Term Structure of Risk in Currency Market: Dynamics, Trading Rule, and Common Risk Factor[1]

Jingyi Ren[2]

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Abstract

With the tool of a new FX risk index, "FCX", we derive currency risk term structure and measure its shape by level and slope. We consistently find that for currencies paired by US dollars, term structure of currency risk is flat at a low level prior to 2008 crisis, upward-sloping after the crisis, and peaks at a high level with prominently negative slope during the crisis. This work is believed to be new in currency research field. This information is useful to build trading strategies, earning profit by longing currencies with highest level or slope and shorting ones with lowest level or slope. The profit by sorting slope is significantly high and robust to 2008 crisis period, with low correlation to Carry Trade return. This information is also useful to extract global risk factors to help understand currency excess return, a long-lasting puzzle. The global risk factor by level substantially improves cross-sectional explanation power in currency excess returns, compared to Lustig et al. (2011). Furthermore, we show that there is certain high risk corresponding to high level and low slope, and high interest rate currency earns returns co-varying negatively to this risk, implying that it's risky asset and thus require high risk premium, which well explains Carry Trade.

Keywords: Term Structure of Currency Risk, Currency Excess Return, Trading Strategy, Global Risk Factor

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[2] Correspondence: Department of Economics, University of Washington, Seattle, WA 98195, USA. E-mail: renjy@uw.edu