

A Habit-Based Explanation of the Exchange Rate Risk Premium

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ABSTRACT

This paper presents a model that reproduces the uncovered interest rate parity puzzle. Investors have preferences with external habits. Countercyclical risk premia and procyclical real interest rates arise endogenously. During bad times at home, when domestic consumption is close to the habit level, the representative investor is very risk averse. When the domestic investor is more risk averse than her foreign counterpart, the exchange rate is closely tied to domestic consumption growth shocks. The domestic investor therefore expects a positive currency excess return. Because interest rates are low in bad times, expected currency excess returns increase with interest rate differentials.

REFERENCES

Abel, Andrew B., 1990, Asset prices under habit formation and catching up with the Joneses, *American Economic Review* **80**, 38–42.

[Web of Science®](#) | [Google Scholar](#)

Alvarez, Fernando, Andy Atkeson, and Patrick Kehoe, 2009, Time-varying risk, interest rates and exchange rates in general equilibrium, *Review of Economic Studies* **76**, 851–878.

[Web of Science®](#) | [Google Scholar](#)

Ang, Andrew, Geert Bekaert, and Min Wei, 2008, The term structure of real rates and expected inflation, *Journal of Finance* **63**, 797–849.

[Web of Science®](#) | [Google Scholar](#)

Bacchetta, Philippe, and Eric Van Wincoop, 2009, Infrequent portfolio decisions: A solution to the forward discount puzzle, *American Economic Review*, forthcoming.

[Google Scholar](#)

Backus, David, Silverio Foresi, and Chris Telmer, 2001, Affine term structure models and the forward premium anomaly, *Journal of Finance* 56, 279–304.

[Web of Science®](#) | [Google Scholar](#)

Backus, David, and Gregor Smith, 1993, Consumption and real exchange rates in dynamic economies with non-traded goods, *Journal of International Economics* 35, 297–316.

[Web of Science®](#) | [Google Scholar](#)

Bansal, Ravi, and Ivan Shaliastovich, 2008, A long-run risks explanation of predictability puzzles in bond and currency markets, Working paper, Duke University .

[Google Scholar](#)

Bansal, Ravi, and Amir Yaron, 2004, Risks for the long run: A potential resolution of asset pricing puzzles, *Journal of Finance* 59, 1481–1509.

[Web of Science®](#) | [Google Scholar](#)

Benigno, Gianluca, and Christoph Thoenissen, 2008, Consumption and real exchange rates with incomplete markets and non-traded goods, *Journal of International Money and Finance* 27, 926–948.

[Web of Science®](#) | [Google Scholar](#)

Boldrin, Michele, Lawrence J. Christiano, and Jonas D.M. Fisher, 2001, Habit persistence, asset returns and the business cycle, *American Economic Review* 91, 149–166.

[Web of Science®](#) | [Google Scholar](#)

Brandt, Michael W., John Cochrane, and Pedro Santa-Clara, 2006, International risk-sharing is better than you think, or exchange rates are too smooth, *Journal of Monetary Economics* 53, 671–698.

[Web of Science®](#) | [Google Scholar](#)

Buraschi, Andrea, and Alexei Jiltsov, 2007, Habit formation and macro-models of the term structure of interest rates, *Journal of Finance* 62, 3009–3063.

[Web of Science®](#) | [Google Scholar](#)

Campbell, John Y., and John H. Cochrane, 1995, By force of habit: A consumption-based explanation of aggregate stock market behavior, Working paper NBER No 4995.

[Google Scholar](#)

Campbell, John Y., and John H. Cochrane, 1999, By force of habit: A consumption-based explanation of aggregate stock market behavior, *Journal of Political Economy* 107, 205–251.

[Web of Science®](#) | [Google Scholar](#)

Campbell, John Y., and Motohiro Yogo, 2006, Efficient tests of stock return predictability, *Journal of Financial Economics* 81, 27–60.

[Web of Science®](#) | [Google Scholar](#)

Chan, Yeung Lewis, and Leonid Kogan, 2002, Catching up with the Joneses: Heterogeneous preferences and the dynamics of asset prices, *Journal of Political Economy* 110, 1255–1285.

[Web of Science®](#) | [Google Scholar](#)

Chari, V. V., Patrick J. Kehoe, and Ellen R. McGrattan, 2002, Can sticky price models generate volatile and persistent real exchange rates *Review of Economic Studies* 69, 533–564.

[Web of Science®](#) | [Google Scholar](#)

Chen, Xiaohong, and Sydney C. Ludvigson, 2009, Land of addicts? An empirical investigation of habit-based asset pricing models, *Journal of Applied Econometrics* 24, 1057–1093.

[Web of Science®](#) | [Google Scholar](#)

Clarida, Richard, Jordi Gali, and Mark Gertler, 2000, Monetary policy rules and macroeconomic stability: Evidence and some theory, *Quarterly Journal of Economics* 115, 147–180.

[Web of Science®](#) | [Google Scholar](#)

Cochrane, John H., and Monika Piazzesi, 2008, Decomposing the yield curve, Working paper, University of Chicago .

[Google Scholar](#)

Colacito, Riccardo, 2006, Risks for the long run: An explanation of international finance puzzles, Working paper, New York University .

[Google Scholar](#)

Constantinides, George M., 1990, Habit formation: A resolution of the equity premium puzzle, *Journal of Political Economy* 98, 519–543.

[Web of Science®](#) | [Google Scholar](#)

Corsetti, Giancarlo, Luca Dedola, and Sylvain Leduc, 2008, International risk sharing and the transmission of productivity shocks, *Review of Economic Studies* 75, 443–473.

[Web of Science®](#) | [Google Scholar](#)

Cox, John C., Jonathan E. Ingersoll, and Stephen A. Ross, 1985, A theory of the term structure of interest rates, *Econometrica* 53, 385–408.

[Web of Science®](#) | [Google Scholar](#)

Dostey, Michael, Carl Lantz, and Brian Scholl, 2003, The behavior of the real rate of interest, *Journal of Money, Credit and Banking* 35, 91–110.

[Web of Science®](#) | [Google Scholar](#)

Epstein, Larry G., and Stanley Zin, 1989, Substitution, risk aversion and the temporal behavior of consumption and asset returns: A theoretical framework, *Econometrica* 57, 937–969.

[Web of Science®](#) | [Google Scholar](#)

Evans, Martin, 1998, Real rates, expected inflation and inflation risk premia, *Journal of Finance* 53, 187–218.

[Web of Science®](#) | [Google Scholar](#)

Fama, Eugene, 1984, Forward and spot exchange rates, *Journal of Monetary Economics* 14, 319–338.

[Web of Science®](#) | [Google Scholar](#)

Fama, Eugene F., and Kenneth R. French, 1993, Common risk factors in the returns on stocks and bonds, *Journal of Financial Economics* 33, 3–56.

[Web of Science®](#) | [Google Scholar](#)

Fama, Eugene F., and G. William Schwert, 1977, Asset returns and inflation, *Journal of Financial Economics* 5, 115–146.

[Web of Science®](#) | [Google Scholar](#)

Farhi, Emmanuel, and Xavier Gabaix, 2008, Rare disasters and exchange rates: A theory of the forward premium puzzle, Working paper, Harvard University .

[Google Scholar](#)

Frachot, Antoine, 1996, A reexamination of the uncovered interest rate parity hypothesis, *Journal of International Money and Finance* 15, 419–437.

[Web of Science®](#) | [Google Scholar](#)

Gomez, Juan-Pedro, Richard Priestley, and Fernando Zapatero, 2006, An international CAPM with consumption externalities and non-financial wealth, Working paper, University of Southern California .

[Google Scholar](#)

Hansen, Lars Peter, 1982, Large sample properties of generalized method of moments estimators, *Econometrica* **50**, 1029–1054.

[CAS](#) | [Web of Science®](#) | [Google Scholar](#)

Hansen, Lars Peter, John Heaton, and Amir Yaron, 1996, Finite-sample properties of some alternative GMM estimators, *Journal of Business and Economic Statistics* **96**, 262–280.

[Google Scholar](#)

Hansen, Lars Peter, and Robert J. Hodrick, 1980, Forward exchange rates as optimal predictors of future spot rates: An econometric analysis, *Journal of Political Economy* **88**, 829–853.

[Web of Science®](#) | [Google Scholar](#)

Hansen, Lars Peter, and R. Jagannathan, 1991, Implications of security markets data for models of dynamic economies, *Journal of Political Economy* **99**, 252–262.

[Web of Science®](#) | [Google Scholar](#)

Harvey, Campbell R., 1989, Time-varying conditional covariances in tests of asset pricing models, *Journal of Financial Economics* **24**, 289–317.

[Web of Science®](#) | [Google Scholar](#)

Hollifield, Burton, and Amir Yaron, 2003, The foreign exchange risk premium: Real and nominal factors, Working paper, Wharton .

[Google Scholar](#)

Jermann, Urban J., 1998, Asset pricing in production economies, *Journal of Monetary Economics* **41**, 257–275.

[Web of Science®](#) | [Google Scholar](#)

Lettau, Martin, and Sydney Ludvigson, 2009, Measuring and modeling variation in the risk-return tradeoff, in Yacine Ait-Sahalia and Lars Peter Hansen, eds. *Handbook of Financial Econometrics* (Elsevier, North Holland).

[Google Scholar](#)

Lettau, Martin, and Harald Uhlig, 2000, Can habit formation be reconciled with business cycle facts *Review of Economic Dynamics* 3, 79–99.

[Web of Science®](#) | [Google Scholar](#)

Lettau, Martin, and Stijn Van Nieuwerburgh, 2008, Reconciling the return predictability evidence, *Review of Financial Studies* 21, 1607–1652.

[Web of Science®](#) | [Google Scholar](#)

Ljungqvist, Lars, and Harald Uhlig, 2003, Optimal endowment destruction under Campbell-Cochrane habit formation, Working paper, Stockholm School of Economics .

[Google Scholar](#)

Lustig, Hanno, and Adrien Verdelhan, 2007, The cross-section of foreign currency risk premia and consumption growth risk, *American Economic Review* 97, 89–117.

[Web of Science®](#) | [Google Scholar](#)

Mehra, Rajnish, and Edward Prescott, 1985, The equity premium: A puzzle, *Journal of Monetary Economics* 15, 145–161.

[Web of Science®](#) | [Google Scholar](#)

Menzli, Lior, Tano Santos, and Pietro Veronesi, 2004, Understanding predictability, *Journal of Political Economy* 112, 1–48.

[Web of Science®](#) | [Google Scholar](#)

Nelson, C.R., and A.F. Siegel, 1987, Parsimonious modeling of yield curves, *Journal of Business* 60, 473–489.

[Web of Science®](#) | [Google Scholar](#)

Piazzesi, Monika, and Martin Schneider, 2006, Equilibrium yield curves, *NBER Macroeconomics Annual* 21, 389–442.

[Web of Science®](#) | [Google Scholar](#)

Shore, Stephen H., and Joshua S. White, 2003, External habit formation and the home bias puzzle, Working paper, University of Pennsylvania .

[Google Scholar](#)

Stock, James H., and Mark W. Watson, 1999, Business cycle fluctuations in U.S. macroeconomic time series, in John B. Taylor and Michael Woodford, eds. *Handbook of Macroeconomics* (Elsevier Science, Amsterdam).

[Web of Science®](#) | [Google Scholar](#)

Sundaresan, Suresh, 1989, Intertemporal dependent preferences and the volatility of consumption and wealth, *Review of Financial Studies* 2, 73–88.

[Web of Science®](#) | [Google Scholar](#)

Tallarini, Thomas D., and Harold H. Zhang, 2005, External habit and the cyclical of expected stock returns, *Journal of Business* 78, 1023–1048.

[Web of Science®](#) | [Google Scholar](#)

Taylor, John B., 1993, Discretion versus policy rules in practice, *Carnegie-Rochester Series on Public Policy* 39, 195–214.

[Google Scholar](#)

Wachter, Jessica A., 2005, Solving models with external habit, *Finance Research Letters* 2, 210–226.

[Google Scholar](#)

Wachter, Jessica, 2006, A consumption-based model of the term structure of interest rates, *Journal of Financial Economics* 79, 365–399.

[Web of Science®](#) | [Google Scholar](#)

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