Duration-Risk versus Local Supply Channel in Treasury Yields: Evidence from the Federal Reserve’s Asset Purchase Announcements

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Discussion by

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Overview of the Paper

Premise: There are price effects from LSAPs through portfolio re-balancing.

- **Duration-risk channel:** Portfolio re-balancing is determined by total amount of interest rate risk ⇒ Bonds of all maturities should be affected, but long-duration bonds more so.

- **Local-supply channel:** Treasury market is segmented by preferred-habitat investors ⇒ Price impact is largest where the shortage in supply is biggest.

Question: Can we distinguish between these two channels?

Empirical challenges of event study:

- **Price impact:** Intraday price quotes for Treasury securities.
- **Supply impact:** Quantify local supply/duration risk “surprises.”
- **Control** carefully for pre-announcement expectations.

Findings: Both channels matter and about equally so. The average impact is -9 basis points per $100 billion surprise purchase.

Should we have faith in such estimates? Is this the whole story?
Reliability of the response of long-maturity bonds.

There is no control for changes in expectations for future monetary policy around the five announcements.

The two-day event window is likely to overstate the reported effects.

For March 18, 2009, there is no distinction between MBS and Treasury purchases.

The response across markets could raise questions about the interpretation of the effects/channels asset purchases work through.
Market functioning according to most measures were poor around March 18, 2009 ⇒ Results for that announcement should be interpreted with caution.

However, for the other four days, market functioning appears to be at satisfactory levels.
Christensen, Lopez, and Rudebusch (CLR, 2013) use a shadow-rate AFNS model to price all Treasuries in the Fed’s SOMA portfolio.

Illustration of pricing errors in dollars per $100 notional across bond maturities (left) and coupon rates (right).

As of January 2, 2013, some pricing errors are quite notable.

Key point: Seasoned long-maturity Treasuries carry significant liquidity premiums. So how quickly and how much are these traded?
General problem: No control for changes in policy expectations.

On Mar. 18, 2009, “extended period” language was introduced.

Christensen and Rudebusch (2012) and Bauer and Rudebusch (2013) analyze LSAP1 announcements and find evidence of significant signaling effects.
Two-day (or “26 hour”) event windows may overstate the actual local supply or duration risk response.

As for interpretations, note the very similar term structure response across Treasuries, OIS, AAA-rated corporate bonds, and interest rate swaps.
In general, the yield responses in the 15-30 year maturity segment are more erratic.

With a very similar response across most segments of the U.S. fixed-income markets, is “local supply effects” the appropriate description/channel?

Finally, how unique are these yield curve changes?
I use CLR’s shadow-rate AFNS model estimated using daily GSW Treasury yield data to find days with matching yield curve changes (out of a total of 6,736 observation dates).

Mar. 18, 2009 two-day changes are matched well by Nov. 28, 2008.

There are also a couple of matching yield curve changes for the responses on Nov. 3, 2010, and Sep. 21, 2011.

Finally, the yield curve changes on Jun. 20, 2012, have close matches on 9/15/1988 and 10/25/2012 (not shown).

Thus, there is nothing unique about the particular yield curve changes on these five announcement dates. Hence, it cannot be excluded that other factors caused the observed yield changes.
Conclusion

- This paper uses intraday quotes for the universe of Treasury bonds to detect evidence of local supply and/or duration risk channels in the yield response around Fed asset purchase announcements.
- There might be concerns about the liquidity of the seasoned long-duration Treasuries that are an important part of the analysis.
- By using “26 hour” event windows, the local supply and duration risk effects might be overstated.
- In light of a uniform response pattern across many segments of the U.S. fixed-income markets to four of the five announcements, it appears that a broader interpretation of the results would be appropriate.
- Finally, it would strengthen the story significantly if there were some controls for changes in policy expectations around the announcements.