Acronyms and symbols

\( \alpha \) constant term in a Fama UIP equation
\( a \) coefficient of the home output gap in a Taylor Rule equation
\( a' \) coefficient of the foreign output gap in a Taylor Rule equation
\( b \) coefficient of the inflation terms in a Taylor Rule equation
\( b' \) coefficient of the foreign inflation terms in a Taylor Rule equation
\( \beta \) Fama’s beta coefficient, i.e., the coefficient of the lagged interest rate differential in a Fama equation
\( \beta_1 \) coefficient of the forward premium (FP) in a smooth transition nonlinear UIP econometric model
\( \beta_2 \) coefficient of the \([FP \times G]\) term in a smooth transition nonlinear UIP econometric model
\( \beta_i \) the beta coefficient in the inactive zone of the fx market
\( \beta_A \) the beta coefficient in the active zone of the fx market
\( B \) Fama’s \( \beta \) in Synthesis Model I if the effects of a variable “risk premium” and a variable \( ds^* \) term are zero
\( \text{B&vW} \) Bacchetta and van Wincoop
\( \text{CAPM} \) capital asset pricing model
\( \text{CIP} \) covered interest parity
\( \text{DM} \) Deutsch Mark

1 In general: (a) any symbol, \( Z \), relates to the actual value of \( Z \) in the home country, the USA; (b) \( Z^* \) refers to the subjectively anticipated value for \( Z \); (c) \( E[Z] \) is the true expected value for \( Z \); and (d) \( Z' \) is the actual value of \( Z \) in the foreign country.
Exchange rate economics

e random term in the equation for the fundamentals
determining ID

\( \epsilon \) exchange rate prediction error

\( E[ ] \) expected value operator

\( E^*[ ] \) subjectively anticipated value operator

\( \text{ER}_s \) ex post excess return from going long on dollars

\( \text{ER}_{fx} \) ex post excess return from going long on fx, which equals

\((- \text{ER}_s)\)

\( \text{ER}^*_s \) ex ante excess return from going long on dollars

\( \text{ER}^*_{fx} \) ex ante excess return from going long on fx

\( \phi (t+k) \) actual rate of decay in a nonzero ID from period t+k–1 to
period t+k

\( \phi^*(t) \) subjectively anticipated (as of period t) rate of decay for a
nonzero ID

\( \Phi \) true expected value for the rate of decay in ID

\( f \) log of the forward exchange rate

\( \text{FP} \) forward premium, \( f - s \)

\( \text{fx} \) foreign exchange

\( G \) transition function that determines the degree of reversion of
deviations from UIP toward zero

\( \gamma \) coefficient that relates \( ds^* \) to the interest rate differential

\( \text{G&T} \) Gourinchas and Tornell

\( \Gamma \) speculators’ demand or supply for fx curve

\( \eta_s \) home short-run price elasticity of demand for imports
(defined to be positive)

\( \eta_L \) home long-run price elasticity of demand for imports
(defined to be positive)

\( \eta^*_s \) foreign short-run price elasticity of demand for home exports
(defined to be positive)

\( \eta^*_L \) foreign long-run price elasticity of demand for home exports
(defined to be positive)

\( i \) home nominal interest rate

\( i' \) foreign nominal interest rate

\( \text{ID} \) home minus foreign nominal interest rate differential

\( \text{ID}^* \) subjectively anticipated future interest rate differential

\( \overline{\text{ID}} \) average interest rate differential

\( \overline{\text{ID}}_{ST} \) short-term interest rate differential
**Acronyms and symbols**

- **ID\textsubscript{LT}** long-term interest rate differential
- **J** home balance of trade in fx units
- **J\textsubscript{1}** coefficient of s(t) in the J function; this equals $\eta_s + \eta_s' < 0$
- **J\textsubscript{2}** coefficient of s(t–k) in the J function; this equals $\eta_L + \eta_L' > 0$
- **M-L** Marshall-Lerner Condition
- **M&P** Molodtsova and Papell
- **$\mu$** exchange rate multiplier
- **n(t+k)** optimum speculative time horizon for carry-trade in period t+k
- **$\Pi$** profit from going long on dollar assets, except in section 2.8
- **$\Pi^*$** subjectively anticipated profit from going long on dollar assets
- **$\Pi$** desired home inflation rate in a Taylor Rule equation in section 2.8
- **$\Pi'$** desired foreign inflation rate in a Taylor Rule equation
- **$\pi$** actual home (USA) inflation rate
- **$\pi'$** actual foreign inflation rate
- **p** log of the home price index
- **p'** log of the foreign price index
- **Pr** probability of being in Regime 2 of the fx market
- **$\theta$** weight given to the long-run value for the spot rate in a regressive expectations equation
- **r** desired long-run value for the home real rate of interest in a Taylor Rule equation
- **r'$** desired long-run value for the foreign real rate of interest in a Taylor Rule equation
- **RE** rational expectations
- **$\rho$** threshold magnitude or “risk premium”
- **$\rho^*$** subjectively anticipated value for the “risk premium”, E*$[\rho]$
- **$\rho_o$** exogenous component of the “risk premium”
- **$\rho^s$** implicit return from the safe-haven aspect of the dollar
- **$\rho^d$** default risk premium
- **$\rho'$** coefficient that relates the “risk premium” to the interest rate differential
- **S** bilateral nominal exchange rate in $ per unit of fx
- **s** log of S
- **s*$** log of the subjectively anticipated exogenous long-run equilibrium value for the exchange rate
Exchange rate economics

\( s^*(t) \) log of the subjectively anticipated (as of period t) value for the spot rate \( n(t) \) periods forward

\( \tau \) random component of the actual rate of decay, i.e., \( \phi = \Phi + \tau \)

UIP uncovered interest parity

\( u(t+k) \) forecast error when using regressive expectations

\( V \) the percentage change in: the spot rate, or the excess return from going long on fx, or the nominal money supply

\( v(t) \) random component of ID in Gourinchas and Tornell (2004)

\( W_I \) weight given to \( \beta_I \) when calculating Fama’s \( \beta \)

\( W_A \) weight given to \( \beta_A \) when calculating Fama’s \( \beta \)

\( \Omega \) true expected value for cumulative net interest from carry-trade over the optimum speculative time horizon

\( \Omega^* \) subjectively anticipated value for cumulative net interest from carry-trade over the optimum speculative time horizon

\( X \) vector of missing variables in a Fama equation

\( Y(t) \) \( s(t-1) \) for extrapolative expectations; \( E^*[s(t)] \) as of period \( t-1 \) for adaptive expectations; \( s^o \) in regressive expectations

\( y(t) \) home output gap in a Taylor Rule equation

\( y'(t) \) foreign output gap in a Taylor Rule equation

\( \Psi \) number of speculators who believe that the euro will either appreciate or depreciate

\( z \) fundamentals that determine ID in Gourinchas and Tornell (2004)

\( Z \) anticipated cumulative “risk premium” over the optimum speculative time horizon