Liquidity Spillovers in Sovereign Bond and CDS Markets: An Analysis of The Eurozone Sovereign Debt Crisis

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Eurozone Sovereign Crisis

- Ongoing issue of liquidity and solvency of various EU governments.
- Causes are diverse (poor fiscal planning in Portugal, expensive bank guarantees in Ireland, falsified national accounts in Greece)
- At present Greece, Portugal and Ireland are in receipt of financial guarantees and liquid capital injections via the IMF, EFSF and asset purchases by the ECB.
- Iceland has also received a substantial 'bail-out' after the collapse of its banking system, earlier on in the crisis.
- Causes are well known and are for other discussions.
- This paper looks at the mechanism of transmission of liquidity and information in the price formation mechanism of Eurozone sovereign debt during the 2007-2011 period.
- The paper provides a table of various macroeconomic indicators for 2007, 2008, 2009 and 2010 versus the 2001-2006 average.

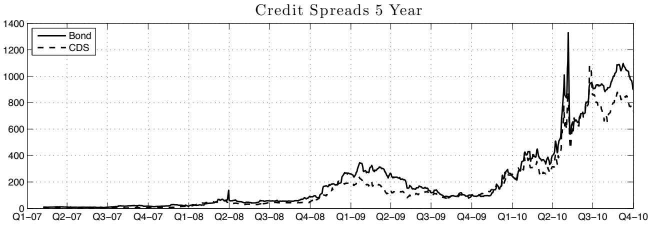
Data set

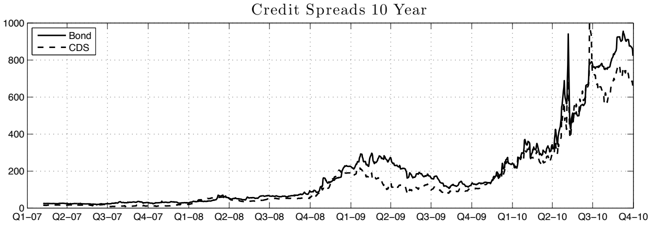
- Given the controversy surrounding the reporting of various credit spread indices, we have constructed our data set, where possible, from the transaction history.
- The data set is sourced from Thomson-Reuters Tick History and DataStream. Sovereign bond data is collected using the 'Super RICs' or Reuters Information Codes.
- The super-RICs collect all trades on instruments in the tag range set by the code, i.e. AT5YT=RR literally means pull all yields on traded bonds with a 5 year maturity from the daily collection date.
- We use the same approach for the CDS market, however aggregation is much more complex. Multiple data vendors provide an array of intra-day and end-of-day information, through Markit and CMA.
- The CDS data set is then hand built from these sources and combined into a daily index.

Countries in sample

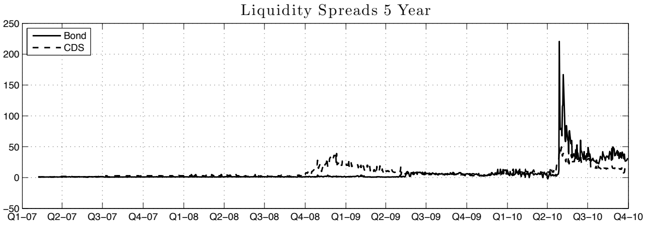
- We collect all traded sovereign bonds with a maturity of 5 and 10 years for the countries selected in the sample.
- Originally all Eurozone countries were included in the sample.
- However, credit default swaps have only been actively traded on ten countries for a long enough period to permit analysis.
- These countries are Austria, Belgium, France, Germany (the benchmark), Greece, Ireland, Italy, Netherlands, Portugal and Spain.
- The next slide lists the various CDS sources that CMA and Markit use when building the index of daily spreads.

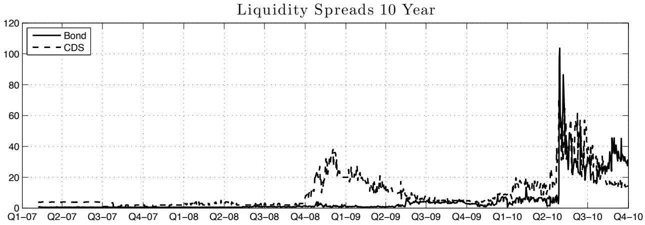
Greek credit spreads



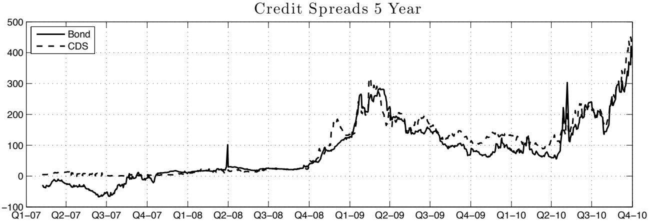


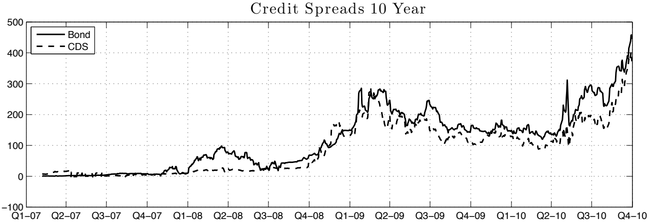
Greek liquidity spreads



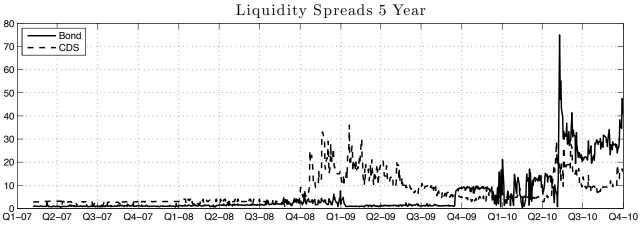


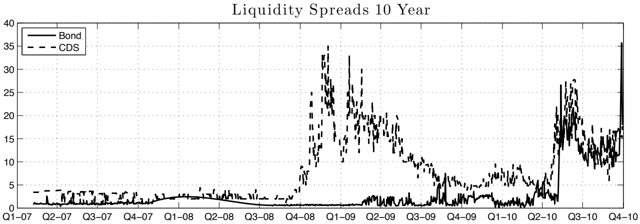
Irish credit Spreads



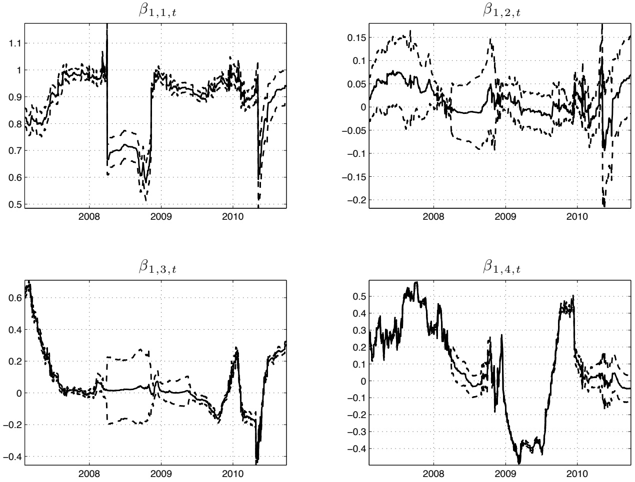


Irish liquidity Spreads





Greek 5 year model first equation



Observations

- Most important take home messages:
  - Explosive trends present at times in almost all Eurozone countries and in particular Greece, Ireland and Portugal.
  - At this point the market has ceased to function in the normal manner.
  - Without intervention the discount rate would have been driven to infinity.
  - There is a time varying transmission effect from the CDS liquidity spread to the bond market credit spread (violates the nearly complete market condition of Jarrow-Protter 2005).