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Discussion on

Monetary Policy at the Zero Lower Bound: Information in the Federal Reserve's Balance Sheet

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Article in a nutshell

Research question:

Does FED Treasury purchases have impact on TB yields

Why?

- Liquidity/safety premium channel
- Expected inflation channel
- Real rate of interest channel
- Portfolio allocation channel (flow to equities)

Overall

Very important topic for monetary poicy makers!!!

Article in a nutshell

Method: ARDL models

$$\Delta y_{n,t} = \alpha_n + \beta_{1,n} level_{t-1} + \beta_{2,n} slope_{t-1} + \beta_{3,n} \Delta FTM_t + \beta_{4,n} \Delta FTT_t + u_{n,t}$$

Findings:

Normal times: FED purchases are increasing TB yields

ZLB times: FED purchases are increasing TB yields
(also term premium, expected inflation, real yields)

Explanation: The dominant role of liquidity channel

FED swaps TB for more liquid assets, hence liquidity/safety premium of TB declines, leading to higher yields (Krishnamurthy and Vissing-Jorgensen 2011).

	Monthly yield changes					
	1y	3y	5y	7y	10y	15y
			Normal period			
$level_{-1}$	-0.0578	-0.2268	-0.3154	-0.3607	-0.3831	-0.3622
	(0.0972)	(0.1170)*	(0.1161)***	(0.1137)***	(0.1115)***	(0.1030)***
	[0.0828]	[0.0953]**	[0.1039]***	[0.1070]***	[0.1120]***	[0.1066]***
$slope_{-1}$	-0.0306	-0.0948	-0.1313	-0.1506	-0.1608	-0.1542
	(0.0411)	(0.0494)*	(0.0490)***	(0.0480)***	(0.0471)***	(0.0435)***
	[0.0352]	[0.0380]**	[0.0417]***	[0.0438]***	[0.0458]***	[0.0435]***
ΔFTM	-11.9950	-11.5058	-9.3955	-7.5742	-5.5647	-3.7849
	(2.8197)***	(3.3942)***	(3.3682)***	(3.2996)**	(3.2349)*	(2.9879)
	[3.2070]***	[4.2441]***	[4.4984]**	[4.4329]*	[4.1491]	[3.6124]
ΔFTT	-9.8323	-10.1486	-7.8358	-5.8319	-3.8439	-2.4244
	(2.5479)***	(3.0670)***	(3.0435)***	(2.9816)**	(2.9231)	(2.6999)
	[2.6012]***	[3.4185]***	[3.5274]**	[3.4080]*	[3.1660]	[2.7991]
$\overline{R}^2$	0.1697	0.1426	0.1347	0.1332	0.1298	0.1290
			ZLB period			
$level_{-1}$	-0.0580	-0.1177	-0.1404	-0.1307	-0.1000	-0.0492
	(0.0412)	(0.0807)	(0.1043)	(0.1160)	(0.1250)	(0.1295)
	[0.0497]	[0.0689]*	[0.0985]	[0.1197]	[0.1368]	[0.1419]
$slope_{-1}$	0.0159	0.0060	-0.0117	-0.0383	-0.0719	-0.1039
	(0.0309)	(0.0606)	(0.0783)	(0.0871)	(0.0939)	(0.0972)
	[0.0371]	[0.0656]	[0.0854]	[0.0983]	[0.1071]	[0.1096]
ΔFTM	-1.0181	-1.1601	-0.6427	-0.1395	0.3293	0.6852
	(0.7200)	(1.4113)	(1.8231)	(2.0272)	(2.1852)	(2.2627)
	[0.5674]*	[0.9625]	[1.4197]	[1.7737]	[2.0101]	[1.9971]
ΔFTT	-0.1101	1.7055	2.8767	3.4743	3.7341	3.5508
	(0.3223)	(0.6318)***	(0.8161)***	(0.9075)***	(0.9782)***	(1.0129)***
	[0.2258]	[0.5944]***	[0.8282]***	[0.9093]***	[0.9348]***	[0.9.54]***
$\overline{R}^2$	0.0204	0.0997	0.1441	0.1599	0.1536	0.1244

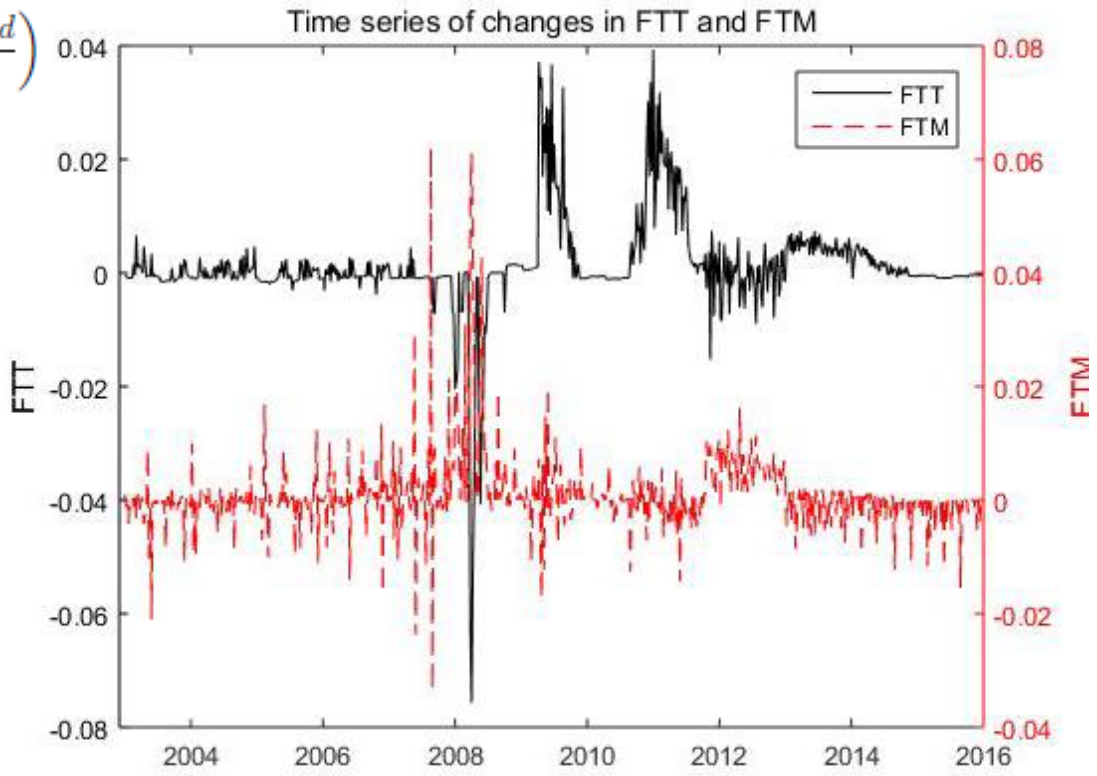
Q1: Why FTT and FTm are in logs

$$FTT \equiv \log\left(\frac{total\ Treasury\ securities\ held\ by\ Fed}{Nominal\ GDP}\right)$$

$$FTM \equiv \log\left(\frac{\sum_{j=1}^{5} V_j \times T_j + V_6 \times 15}{\sum_j V_j}\right)$$

In particular:

Log specification assumes that increasing TB assets from 10% of GDP to 11% of GDP has the same effect on yields as increasing TB assets from 100% of GDP to 110% of GDP...



$$\Delta y_{n,t} = \alpha_n + \beta_{1,n} level_{t-1} + \beta_{2,n} slope_{t-1} + \beta_{3,n} \Delta FTM_t + \beta_{4,n} \Delta FTT_t + u_{n,t}$$

Q2: Specification of the model?

- Under the current specification the effect of FTM and FTT on yields is assumed to be instantaneous

$$\Delta y_{n,t} = \alpha_n + \beta_{1,n} level_{t-1} + \beta_{2,n} slope_{t-1} + \beta_{3,n} \Delta FTM_t + \beta_{4,n} \Delta FTT_t + u_{n,t}$$

- Over the ZLB period TB yields have decreased and the value of FTT/FTM has increased (negative correlation, at odds with the main result)

- What about adding lagged values of *y*, *FTM* and *FTT* and calculating long-term multiplier?

- I would be happy to see scatter-plot of y on FTT to check if the results are not driven by outliers.

Minor issues

1. What is *level* and *slope* in regression 3?

2. I would rather report Hausman test in Table 10 than write that the results are available upon request

3. What is the reason to report std. errors twice in the Tables 3-8?

Summary

1. An advanced and well executed econometric analysis

2. It helps in understanding on how nonconventional monetary policy operates in ZLB periods

3. I very like that the results are against our intuition: it forces us to think

4. What about a theoretical model that would make the argument even more convincing?