

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

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What can we
learn?

Repo Market

Price Pressure

Fed Behavior

Back Drop: Crisis

Old Bonds: Crisis
Mitigation

Motivation

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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*).

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Natural Experiment?

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- ▶ 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 QE1: \$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.

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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.”

Result: Flow

**Table 6. Flow Effects on Day of Purchase
(eligible securities)**

	< 15y to maturity	>15y to maturity
Own Purchases	0.276*** (0.053)	-0.106 (0.098)

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).

Result: Fed Behavior

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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 4. Stock Effects (IV)—Pooled

	Baseline	Controlling for initial prices
Own Purchases (IV)	2.17*** (0.43)	0.61*** (0.21)

—Moving to the spline is bigger than claimed supply effect.

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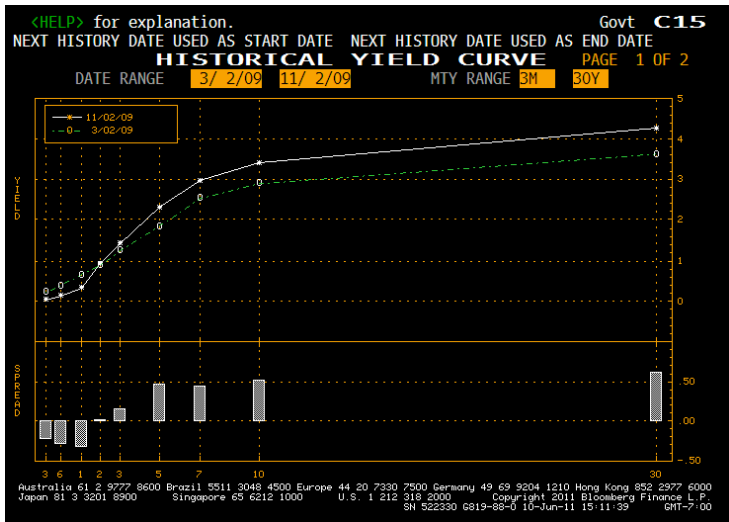
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Yield Curve



(Anecdotally, the shift in curve is consistent with “Greenspan Era” response to reduction in target FFR: Pivot on the 2-year note.)

What can we learn?

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Price Pressure

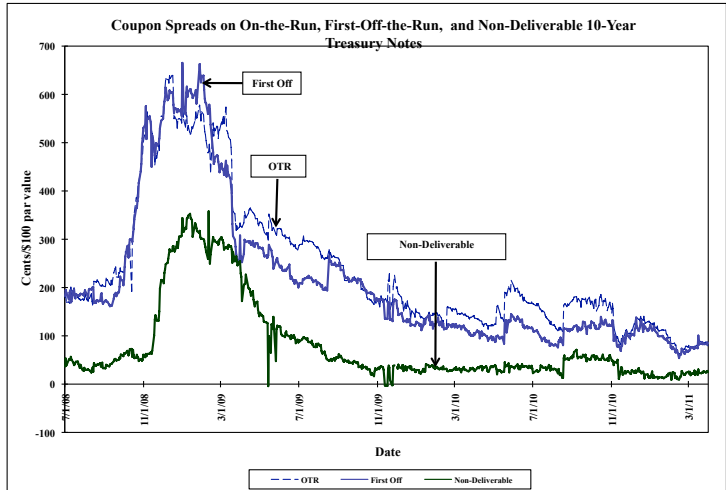
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Coupon Spreads: The Crisis

10-Year Note Coupon Spreads (Crisis Period):



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The Holding Period Returns

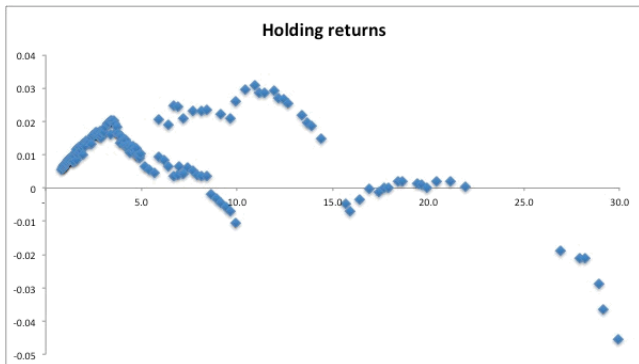


Table 5. Stock Effects (IV)—Subsamples

	Notes	Bonds	> 15 years	< 15 years	Near on-the-run	Far off-the-run
Own Purchases (IV)	0.35 (0.32)	0.68*** (0.24)	0.38 (0.31)	0.66*** (0.21)	-0.03 (0.34)	1.23*** (0.34)
Purchases of near substitutes (IV) (maturity w/in 2 yrs of own)	0.08** (0.03)	0.09* (0.05)	0.04 (0.07)	0.04 (0.03)	0.17*** (0.06)	0.11*** (0.04)
		-0.0006		-0.00007		-0.0022**

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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.

One observation



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.

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