

Discussion of "Variance Risk Premiums in Emerging Markets"

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Variance Risk Premium (VRP)

- Difference between risk-neutral expectation and physical expectation of return variance
 - ▶ $VRP_t = E_t^Q[\sigma_{r,t+1}^2] - E_t[\sigma_{r,t+1}^2]$
- State variable that measures economic uncertainty
- Bollerslev, Tauchen, Zhou (2009)
 - ▶ Captures risk premium related to consumption growth shocks
 - Volatility shocks
 - Volatility-of-volatility shocks

Empirical Evidence : Return Predictability

- $VRP = \text{Implied Variance (IV)} - \text{Realized Variance (RV)}$
- VRP predicts US stock returns
 - ▶ Bollerslev, Tauchen, Zhou (2009)
 - ▶ Dreschler and Yaron (2011)
- Predictability primarily in the short-horizon
 - ▶ month to a quarter
- Predicts stock returns in developed markets
 - ▶ Bollerslev, Marrone, Xu, and Zhou (2014)

This paper: Emerging Markets VRP

- Construct VRP for emerging markets
- Short data series for IV
 - ▶ Use Lynch and Wachter (2013) sample-extension
- Market weight country-level VRP to obtain
 - ▶ Global VRP
 - ▶ Developed VRP
 - ▶ Emerging VRP

Emerging VRP Return Predictability

- Global VRP predicts individual market returns
 - ▶ Captures commonality in risk premium
- Developed VRP predicts short-horizon returns
 - ▶ High frequency variation in expected returns
- Emerging VRP predicts medium-horizon returns
 - ▶ Relatively low frequency variation in expected returns

Additional Tests

- Panel Regressions: Returns are cross-sectional correlated
 - ▶ Cluster standard errors by month - Peterson (2009)
 - ▶ Bollerslev et al (2014) two-way clustering leads to similar findings
 - ▶ For completeness - two-way cluster
- Incremental explanatory power over other predictors
 - ▶ Prior papers show VRP is different from other predictors
 - ▶ Is emerging market VRP different given the predictive horizon is similar to DY etc.,

Potential Story

- Consider aggregate global consumption growth
 - ▶ Includes both emerging and developed markets
- Modify Bollerslev, Tauchen, Zhou (2009)
- Different duration shocks to consumption growth volatility
 - ▶ Short lived
 - ▶ Long lived shocks

Potential Story

- Single global VRP - Captures risk premium of both shocks
- Is it possible to isolate short and long-term shocks?
- Longer term shocks to global consumption
 - ▶ Emerging consumption exposed to long term shocks
 - ▶ Trade links, Global risk-appetite/Capital flows
- Short term shocks to global consumption
 - ▶ Developed consumption less exposed

Suggestion

- Construct global return series
 - ▶ Market-weighted returns of individual market returns
 - ▶ One time series instead of panel of returns
- Replicate the results of panel in time series
 - ▶ Global VRP predicts global returns
 - ▶ Developed VRP predicts short term returns
 - ▶ Emerging VRP predicts for long term returns

Summary

- Good paper
- Shows Emerging VRP has predictive power
 - ▶ Market returns
 - ▶ Currency
 - ▶ Flows
- Suggestion: Global consumption with ST and LT risks