Discussion of: *Flow and Stock Effects of Large-Scale Treasury Purchases* by Stefania D’Amico and Thomas King

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Paper’s Scope:

- Assuming that we take results at face value:
  - No policy implications: Local inelasticities in Treasuries neither necessary nor sufficient for impact on credit (or macroeconomy).
    - Treasury yields might include *flight-to-quality*-like premia.
    - Concurrent expansion of Bank Reserves: (Over the period, excess reserves grew by roughly $300 billion).
  - So the paper is about the shape of the aggregate demand curve in Treasuries.
    - Locally in time (traditional “price pressure” – *Flow Effect*).
    - More broadly (*Stock Effect*).
Natural Experiment?

- Is this the right context to study this question?
  - Total Amount of T-Notes and Bonds held by public on 6/30/08: $3.1 Trillion.
  - On March 31, 2009: $3.6 Trillion.
  - On October 31, 2009: $4.5 Trillion.
  - Amount of QEII: $0.3 Trillion. Shouldn’t we consider the net supply over the period?
    - Paper: Not if we can focus on the old securities. (But what about near substitutes?)

Thought Experiment:
The Fed and Treasury wish to design an experiment to test (the narrow question): whether supply matters.

How?
Something like Operation Twist. Repeated.
The problem here: We have one observation.
Known Idiosyncrasies

Careful not to conflate the yield curve with known security-specific idiosyncrasies such as the on-the-run premium.

- Source: Short-selling institution. On-the-run / squeeze premium is value of expected future (repo) specialness.
- Fully consistent with the absence of arbitrage. (Price is an incomplete measure of ownership benefits.)

Some evidence that purchases led to havoc in repo market. Anecdote: The 3-Year Note, 1\(\frac{1}{2}\)% of 7/15/12:

- Fed purchased $4.054 billion on 8/10/09.
- Fed lends out $6 billion incrementally on 8/14/09.
- Lending rate (specialness) hits 109 bps on 8/18/09.
- Even by 9/1/09 $3.6 billion lent at 58 bps.
- “Dealers are taking on a lot of risk.”
Fed pays a concession for large blocks. (*Price Pressure*)
Evidence from QEII: I took 13 cases where Fed purchased
roughly $1 billion on the day (at random Nov. 2010 – Feb.
2011, Mean Term: 6.2 yrs, Max. 8.6).
Mean (% price) spread between closing ask and Fed average:
0.29%, s.e.:0.09%
Mean spread between closing ask and Fed high: 0.32%,
s.e.:0.09%.
(Average Bid-Ask Spread: 0.02%).
D’Amico-King: $1 billion entails +0.02% in price
(roughly -.7 bps in yield terms).
The first (IV) stage does a good job of predicting Fed purchases.

- 148 notes and bonds.
- $r^2$: 43%.
- Traders tell me that splines have never fit better.

<table>
<thead>
<tr>
<th>Table 4. Stock Effects (IV)—Pooled</th>
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<tbody>
<tr>
<td>Own Purchases (IV)</td>
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—Moving to the spline is bigger than claimed supply effect.
(Anecdotally, the shift in curve is consistent with “Greenspan Era” response to reduction in target FFR: Pivot on the 2-year note.)
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What can we learn?

Repo Market
Price Pressure
Fed Behavior

Back Drop: Crisis
Old Bonds: Crisis Mitigation

Coupon Spreads: The Crisis

10-Year Note Coupon Spreads (Crisis Period):

[Graph showing coupon spreads on On-the-Run, First-Off-the-Run, and Non-Deliverable 10-Year Treasury Notes]
The Holding Period Returns

Table 5. Stock Effects (IV)—Subsamples

<table>
<thead>
<tr>
<th></th>
<th>Notes</th>
<th>Bonds</th>
<th>&gt; 15 years</th>
<th>&lt; 15 years</th>
<th>Near on-the-run</th>
<th>Far off-the-run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own Purchases (IV)</td>
<td>0.35</td>
<td>0.68***</td>
<td>0.38</td>
<td>0.66***</td>
<td>-0.03</td>
<td>1.23***</td>
</tr>
<tr>
<td>(0.32)</td>
<td>(0.24)</td>
<td>(0.31)</td>
<td>(0.21)</td>
<td>(0.34)</td>
<td>(0.34)</td>
<td></td>
</tr>
<tr>
<td>Purchases of near substitutes (IV) (maturity w/in 2 yrs of own)</td>
<td>0.08**</td>
<td>0.09*</td>
<td>0.04</td>
<td>0.04</td>
<td>0.17***</td>
<td>0.11***</td>
</tr>
<tr>
<td>(0.03)</td>
<td>(0.05)</td>
<td>(0.07)</td>
<td>(0.03)</td>
<td>(0.06)</td>
<td>(0.04)</td>
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</tr>
</tbody>
</table>

What can we learn?

Repo Market
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The Feb 15 2019 Pair

Old 30:
- Original Size: $19.2 Billion.
- $6.1 Billion retired in Buy-Back.
- Fed purchased 15% during period.
- March 31: 27% held in stripped form.
- October 31: 20% held in stripped form.
- HPR = 2.5%.
- Duration: 7.1 (years).

New 10:
- Original Size: $58.7 billion.
- Fed purchased 1.7% during period.
- HPR = -1%.
- Duration: 8.6 (years).

If we started 1 day later HPRs: -1% and -5%, resp.
Reason for convergence?

- Return to normalcy.
- New 10 goes off-the-run.
- Fed bought 15% of outstanding 20 year old.

No way to discriminate based on one episode. Regardless, this is not a yield curve effect.