Comments on
“Sovereign Risk and Financial Risk”
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Lots of co-movement in the Sovereign debt market! Cross-country and Cross-maturity

Which common factors drive (the co-movement of) spreads?
Motivation

Why do we care?

1. Recent **sovereign bailouts** in Europe: Greece, Ireland, Portugal,...

2. **No consensus** on the determinants of sovereign risk premia.
   - Local vs. global Factors? Frequency? State of the world?
   - This paper makes a contribution that tends to reconcile different views

3. International **portfolio diversification**.

4. **Big money**.
   - World external debt: 56.9 trillion USD (31.12.2009)
   - Global stock market capitalization: 51.225 trillion USD
   - Single-name CDS Notional Amount Outstanding: 18.145 trillion USD (BIS H2 2010)
   - Sovereign CDS Notional Amount Outstanding: 2.542 trillion USD (BIS H2 2010)

5. From a standard **GE asset pricing** perspective, little known about Sovereign debt and default.
   - This paper contributes in that direction as well: endogenous default and debt dynamics

6. **Bonds vs. CDS**? Non-linear pricing function and divergence of CDS-Bond basis!
Selected literature on Sovereign credit risk

Global factors

Pan and Singleton (2008), Longstaff et al. (2010), Remolona et al. (2008), Borri and Verdelhan (2009), Ang and Longstaff (2011), Augustin and Tédongap (2012)

1. U.S. equity, volatility (VIX), and bond market risk premia.
4. Long-run risks in macroeconomic forecast and uncertainty

Local factors

Hilscher and Nosbusch (2010), Altman and Rijken (2011), Acharya et al. (2011)

1. Volatility of terms of trade.
2. Health of local financial sector.
3. Local government bailout guarantees.

This paper

1. Global factors: excess bond premium (EBP), US stock market
2. Local factors: local stock market (return and volatility), exchange rate against USD
Sovereign spreads highly sensitive to the EBP, larger effect for speculative-grade (SG) debt, compared to investment-grade (IG) debt.

- **Financial crisis:**
  - EBP $\uparrow$ 300 bp $\Rightarrow$ SG $\uparrow$ 70 bp
  - EBP $\uparrow$ 300 bp $\Rightarrow$ IG $\uparrow$ 30 bp
  - These numbers must be compared relative to the total increase in SG and IG spreads and same analysis should be carried out for other significant global factors

- The EBP must be confronted to other global factors considered in previous literature (see previous slide), as well as VRP, VIX, MSCI, BA/ML BBB-AAA, BA/ML BB-BBB

Spreads are sensitive to exchange rates, though the effect is (very?) weak, and varies across exchange rate regimes, from more flexible (MF) to less flexible (LF)

- **Local currency depreciation:**
  - FX $\uparrow$ 1% $\Rightarrow$ MF $\uparrow$ 1.7 bp
  - FX $\uparrow$ 1% $\Rightarrow$ LF $\uparrow$ smaller
  - Again, these numbers must be compared relative to the total increase in MF and LF spreads and same analysis should be carried out for other significant local factors

- FX, local market return and volatility must be confronted to other local factors considered in previous literature (see previous slide)
Construct a general equilibrium model of sovereign debt and default to rationalize the empirical findings

- risk-averse global investor
- optimal default
- endogenous debt dynamics
- multiple countries

Important Fact:

- Empirical relationship between sovereign bond spreads and U.S. financial market variables (EBP & stock return)... 
- ... but rationalize these findings with a model based on real economic shocks.
- Question: Real or financial channel? (Ang and Longstaff (2011))
- Why not rationalize findings with a model based on aggregate wealth... 
- ... or perform a rigorous test of the model predictions based on primitive macroeconomic shocks?
- ... or derive the model EBP, global and local stock return and volatility, and other factors with endogenous counterparts, and make sure to reproduce their actual moments together with actual regression coefficients?
- If not so, difficult to convince model rationalizes the data findings.
Regression of EBP on other global factors considered in the literature

Global stock volatility (e.g. VIX) not considered, but local stock volatility is

Calibration of the model: discuss and motivate choice of parameter values

Borrowers are modeled individually. Independently? Can model accommodate multiple defaults?

Alternative global and local factors

Term structure of Sovereign debt neglected in the paper, but important in the literature. Can EBP be constructed per debt maturity and empirical analysis refined?

Do standard regression analysis in truncated data (-50 bp, 2000 bp). Try truncated regression analysis using original data, if possible.
1 Very preliminary paper
2 Global factors, EBP in particular, seem to be more important
3 More ambitious goal: build a model that generates the same factors as in the data, and conduct same analyses on model versus data


