Discussion of
Simon Gilchrist, Egon Zakrajsek and Vivian Yue
U.S. Monetary Policy and Foreign Bond Yields

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*The views expressed do not necessarily reflect the official position of the ECB.

Overview

- Question: International spillovers of U.S. monetary policy shocks in
  - Conventional (pre-zlb) vs. unconventional (zlb) periods
  - Advanced vs. emerging-market government bond yields, equities and exchange rates.

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  - Conventional (pre-zlb) vs. unconventional (zlb) periods
  - Advanced vs. emerging-market government bond yields, equities and exchange rates.
- Methodology:
  - Event-study regressions around U.S. monetary policy announcements
  - Innovation: Intraday changes in both 2-year and 10-year Treasury yields
  - Impact on daily changes of asset prices

Overview, cont.

- Results
  - Conventional shock: steeper, unconventional: flatter yield curve
  - International transmission during zlb: weak at the short end, strong at the long end of the yield curve
  - True in both advanced and emerging economies
  - Speculative grade yields less responsive during the ZLB

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- Results
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  - International transmission during zlb: weak at the short end, strong at the long end of the yield curve
  - True in both advanced and emerging economies
  - Speculative grade yields less responsive during the ZLB
- Implications for policy?
  - XR, local interest rate policy insufficient to insulate long rates
  - Should U.S. monetary policy care?
  - Should there be new tools: capital controls, foreign exchange interventions, emerging market LSAPs?

Comments

- Related to the research project (including Gilchrist, López-Salido, and Zakrajšek, 2015)

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- Conventional vs. unconventional shocks

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- Impact on inflation compensation

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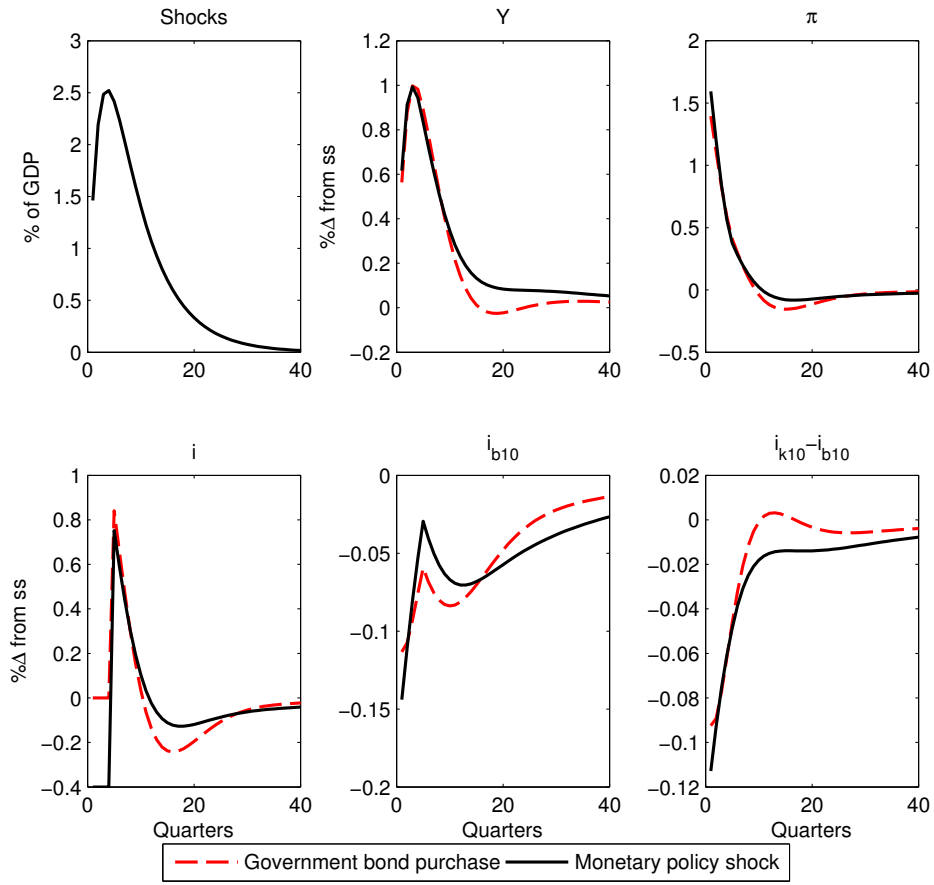
- Impact on credit costs

Conventional vs. unconventional shocks: A model

- Example: a monetary DSGE model with funding constrained banks (Gertler and Karadi, 2013)



Conventional vs. unconventional shock: A model, cont.

- Comparable impact of
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  - Conventional shock also eases credit constraints
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- Empirical question

Conventional vs. unconventional shocks: The data

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Conventional vs. unconventional shocks: The data

- LSAPs target the long end of the yield curve
- Innovation: use two independent yield-curve factors during the ZLB: Good idea
- As in Gürkaynak, Sack, and Swanson (2005b), but with long yields
- Data: (based on Gürkaynak et al., 2005b)
  - 30 min surprises
  - 2, 10 year Treasuries
  - 1991-2008m11 and 2008m12-2015m6
  - Daily changes in asset prices
  - Same NLLS methodology the authors use

Conventional vs. unconventional shocks: The data, cont

- During conventional period: long shock also matters

1991m1-2008m11	Overnight forward yield curve and 5-by-5 forward				
157 obs	2yr	5yr	5x5	10yr	30yr
Short	0.789***	0.347***	0.149**	0.0269	0.0105
	(0.0922)	(0.0838)	(0.0720)	(0.0663)	(0.216)
Long	0.763***	1.097***	1.059***	0.999***	-0.200
	(0.245)	(0.212)	(0.178)	(0.163)	(0.590)
R^2	36%	23%	21%	19%	0%
R^2 (only short)	32%	10%	3%	0%	0%

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Conventional vs. unconventional shocks: The data, cont

- During conventional period: long shock also matters
- 2YR shock might be insufficient statistic even then

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Conventional vs. unconventional shocks: The data, cont

- During unconventional period: long shock matters more

2008m12-2015m6	Overnight forward yield curve and 5-by-5 forward				
53 obs	2yr	5yr	5x5	10yr	30yr
Short	1.600***	1.609***	1.030***	0.524	-0.189
	(0.259)	(0.426)	(0.372)	(0.325)	(0.424)
Long	0.779***	1.543***	1.336***	0.974***	0.721***
	(0.132)	(0.183)	(0.162)	(0.166)	(0.260)
R^2	65%	66%	62%	42%	13%
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Conventional vs. unconventional shocks: The data, cont

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Conventional vs. unconventional shocks: The data, cont

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- Partly because 2YR rate constrained
- Monetary policy drives long rates more

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Impact on inflation compensation

- Long raises IC: risk premium or revealing private info

1999m1-2008m11	Overnight forward yield curve and 5-by-5 forward				
87 obs	2yr	5yr	5x5	10yr	20yr
Short	0.169	-0.0740	-0.0757	-0.0746	-0.172*
	(0.122)	(0.0701)	(0.0553)	(0.0540)	(0.0916)
Long	0.526*	0.363**	0.302**	0.281**	0.175
	(0.269)	(0.165)	(0.129)	(0.127)	(0.220)
R^2	12%	6.5%	8%	7%	5%
2008m12-2015m6,					
53 obs	2yr	5yr	5x5	10yr	20yr
Short	-0.294	0.0339	0.164	0.132	-0.671**
	(0.225)	(0.130)	(0.149)	(0.162)	(0.298)
Long	0.0367	0.196**	0.278***	0.246**	-0.496***
	(0.148)	(0.0809)	(0.0899)	(0.101)	(0.183)
R^2	3%	10%	17%	11%	20%

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- Long raises IC: risk premium or revealing private info
- Very long term IC drops; more during the ZLB period

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Impact on inflation compensation, cont.

- Potential cause: learning about the inflation target (Gürkaynak, Sack, and Swanson, 2005a)

Impact on inflation compensation, cont.

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- Add simple learning to the DSGE model above
  - Taylor rule with potentially time-varying inflation target

$$i_t = \rho_i i_{t-1} + (1-\rho_i)\left(\kappa_\pi\left(\pi_t - \pi_t^*\right) + \kappa_y\left(y_t - y_t^*\right)\right) + \varepsilon_t$$

  - Linear updating of perceived inflation target in case of surprises

$$\pi_{t+1}^{*p} = \pi_t^{*p} + \alpha_\pi\left(\bar{\pi}_t - \bar{\pi}_{t|t-5}\right) - \alpha_i\left(i_t - i_{t|t-1}\right) + \alpha_{QE}\left(QE_t - QE_{t|t-1}\right)$$

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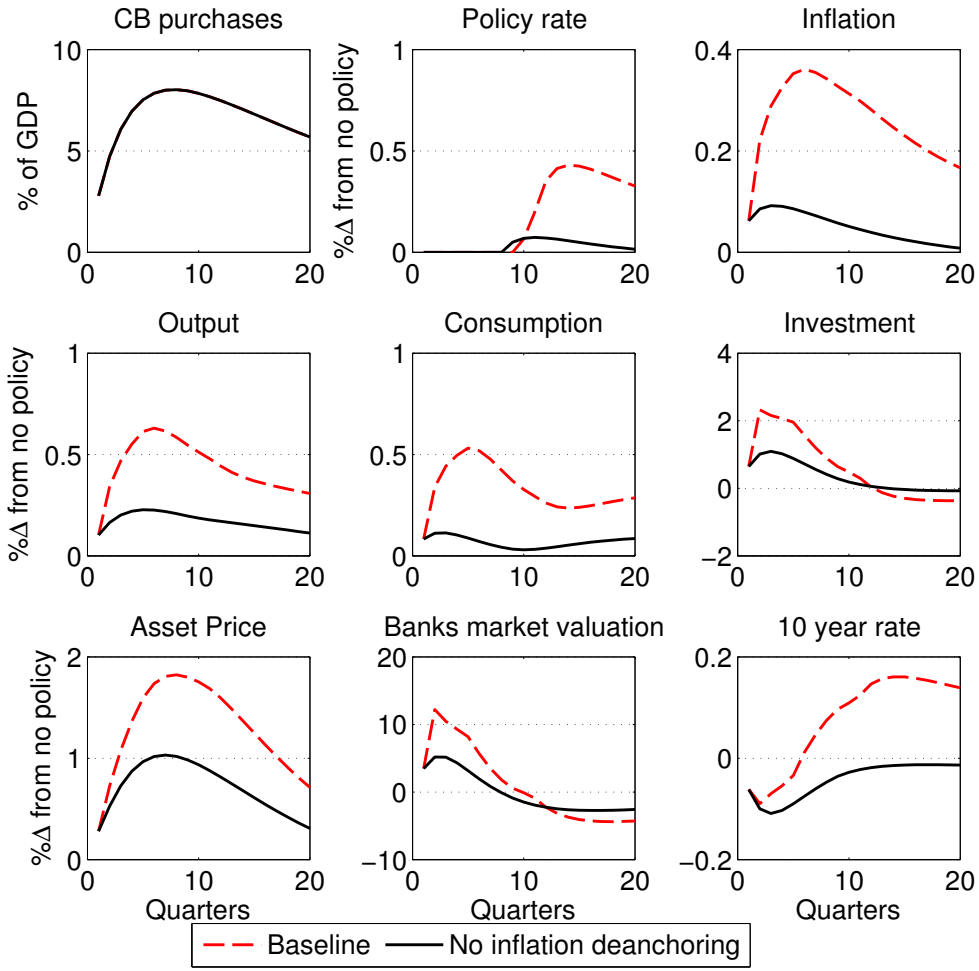
- A QE policy can have a reanchoring channel
- Influences expected path of interest rate policy
- Powerful feedback at ZLB
- Euro area calibration
  - Simulated QE policy (EAPP)
  - Policy impacts 10YR yield by -10bps in the model
  - EAPP raises perceived target by 7bps (not unreasonable given the numbers above)

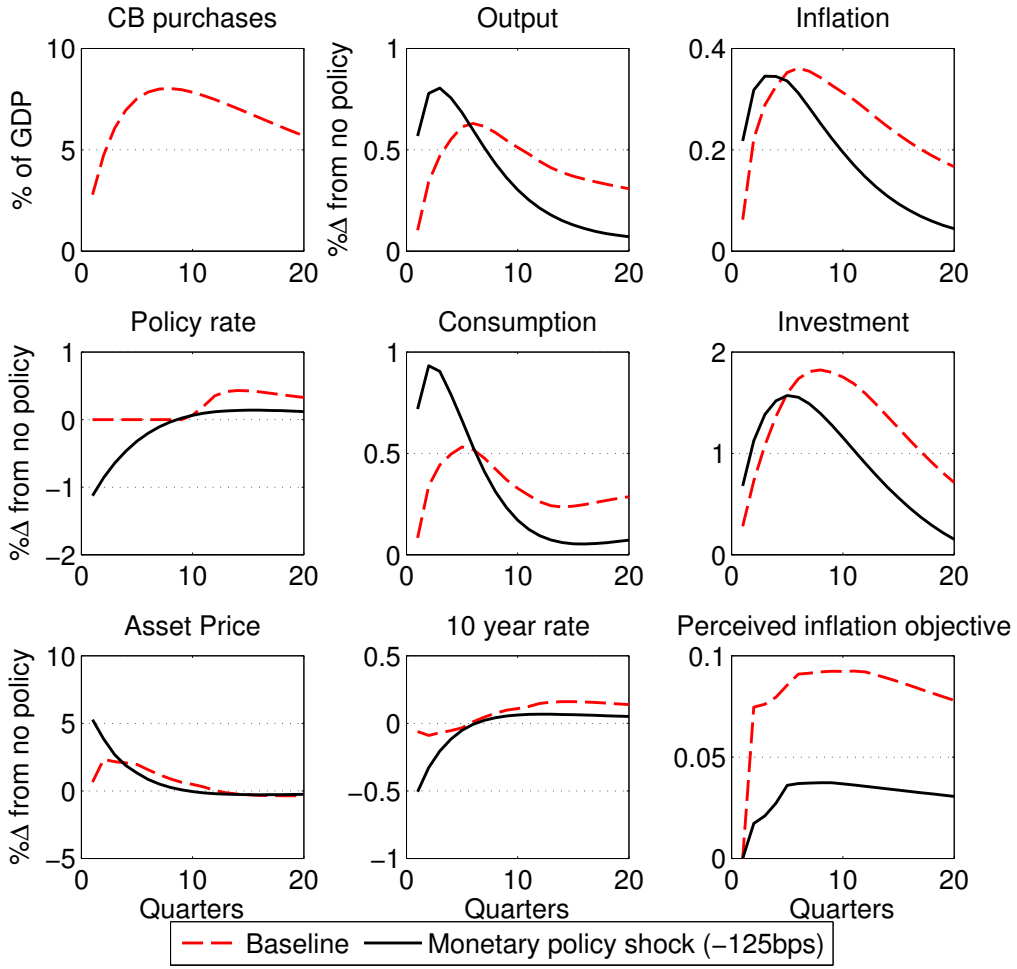
Impact on inflation compensation, cont.

- Powerful amplification: reanchoring channel raises peak inflation impact from 10bps to 35bps



Impact on inflation compensation, cont.

- Monetary policy and QE shock becomes more different



Impact on corporate spreads

- Financial friction models predict increasing bond spreads

	Moody's Baa corporate spread (30 year)	
	1991m1-2008m11, 157 obs	2008m11-2015m6, 53 obs
Short	0.115**	0.401***
	(0.0495)	(0.145)
Long	0.112	-0.134
	(0.135)	(0.0934)
R^2	4%	16%

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Impact on corporate spreads

- Financial friction models predict increasing bond spreads
- With 2-day changes, some evidence on positive impact in both periods

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- Some evidence on positive impact on corporate spreads during unconventional periods

References I

Gertler, M. and P. Karadi (2013). QE 1 vs. 2 vs. 3...: A Framework for Analyzing Large-Scale Asset Purchases as a Monetary Policy Tool. *International Journal of Central Banking* *9*(1), 5–53.

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