Discussion: A "Bad Beta, Good Beta" Anatomy of Currency Risk Premiums and Trading Strategies

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August 24, 2019

EFA, Lisbon

Summary: Empirics

- Uncover two currency betas with the "discount rate" news and "cash flow" news in real exchange rate

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  - CF news $r^* - r$ is negatively correlated with aggregate state
- Time-varying price of risk
  - Countercyclical price of DR beta, procyclical price of CF beta
- Currency trading strategies

Summary: Interpretation in an Affine Model

- SDF dynamics

$$-m_{j,t+1} = c_j + \xi_j \sigma_{j,t}^2 + \gamma_j \sigma_{j,t} u_{j,t+1} + \delta_j \sigma_{w,t} u_{w,t+1} + \kappa_j \sigma_{j,t} u_{g,t+1}$$

- State variable: $\sigma_{j,t}, \sigma_{w,t}$ follow square root processes

$$\sigma_{j,t+1}^2 = (1-\rho)\mu + \rho \sigma_{j,t}^2 - \nu \sigma_{j,t} u_{j,t+1}$$

$$\sigma_{w,t+1}^2 = (1-\rho_w)\mu_w + \rho_w \sigma_{w,t}^2 - \nu_w \sigma_{w,t} u_{w,t+1}$$

Summary: Interpretation (Cont'ed)

- Cash flow news (real rate)

$$\eta^{dr}_{t+1} = \left[\chi - \frac{1}{2}\left(\gamma^2 + \kappa^2\right)\right] \frac{\nu}{1-\rho}\sigma_t u_{t+1} + \left[-(\bar{\tau}_j - \tau) + \frac{1}{2}(\bar{\delta}_j^2 - \delta^2)\right] \frac{\nu_w}{1-\rho_w}\sigma_w u_{w,t+1}$$

  - Under the assumptions that two brackets are negative, low risk-free rate **in the US** is a bad news (high vol)

- Discount rate news

$$\eta^{\xi}_{t+1} = \eta^{dr}_{t+1} - \gamma\sigma_t u_{t+1} + \underbrace{\left(\bar{\delta}_j - \delta\right)}_{=0}\sigma_{w,t+1}u_{w,t+1} + \underbrace{\left(\overline{\kappa_j\sigma_{j,t}} - \kappa\sigma_t\right)}_{<0} u_{g,t+1}$$

  - High risk premium is bad news (negative $u_{g,t+1}$)
  - Domestic investors are more sensitive to the global shock u_g

- CF news measures $u_{t+1}, u_{w,t+1}$, while DR news measures $u_{g,t+1}$ additionally

Summary: Interpretation (Cont'ed)

- CF beta: Higher δ_j currencies have higher CF beta (hedge)
- DR beta: Lower $\kappa_j \sigma_j$ currency has higher DR beta (risky)

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- This paper's decomposition can be understood under **the ICAPM framework**, as in Campbell-Vuolteenaho (2004).

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Puzzle	Flat CAPM beta	Flat Dollar beta
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The two papers are very different. How? I compare the two papers under the same ICAPM framework.

Campbell-Vulteenaho's Logic

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Campbell-Vulteenaho's Logic

- ICAPM framework

$$m = a - bR_w - cs, b, c > 0$$

- Positive discount rate news: low R_w but high s
- Negative cash flow news: low R_w
- Result: DR news beta is not as bad as CF beta
- High discount rate implies better investment opportunity only when volatility is constant (Bansal, Kiku, Shaliastovich, and Yaron, 2014)

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Emphasizing the Role of Stochastic Volatility

- In this paper, volatility is the key state variable s
- Higher volatility implies higher risk premium as well as lower domestic interest rate
- If investors dislike volatility, higher risk premium captures a bad state of the economy $\rightarrow$ exposure to DR news is risky
- Meanwhile, CF news is positive (due to lower US interest rate) in bad states $\rightarrow$ exposure to CF news is a hedge

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- Can we push the argument more general beyond stochastic volatility under the ICAPM framework?
- **Assumption**: procyclical risk free rate, so that high CF (low interest rate) implies bad state of the economy
- Higher discount rate: R_w (-), s (+)
- Lower cash flow: R_w (-), s (+) and **even more so**
  - A side question: what is the "wealth portfolio"?
  - Less connected to the affine model

Minor Issues

- Measurement of DR and CF news
  - Decompose then average, or average then decompose?
  - Pooled panel VAR: how plausible is it to assume constant coefficients among currencies?
- Tighter connections between the model and the data
  - Derive carry's β, λ's from the model
  - Some calibration exercise can be helpful
  - How about momentum and value portfolios in the model?

Conclusion

- Very nice paper and many interesting results
- Comparison with Campbell-Vuoteenaho under the same ICAPM framework highlights the economics of the decomposition
- Emphasize the important role of volatility