

Accepted Manuscript

Fundamentals and exchange rate forecastability with simple machine learning methods

Christophe Amat, Tomasz Michalski, Gilles Stoltz

PII: S0261-5606(18)30366-8
DOI: <https://doi.org/10.1016/j.jimonfin.2018.06.003>
Reference: JIMF 1922

To appear in: *Journal of International Money and Finance*



Please cite this article as: C. Amat, T. Michalski, G. Stoltz, Fundamentals and exchange rate forecastability with simple machine learning methods, *Journal of International Money and Finance* (2018), doi: <https://doi.org/10.1016/j.jimonfin.2018.06.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Fundamentals and exchange rate forecastability with simple machine learning methods[☆]

Christophe Amat^a, Tomasz Michalski^{b,*}, Gilles Stoltz^c

^a*Ecole Polytechnique, Palaiseau, France*

^b*HEC Paris – GREGHEC, Jouy-en-Josas, France*

^c*HEC Paris – CNRS, Jouy-en-Josas, France*

Abstract

Using methods from machine learning we show that fundamentals from simple exchange rate models (PPP or UIRP) or Taylor-rule based models lead to improved exchange rate forecasts for major currencies over the floating period era 1973–2014 at a 1-month forecast horizon which beat the no-change forecast. Fundamentals thus contain useful information and exchange rates are forecastable even for short horizons. Such conclusions cannot be obtained when using rolling or recursive OLS regressions as used in the literature. The methods we use – sequential ridge regression and the exponentially weighted average strategy, both with discount factors – do not estimate an underlying model but combine the fundamentals to directly output forecasts.

JEL Classification: C53, F31, F37

Keywords: exchange rates, forecasting, machine learning, purchasing power parity, uncovered interest rate parity, Taylor-rule exchange rate models

[☆]We would like to thank an anonymous referee, Philippe Bacchetta, Charles Engel, Refet Gürkaynak, Robert Kollmann, Jose Lopez, Evren Örs, Cavit Pakel, Martin Puhl, Romain Rancière, Helene Rey, Barbara Rossi, Michał Rubaszek, Kenneth D. West and the seminar participants at Bilkent University, HEC Paris, the National Bank of Poland, OECD, UN, EEA 2015 conference, Royal Economic Society 2015, 8th Financial Risks International Forum 2015 (Institut Louis Bachelier) for helpful comments and discussions. All remaining errors are ours.

*Corresponding author

Email addresses: christophe.amat@polytechnique.edu (Christophe Amat), michalski@hec.fr (Tomasz Michalski), stoltz@hec.fr (Gilles Stoltz)

Preprint submitted to Elsevier

May 22, 2018

Download English Version:

<https://daneshyari.com/en/article/7364941>

Download Persian Version:

<https://daneshyari.com/article/7364941>

[Daneshyari.com](https://daneshyari.com)