

Time-varying currency risk premiums in zero interest rate environments

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Abstract

According to uncovered interest rate parity (UIRP), expected changes in the nominal exchange rate should be positively-related to the difference in the nominal interest rates across countries. Dozens of articles attempt to explain/model why, empirically, UIRP does not hold and we see a negative relationship between forward premiums and expected future exchange rate changes, the forward premium puzzle. The literature also shows that currency risk premia are determined mainly by interest rate differentials and somewhat by the current deviation of exchange rates from long-run equilibrium.

Given that fluctuations in interest rate differentials are driven mainly by monetary policy, this paper examines the currency markets during the period of extraordinary monetary policy. The research examines the cases of quantitative easing (QE) from the Bank of Japan/yen for over 15 years, QE from the Fed/dollar since 2008, and a possible upcoming QE program from the European Central Bank/euro. The research begins with a comparative analysis of currency excess returns versus prior monetary policy tightening cycles when real and nominal rate remained positive. The paper also looks at what determines risk premiums on a currency pair when rates in both countries are aligned at zero percent. Finally, the paper explores how unconventional changes in monetary policy (when rates are stuck at zero) such as QE or forward guidance, affect exchange rate determination.