect those of the Bank of Canada.

[†]Department of Economics, Purdue University. Email: na28@purdue.edu. Address: 403 W. State Street, West Lafayette, IN 47907, United States.

[‡]Bank of Canada. Email: yinxi.xie.econ@gmail.com. Address: 234 Wellington Street West, Ottawa, ON K1A 0G9, Canada.