Discussion of: *Decomposing euro-area sovereign spreads: credit and liquidity risks*
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Sovereign bond spreads

Objective: \textit{Build and estimate a no-arbitrage model of Euro-area sovereign bond spreads during 2006 to 2012}

\begin{itemize}
\item Incorporate variation in liquidity and credit risk in both the time series and cross-section
\item Incorporate pricing of liquidity risk and credit risk
\Rightarrow \text{Use estimated parameters to decompose bond spreads into liquidity, credit, and risk premium components}
\begin{itemize}
\item estimate actual (\textit{I}-measure) default probabilities
\end{itemize}
\end{itemize}
Model

1. Multiple sovereign bonds each having its own default intensity process
   - upon default bond price jumps down to a fixed fraction of non-defaulted bond price

2. A single common liquidity shock process
   - liquidity shock induces a country-specific loss

3. Tractable dynamics and pricing kernel
   - finite-state Markov chain for regime variable
   - affine dynamics for credit and liquidity processes
   - exponential-affine pricing kernel

\[ \mathbb{Q} \text{ dynamics have same form as under } \mathbb{P} \]
Estimation

Measurement equations for:

1. each country’s yield spread over bunds

2. a proxy for illiquidity: spread of German KfW bond yields over Bunds
   - KfW bonds are explicitly guaranteed by German government

3. a proxy for $\mathbb{P}$-measure expectations: survey-based 12-month-ahead forecasts of yields
   - data sample is very short and yields very persistent

+ normally-distributed measurement/pricing errors

⇒ estimate via maximum likelihood using Kim (1994) filter
   - Kalman filter + Hamilton (1989) regime-switch model filter
Results

1. decreased illiquidity explains spreads to Bunds in 2008-09

2. since 2010 credit risk explains most of the increase and variation in spreads for Spain, Italy and France
   - liquidity remains the main factor for Austria, Finland, Netherlands

3. credit and liquidity risk premia are substantial
   - priced default probability is about 2-3 times “actual” default probability
   - example: 45% priced probability vs. 15% actual probability for Italy and Spain in late 2011 and 2012
• CDS spreads can also be used to (help) measure credit risk component
  • more liquid than cash bonds (smaller bid-ask spreads)

• Include Greece, Ireland, and Portugal
  • important to narrative and economics of the crisis
  • relatively high CDS open interest
  • my conjecture: need to change recovery rate to a fraction of face value to capture their yield curves
• Add more discussion of identification to clarify what drives state and parameter value estimates
  • e.g., how is the term structure of yields important to the estimation?

• Can do more analysis of asset pricing implications
  • do risk price estimates seem very high or are they reasonable?
  • how are risk price estimates related across countries?
Origins of sovereign credit risk

Acharya, Drechsler, Schnabl (2013) show:

1. 2008 bank bailouts ignited the rise in sovereign credit risk across Europe
2. Pre-bailout financial-sector distress predicts post-bailout increase in sovereign CDS
3. Sovereign-bank loop: post-bailout changes in sovereign CDS explain bank CDS after controlling for known determinants of credit spreads
Pre-Bailouts: Europe


- bank CDS increases substantially
- not much change in sovereign CDS
During the Bailout Period


- bank CDS decreases substantially
- strong increase in sovereign CDS
Post Bailout

10/22/2008 – 6/30/2010

- positive comovement
- a merger of financial sector and sovereign
Final thoughts

- Nice paper
- Clean and nicely executed framework and estimation
- Thanks for the opportunity to participate!