

# Discussion: "Unwinding Quantitative Easing: State Dependency and Household Heterogeneity"

by C. Cantore and P. Meichtry

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Timo Haber<sup>1</sup>

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<sup>1</sup>**De Nederlandsche Bank.**

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

# Overview of Discussion

**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
- Comment #2: Importance of heterogeneity
- Comment #3: Policy exercises and implications

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# The paper in a nutshell

Think of simple aggregate consumption function [Cui and Sterk, 2021].

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

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

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

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?

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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 uncertainty 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-dependence:**

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

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## Comment #2: Does heterogeneity matter?

**In the paper:** Heterogeneity does not matter off the ZLB. But it **does** matter at the ZLB.<sup>1</sup>

**Question:** How general is this result?

1. Relatively small differences / sensitive to the calibration (result flips when  $\tau_d$  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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## Comment #3: What about the policy implications?

**In the paper:** Stay away from QT when you are close to ZLB as these shocks may push you back into ZLB.

**Question:** Beyond unexpected shocks, what are welfare effects towards new steady state with both instruments working together?

1. QE adoption likely to be rapid - QT gradual How does this affect the policy implications? [Benigno and Benigno, 2022; Harrison, 2017].
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**Suggestion:** Analyse the interaction of heterogeneity and both instruments in a transition towards a new steady state.

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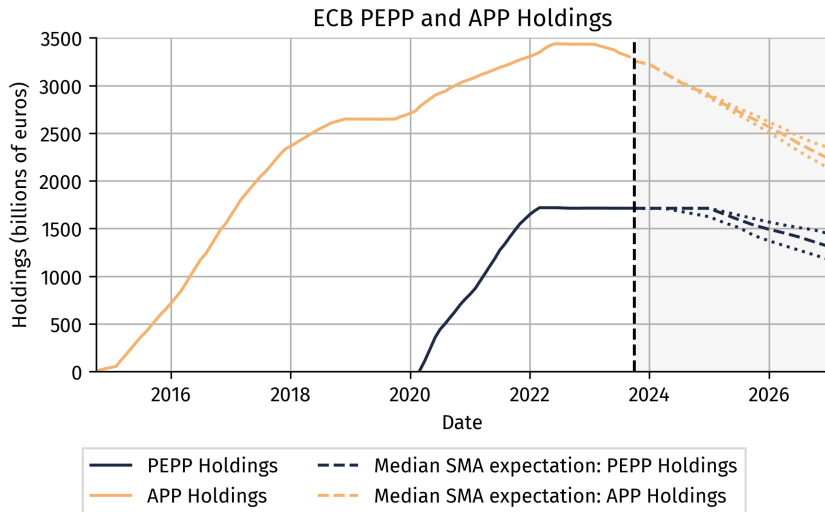
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# Appendix

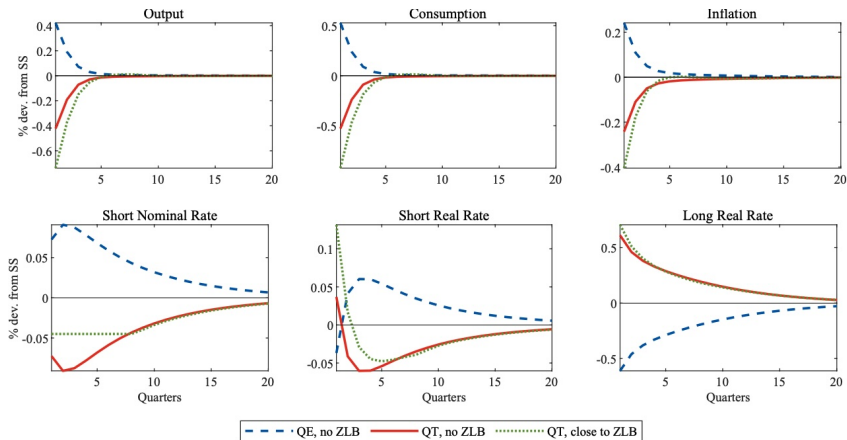
# APP and PEPP Holdings



Source: ECB Monthly Holdings; ECB Survey of Monetary Analysts



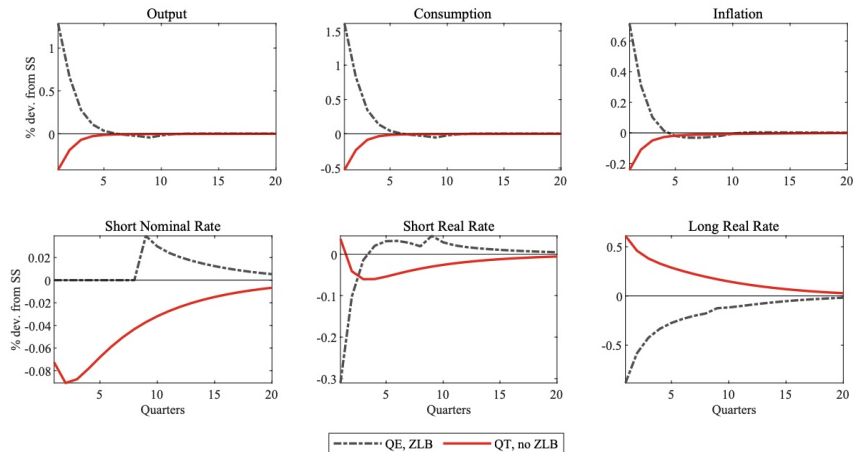
# IRFs for Result 1



Source: Cantore and Meichtry (2023)

back

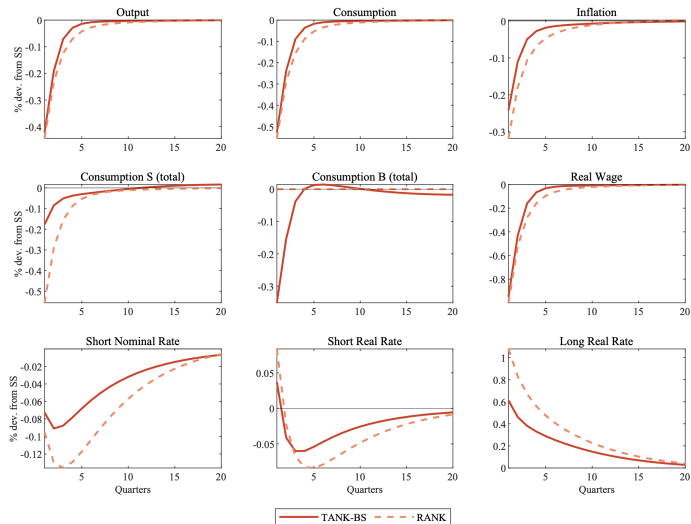
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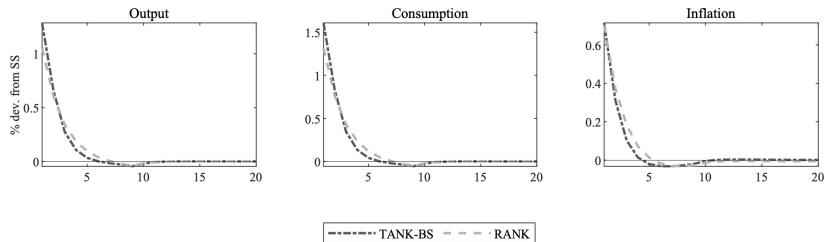
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# IRFs for QT shock off ZLB - RANK v TANK



Source: Cantore and Meichtry (2023)

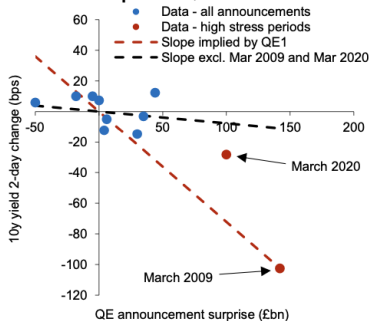
# IRFs for QE shock at ZLB - RANK v TANK



Source: Cantore and Meichtry (2023)

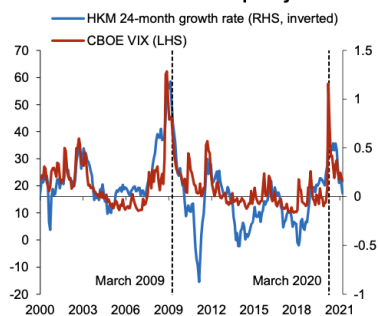
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**Chart 5: Yield impact of QE announcements**



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

**Chart 6: Measures of market liquidity**

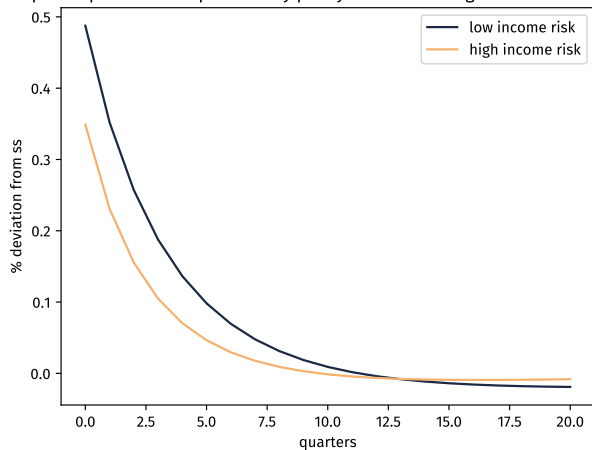


Sources: Refinitiv Eikon and He, Kelly, and Manela (2017). Latest observation: December 2020.

**Source:** Speech by Gertjan Vlieghe, External Member of the Monetary Policy Committee BoE (26 July 2021)

# 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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