Uncertainty Network Risk and Currency Returns

Mykola Babiak*
Lancaster University Management School

Jozef Baruník**
Charles University

Abstract

We examine the pricing of a horizon specific uncertainty network risk, extracted from option implied variances on exchange rates, in the cross-section of currency returns. Buying currencies that are receivers and selling currencies that are transmitters of short-term shocks exhibits a high Sharpe ratio and yields a significant alpha when controlling for standard dollar, carry trade, volatility, variance risk premium and momentum strategies. This profitability stems primarily from the causal nature of shock propagation and not from contemporaneous dynamics. Shock propagation at longer horizons is priced less, indicating a downward-sloping term structure of uncertainty network risk in currency markets.

Keywords: Foreign exchange rates, network risk, currency variance, predictability, term structure

JEL: G12, G15, F31

*Department of Accounting & Finance, Lancaster University Management School, LA1 4YX, UK, E-mail: m.babiak@lancaster.ac.uk.

**Institute of Economic Studies, Charles University, Opletalova 26, 110 00, Prague, CR and Institute of Information Theory and Automation, Academy of Sciences of the Czech Republic, Pod Vodarenskou Vezi 4, 18200, Prague, Czech Republic, E-mail: barunik@utia.cas.cz.