Discussion: "Unwinding Quantitative Easing: State Dependency and Household Heterogeneity"
by C. Cantore and P. Meichtry

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[1]**De Nederlandsche Bank**.
Disclaimer: Views expressed here are my own and do not necessarily reflect official positions of De Nederlandsche Bank or the Eurosystem

This Paper: Assesses the effects of central bank asset market operations in a TANK model and on and off the ZLB.

- Very nice and timely paper!
- Important! Expected QT in the EA is approx. 25% over the next 3 years
  ▸ APP and PEPP Holdings and Expectations

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- Brief summary of the paper
- Comment **#1:** Source(s) of state-dependence
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Think of simple aggregate consumption function [Cui and Sterk, 2021].

$$C_{TA}(\underbrace{S}_{\text{Short Bond}} , \underbrace{L}_{\text{Long Bond}} , \underbrace{\Gamma}_{\text{GE Objects}}) \qquad (1)$$

The partial derivative of consumption with respect to a relative debt supply change can be decomposed:

$$\frac{\partial C_{TA}}{\partial QE} = \underbrace{MPC_S - MPC_L}_{\text{direct effect}} + \underbrace{GE}_{\text{indirect effect}} \qquad (2)$$

Two vital questions in this paper:

1. Is QE just minus QT?

$$\frac{\partial C_{TA}}{\partial QE} = -\frac{\partial C_{TA}}{\partial QT}?$$

2. Does heterogeneity matter?

$$\frac{\partial C_{TA}}{\partial QE} = \frac{\partial C_{RA}}{\partial QE}?$$

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The paper in a nutshell

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The two questions in context

1. The effects of QT compared to QE

- Empirical and theoretical studies suggest sizeable effects of QE
  [Krishnamurthy and Vissing-Jorgensen, 2011]
- More uncetrainty surrounding QT [Benigno and Benigno, 2022; Wei, 2022]

This paper: QE is stronger than QT as long as the former is amplified by the ZLB.

2. The distributional effects of asset purchases

- Large literature on heterogeneity and conventional monetary policy [Auclert, 2019; Bilbiie, 2018; Kaplan et al., 2018]
- QE in a HANK model can have large distributional and aggregate effects [Cui and Sterk, 2021]
- But in a model where only the very constrained agents react differently the effects are small [Sims et al., 2022]

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In the paper: QE and QT effects are stronger at ZLB than otherwise

`Result 1: QT IRFs` `Result 1: QE IRFs`

Question: Is it possible to go deeper into the sources of state-dependence beyond the ZLB?

Some possible candidates for state-depedence:

1. Procyclical idiosyncratic risk `Two asset HANK exercise`
2. Countercyclical liquidity premium `Vlieghe (2021)`
3. Procyclical financial accelerator [Mertens and Ravn, 2011]

Suggestion: The world when CB undertakes QT is different to the world when CB undertakes QE.
Would be very interesting to embrace this further in the model

Comment #1: Asymmetry and state-dependency

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In the paper: Heterogeneity does not matter off the ZLB. But it does matter at the ZLB.[1]

Question: How general is this result?

1. Relatively small differences / sensitive to the calibration (result flips when τ_d is high)? `IRFs of QE`

2. Would be interesting to see if this result is robust to a model that fully reflects household portfolios and MPCs [McKay and Wolf, 2023]

3. Prices adjust quite differently in the two models even away from ZLB. `IRFs of QT`

Suggestion: Both micro-moments and reaction of prices matter for aggregate outcomes. Can we assess the importance of these for TANK vs RANK debate here?

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1. QE adoption likely to be rapid - QT gradual How does this affect the policy implications? [Benigno and Benigno, 2022; Harrison, 2017].

2. QE adoption likely unexpected - QT likely expected. When should CBs announce QT? Expected v Unexpected MP

Suggestion: Analyse the interaction of heterogeneity and both instruments in a transition towards a new steady state.

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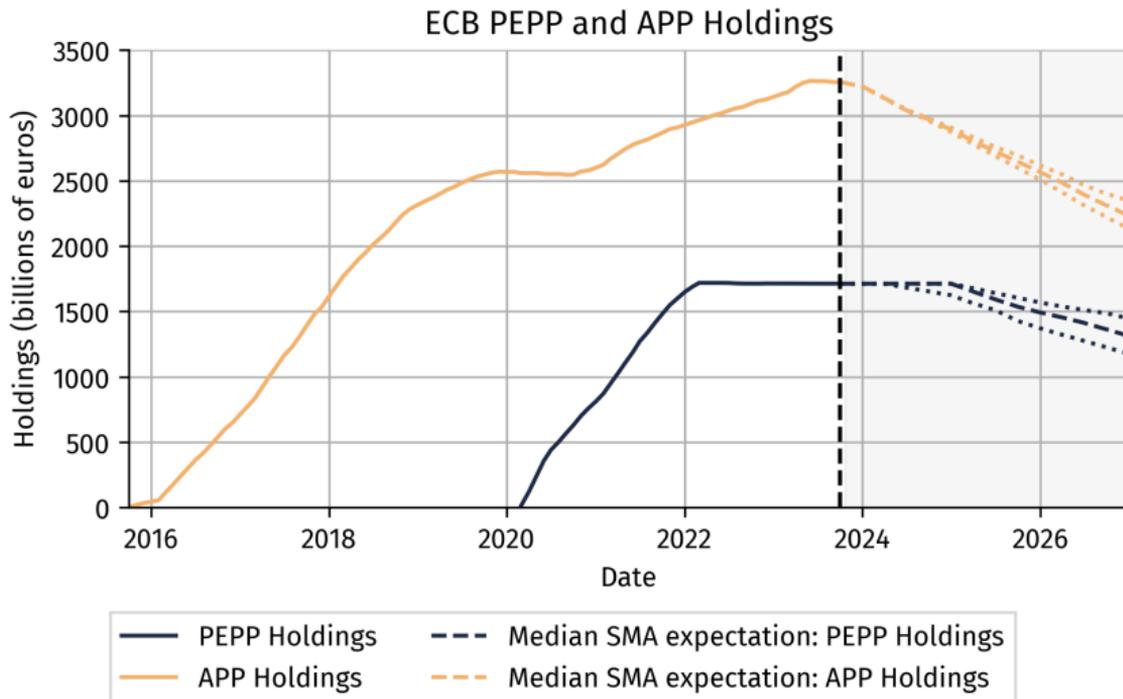
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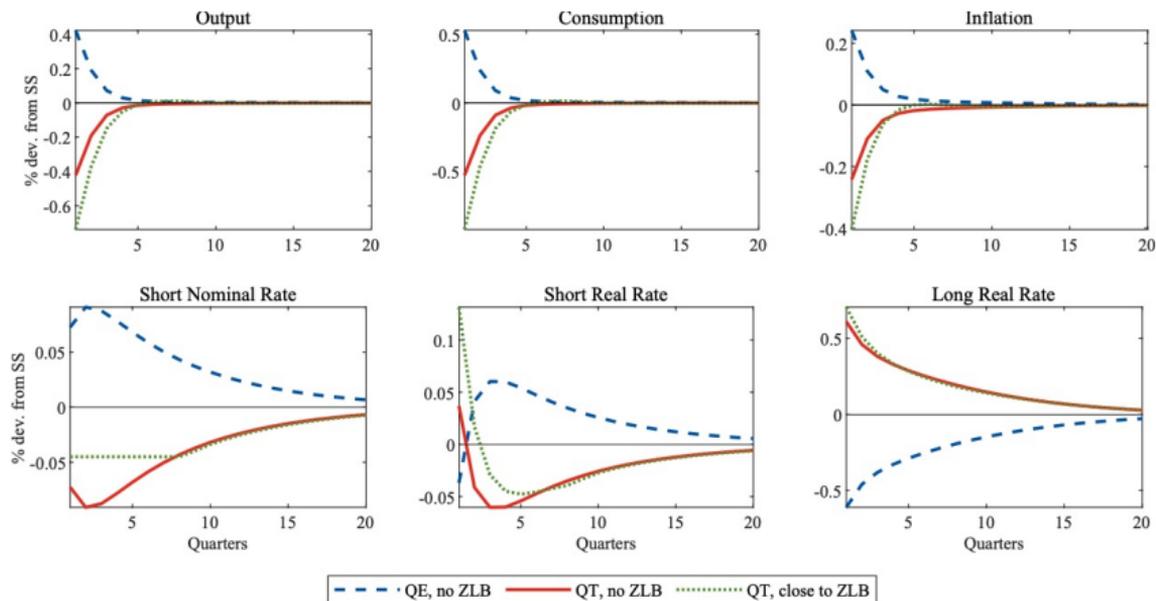
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Appendix

APP and PEPP Holdings

ECB PEPP and APP Holdings

Holdings (billions of euros) vs Date

Legend:
- PEPP Holdings
- APP Holdings
- Median SMA expectation: PEPP Holdings
- Median SMA expectation: APP Holdings

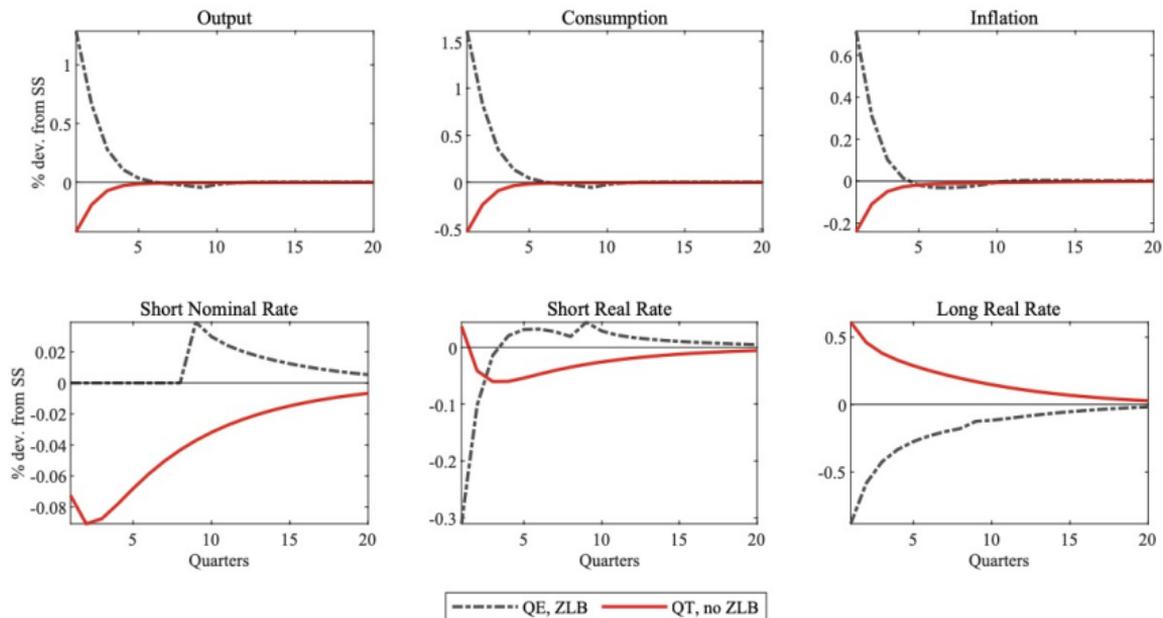**Source:** ECB Monthly Holdings; ECB Survey of Monetary Analysts

back

Source: Cantore and Meichtry (2023)

back

IRFs for Result 1

Source: Cantore and Meichtry (2023)
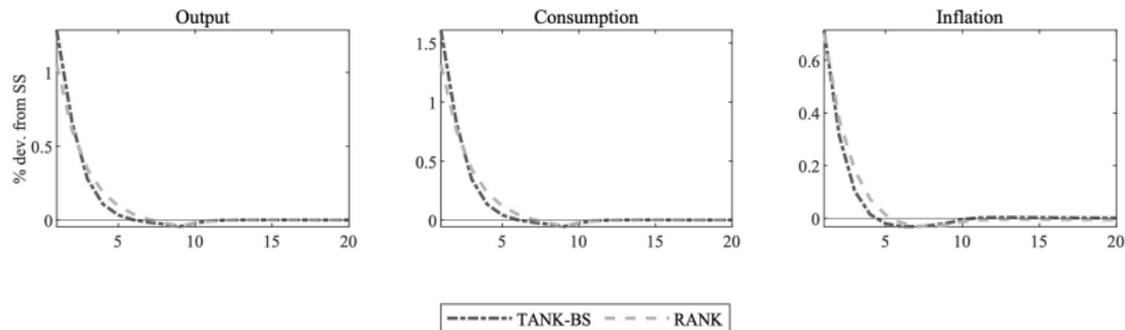
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IRFs for QT shock off ZLB - RANK v TANK
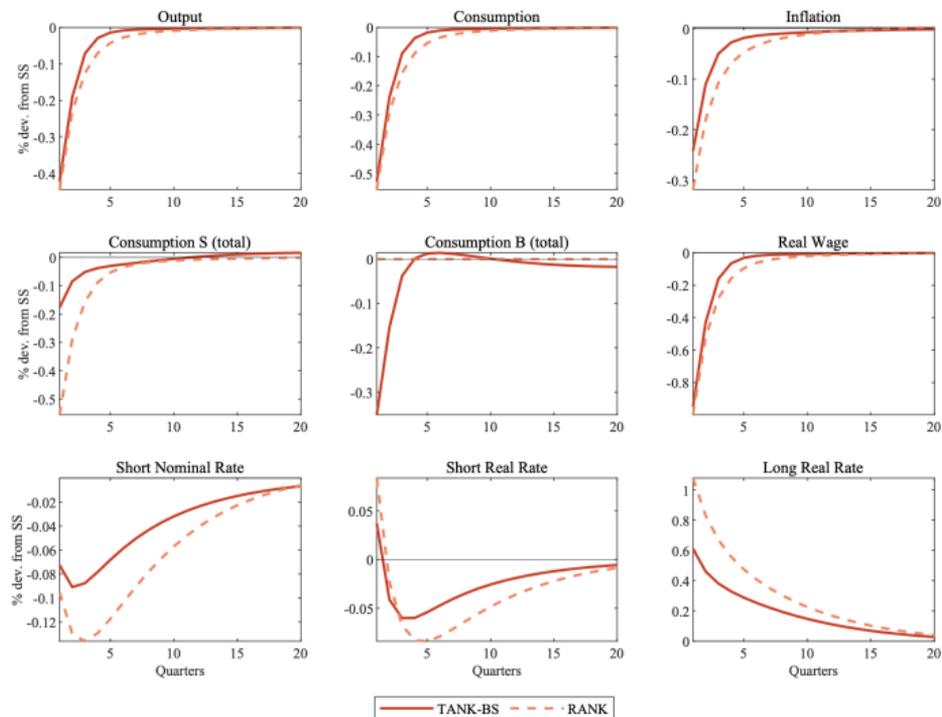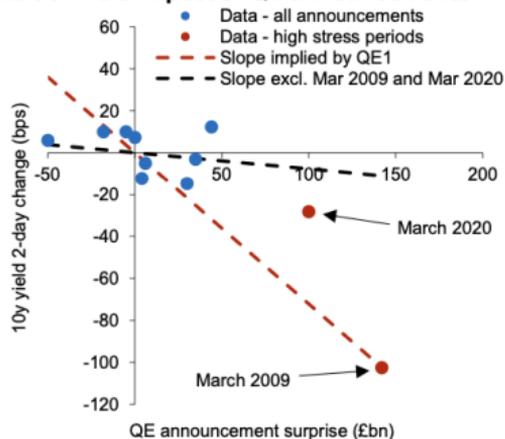

Source: Cantore and Meichtry (2023)

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# IRFs for QE shock at ZLB - RANK v TANK

Source: Cantore and Meichtry (2023)

Vlieghe (2021)

Chart 5: Yield impact of QE announcements

- Data - all announcements
- Data - high stress periods
- – – Slope implied by QE1
- – – Slope excl. Mar 2009 and Mar 2020

10y yield 2-day change (bps)

QE announcement surprise (£bn)

March 2020

March 2009

Sources: Bloomberg Finance L.P, Tradeweb and Bank of England calculations

Chart 6: Measures of market liquidity

- HKM 24-month growth rate (RHS, inverted)
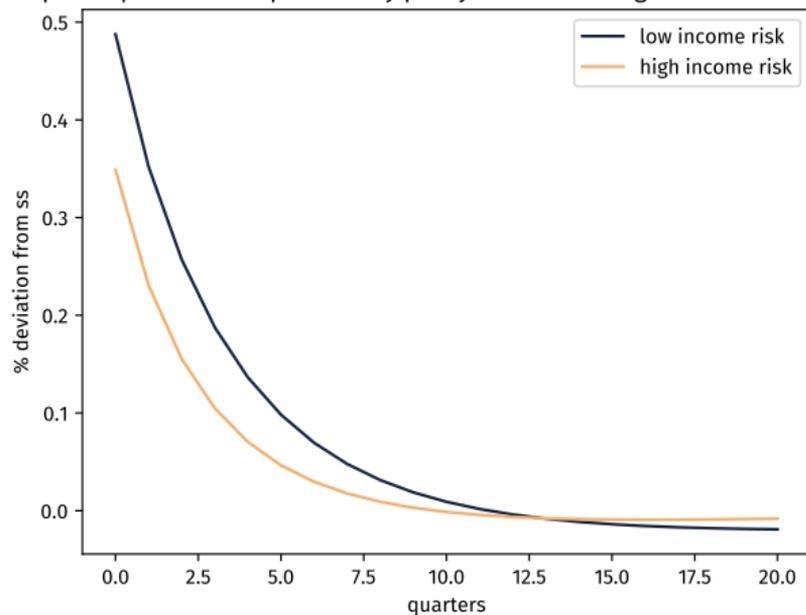- CBOE VIX (LHS)

March 2009

March 2020
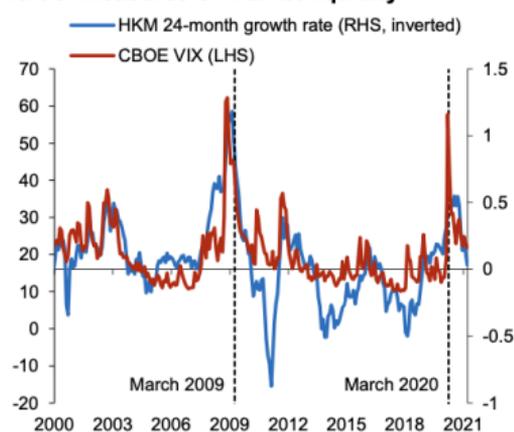
Sources: Refinitiv Eikon and He, Kelly, and Manela (2017). Latest observation: December 2020.

Source: Speech by Gertjan Vlieghe, External Member of the Monetary Policy Committee BoE (26 July 2021)
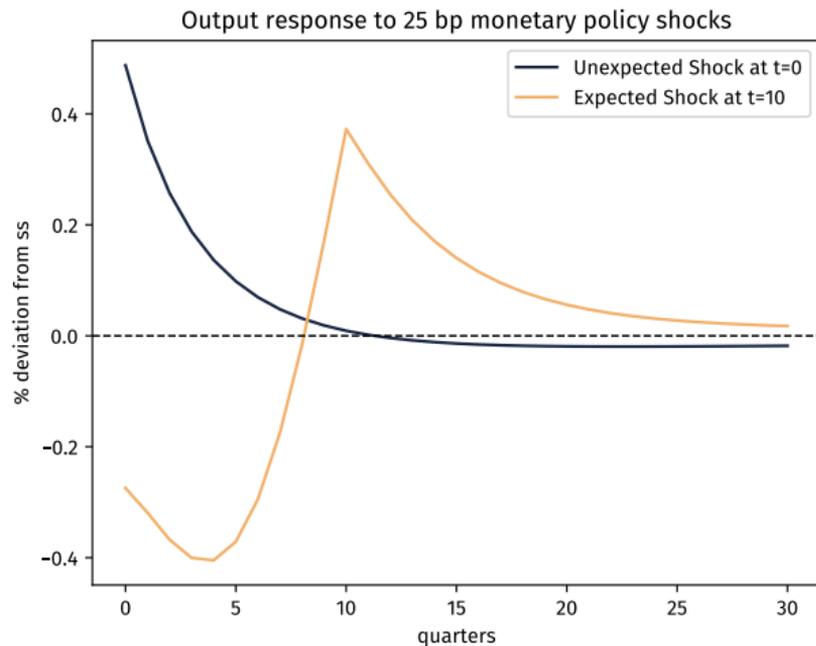
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Monetary policy shock with high and low income risk

Output response to 25 bp monetary policy shocks with high and low income risk

Source: Author's calculations

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Monetary policy shock expected v unexpected

Output response to 25 bp monetary policy shocks

Legend:
- Unexpected Shock at t=0
- Expected Shock at t=10

y-axis: % deviation from ss
x-axis: quarters

Source: Author's calculations

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