Discussion of "From Funding Liquidity to Market Liquidity: Evidence from Danish Bond Markets"

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Summary

- The authors provide evidence that funding liquidity drives market liquidity in the Danish bond market (sovereign and covered bonds).

- What the authors do

  1. **Funding liquidity**: they proxy funding liquidity with
     - the $3-$month Danish CIBOR-CITA spread (equivalent to $3-$month LIBOR-OIS spread); and
     - the $3-$month EURIBOR-EONIA spread.
  2. **Market liquidity**: they average price impact of trades, using novel data-set containing all bond transactions in Danish bonds.

- Sample: November 2007 - December 2011.

Market liquidity - Price impact (I)

- For a given transaction, the price impact

$$\text{Price Impact}_{t,i,k} = \frac{\mid p_{t,i,k} - p_{t,i-1,k} \mid}{p_{t,i-1,k}},$$

  where p refers to the transacted price and i to the ith transaction on day t in bond k.

- Average price impact for a given bond over a week w

$$\text{Price Impact}_{w,k} = \frac{1}{N} \sum_{i}^{N} \text{Price Impact}_{t,i,k},$$

  where N is the number of price impact observations in that week.

Market liquidity - Price impact (II)

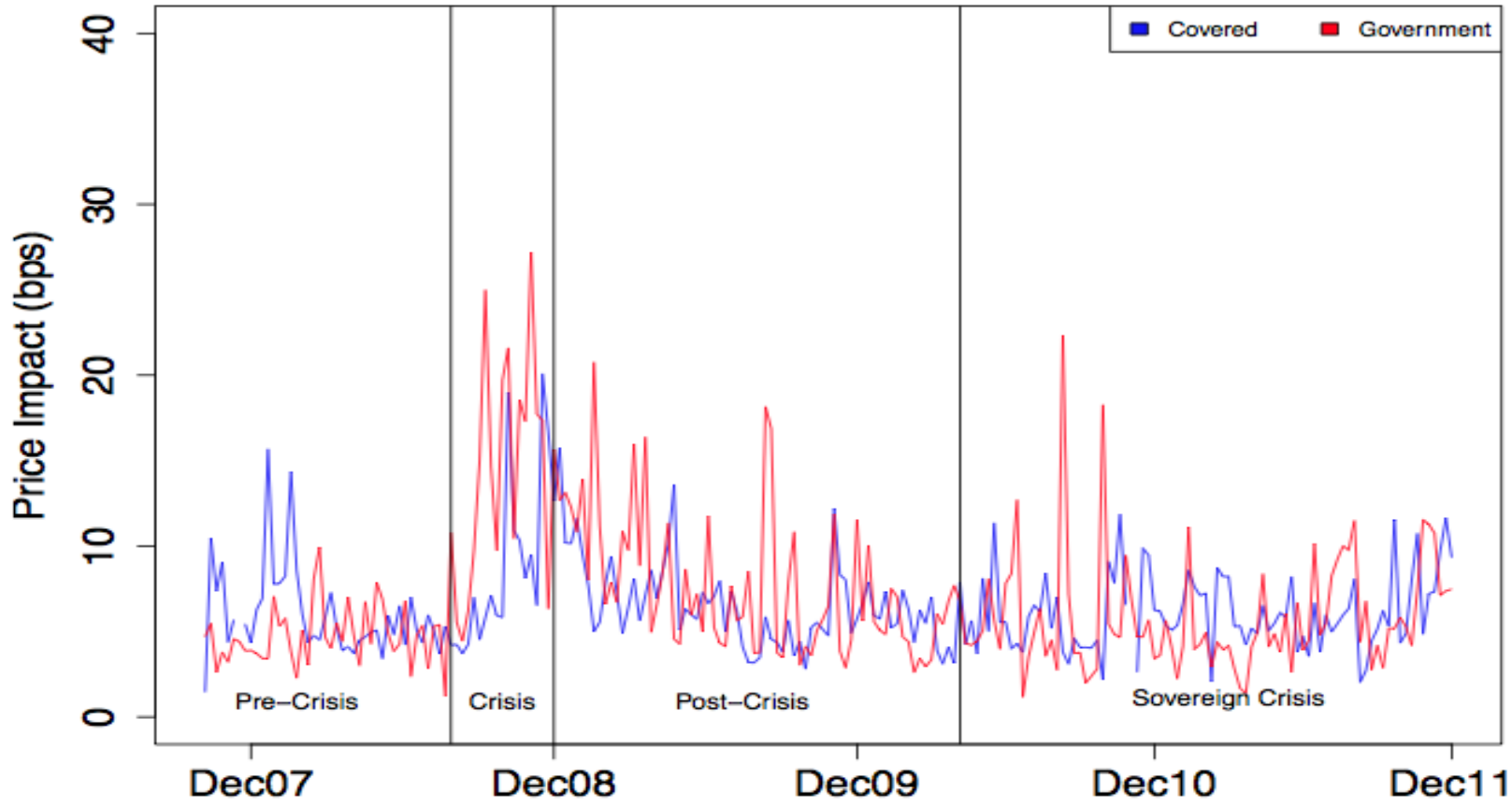
- The weekly price impact measure for a market segment is

$$\text{Price Impact}_w^{Market} = \frac{1}{s_1 + ... + s_M} \sum_k^M s_k \times \text{Price Impact}_{w,k},$$

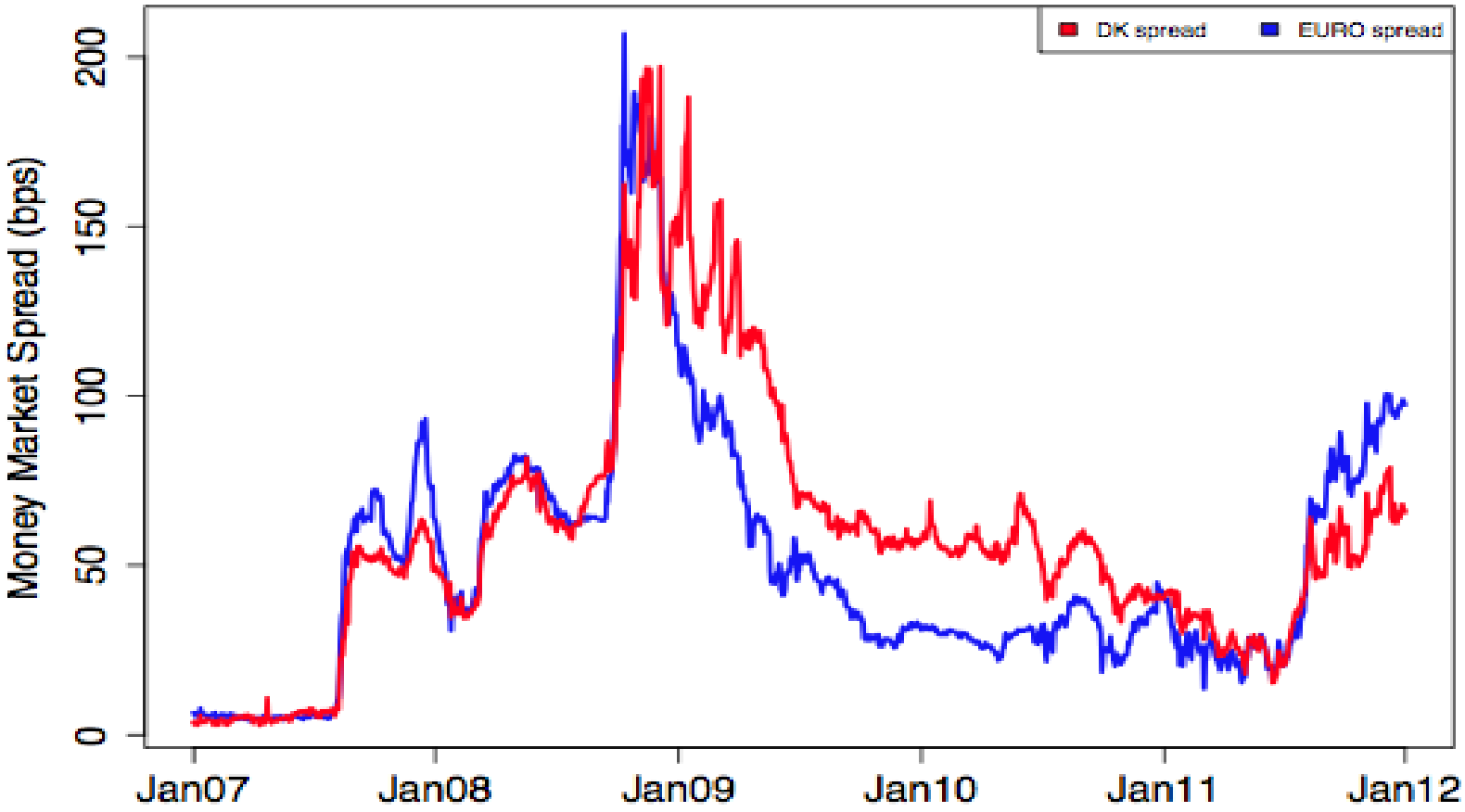
  where s is the amount outstanding in the given bond k and M refers to the number of bonds belonging to the market segment s.

- 4 market segments:
  - Covered bond: short-(1 year) and long-($27-$ years on average) term
  - Sovereign: short-(< 5 years) and long-($5 - 10$ years) term.

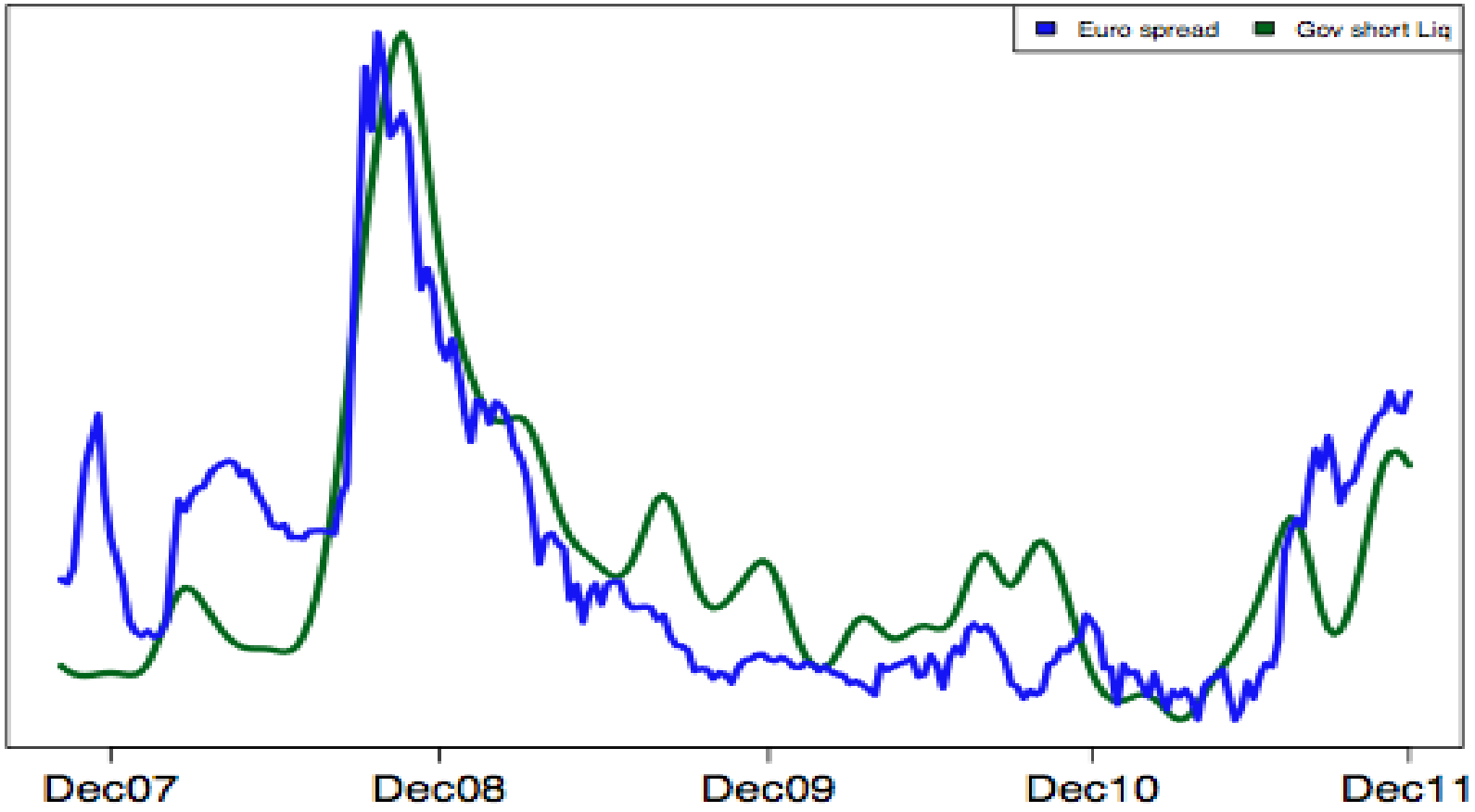
Market liquidity - Price impact short-term bonds



Funding liquidity - Money market spread



Funding liquidity vs Market liquidity



Empirical strategy & Results

1. Four sub periods: i) pre-crisis; ii) crisis; iii) post crisis; and iv) sovereign crisis.

2. They regress weekly changes in market liquidity on lagged changes in market liquidity and lagged money market spread.

$$\Delta \text{PI}_t = \alpha + \beta_1 \Delta \text{PI}_{t-1} + \beta_2 \Delta \text{EU spread}_{t-1} + \beta_3 \Delta \text{DK spread}_{t-1} + \epsilon_t.$$

   - **Finding**: Strong positive relationship between weekly price impact measures and market spreads.

3. They run Granger causality tests.

   - **Finding**: The euro money market spread predicts market liquidity, for all the four segments (but weak results for the long-term covered bonds).

Comments

- Nice paper!!

- I have three main comments:

  1. Market liquidity;
  2. Funding liquidity;
  3. Policy implications.

Market liquidity - Covered bonds issuers

- The authors restrict the sample for covered bonds to bonds issued by the 3 largest issuers which cover around $65 - 85\%$ of the market.
  - Why? The market does not discriminate them in terms of credit quality.

- **But** it would be nice to have some evidence of it (if the data allows), accounting for the issuer dimension (c is the covered bond issuer):

$$\Delta \text{PI}_{c,t} = \alpha + \beta_1 \Delta \text{PI}_{c,t-1} + \beta_2 \Delta \text{EU spread}_{t-1} + \beta_3 \Delta \text{DK spread}_{t-1} + \epsilon_t,$$

- The authors exclude BRG Realkredit issuer because perceived risky.

- **But** it would be nice to see the impact on the market liquidity:
  (higher credit risk $->$ higher funding risk $->$ weaker market liquidity)

Market liquidity - Unity market principle

Bonds with identical characteristics (coupon rate, maturity and amortization structure), but issued from different banks, should trade at the same price.

- Implicit assumption (acknowledged by the authors): the principle holds for the three main issuers. Thus, the price impact

$$\text{Price Impact}_{t,i,k} = \frac{\mid p_{t,i,k} - p_{t,i-1,k} \mid}{p_{t,i-1,k}}$$

  refers to a homogenous portfolio of bonds (not single bond or ISIN) k.

- **Main advantage**: they increase the number of observations.

- **But** it would be nice to see if the price impact is issuer specific.

Funding liquidity

- They proxy funding liquidity using money **market** spreads.
- It is very difficult to have information on the funding at bank level (OTC repo positions, etc ..), but you may have access to central bank information:
  - Refinancing operations with the central bank, as in Drehmann and Nikolau (2012).
  - This information is still incomplete (only part of the bank funding) but it is specific to the bank.

Policy implications

1. In order to draw **robust** policy implications, it would be desirable to link market liquidity and funding liquidity at covered bond issuer level.

2. The paper has valuable implications for the new liquidity regulation and the definition of liquid asset:

   - Banks have to hold buffers of liquid assets to better withstand market wide liquidity stress (see Liquidity Coverage Ratio).
   - **Authors' point:** it is not clear that the new regulation will be effective because severe funding illiquidity leads to severe bond market illiquidity.
   - **But** the new liquidity requirements also include the Net Stable Funding Ratio whose objective is to have a minimum amount of stable liabilities.