

DISSERTATION DEFENSE

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Essays on Asset Pricing Puzzles

My thesis is comprised of three chapters. In the first chapter, I examine the uncovered interest rate parity (UIP) puzzle in a two-country economy where agents have recursive preferences. The model rationalizes the anomaly thanks to the presence of two ingredients: preference for the early resolution of risk and stochastic volatility in consumption growth. When U.S. consumption volatility is relatively low, exchange rate variability is closely tied to shocks in U.K. consumption. This is foreign exchange risk for the U.K. investor. At the same time, the preference for the early resolution of risk drives the U.S. interest rate up when U.S. volatility is low, thus solving the puzzle.

In the second chapter, coauthored with David K. Backus, Chris Telmer and Stanley E. Zin, we investigate the UIP puzzle and its relation to monetary policy. The puzzle, according to which high interest rate currencies appreciate over time, is primarily a statement about short-term interest rates and how they are related to exchange rates. Short-term interest rates are strongly affected by monetary policy. The UIP puzzle, therefore, can be restated in terms of monetary policy. When one country has a high interest rate policy relative to another, why does its currency tend to appreciate? We represent monetary policy as foreign and domestic Taylor rules. Foreign and domestic pricing kernels determine the relationship between these Taylor rules and exchange rates. We examine different specifications for the Taylor rule and ask which can resolve the UIP puzzle. We find evidence in favor of asymmetries. If the domestic Taylor rule responds more aggressively to inflation than does the foreign Taylor rule, the excess expected return on foreign currency increases. A related effect applies to Taylor rules that respond to exchange rates and/or lagged interest rates. A calibrated version of our model is consistent with many empirical observations on real and nominal exchange rates, including the negative correlation between interest rate differentials and currency depreciation rates.

In the third chapter, I show that long-run risk – highly persistent variation in expected consumption growth – arises endogenously in a production economy with nominal frictions. The ‘long-run’ part comes from price stickiness. Nominal frictions in the model generate a consumption growth process that shows low persistence unconditionally, but has a highly persistent conditional mean. The ‘risk’ part comes from Epstein-Zin preferences, which result in a large risk premium being associated with variation in the conditional mean. The model provides new testable implications for long-run-risk models, and restricts the joint distribution of consumption and nominal equity and bond risk premia. A calibrated version of the model generates consumption, a risk-free interest rate, and equity risk premium behavior that are consistent with U.S. data.