

Discussion: "Monetary Policy with Inelastic Asset Markets"

by Joseph Abadi

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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 Analyses the effects of **conventional and unconventional** monetary policy through an **integrated** framework of the real economy and financial markets.

- Well written and **relevant** paper.
- **Tractable and intuitive** demand and supply analysis.
- **Sharp** characterization of results due to closed form solutions.

Plan for this Discussion

- Brief summary of the paper
- Comment **#1**: Type of assets purchased by the central bank.
- Comment **#2**: How strong is the inelastic markets channel?
- Comment **#3**: Optimal policy and steady state central bank balance sheet.

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The paper in a nutshell

Standard models For a given consumption path, demand for assets is perfectly elastic.

In this paper

- Financial intermediaries have investment **mandates**.
→ costly to deviate from target portfolio weights.
- Intermediaries thus require higher returns to hold more risky assets.
→ **inelastic** asset demand.

Key Takeaways

1. Interest rate changes have **amplified** effects due to inelastic asset demand.
2. Central bank asset purchases **lower** risk premia and boost investment, but reversal can lead to **undershooting** of asset prices.
3. Optimal policy uses **both** interest rate adjustments and asset purchases to stabilize asset prices and close output gaps.

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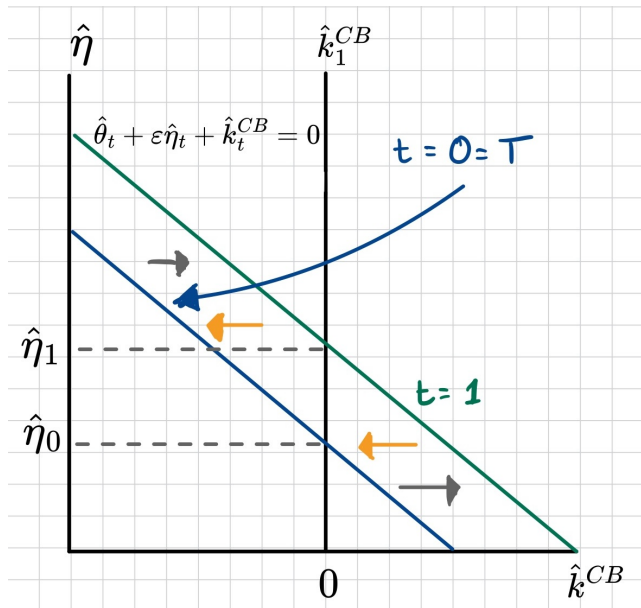
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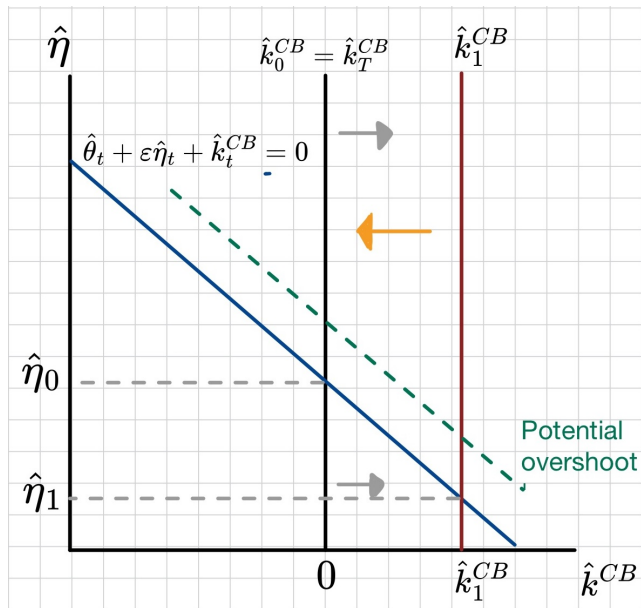
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Contractionary monetary policy in the asset market



Expansionary asset purchases in the asset market



Comment #1: Capital versus public debt?

- In the model, unconventional monetary policy is conducted by purchasing **capital**.
- However, most of QE was done buying either sovereign and quasi-sovereign debt or MBS debt. [ECB Balance Sheet](#) [Federal Reserve Balance Sheet](#)

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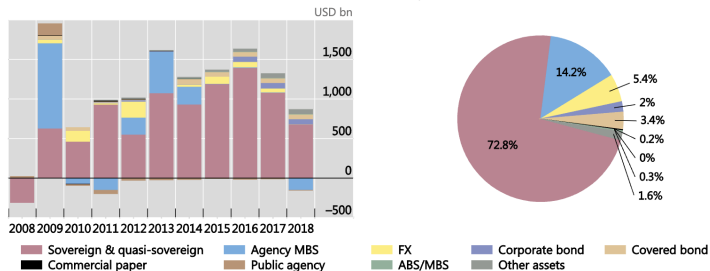
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The composition of asset purchase programmes by asset class¹

Graph II.3

Net purchased amounts per year across all programmes

Net purchased amount by asset type (percent of total in 2008–18)



¹ Net purchase amounts in each year are calculated as the change in central bank holdings (or exposure) from one year to the next. The average exchange rate each year is used to convert holdings (or exposures) to USD.

Sources: National submissions to CGFS/MC survey; study group calculations.

Implications of asset purchase type

- Most of the literature has followed this approach, assuming that CB buys long-term public debt. [Benigno and Benigno, 2022; Chen et al., 2012; Harrison, 2017; Ikeda et al., 2024]
- Understandable simplification in the paper.
- But how sensitive are results to a framework where the CB operates via purchases of sovereign securities?

Some questions and tradeoffs

1. Imperfect substitution between capital and (long) public debt?
2. Compression of term premium versus equity risk premium?
3. Provision of liquidity versus reduction of risky assets?

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Comment #2: How strong is the inelastic markets channel?

- The inelastic markets channel is the **key** feature of the model leading to amplified effects of monetary policy. **Figure 3**
- The crucial parameter for this channel is ε in the asset market clearing equation:

$$\hat{\theta}_t + \varepsilon \hat{\eta}_t = -\hat{k}_t^{CB} \quad (1)$$

where $\varepsilon \equiv \sum_{i=1}^I (\theta_i^* \omega_i^*) \varepsilon_i$ and $\varepsilon_i \equiv \frac{1}{\omega_i^* \xi_i''(0)}$

- Can we quantify the strength of the asset market channel by estimating ε ?
- **Potentially!** Remember the supply and demand diagram in the asset market...

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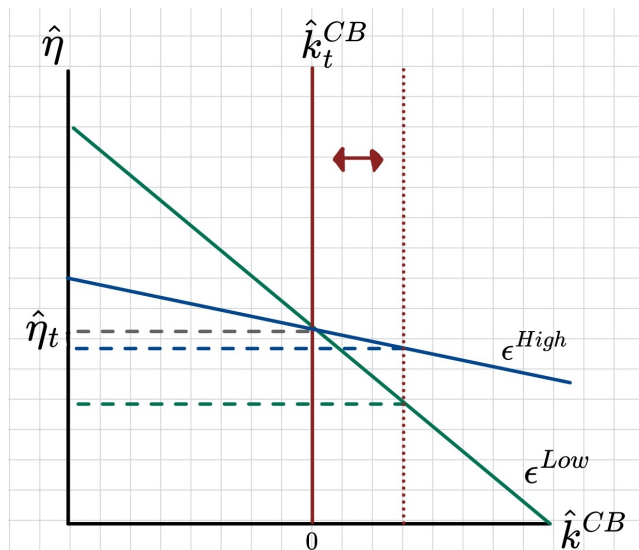
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Three ideas for identification:

1. You could use plausibly exogenous variation in assets purchases. Maybe using the LSAP shocks by [Swanson, 2021] or [Altavilla et al., 2019] could be a good starting point.
2. You could try to fit empirical impulse responses from the literature and estimate the parameter ε that way. [e.g Kim et al., 2020; Swanson, 2023]
3. You could go for a full scale estimation of the model and estimate the parameter ε jointly with the other parameters.[e.g Chen et al., 2012]

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Comment #3: Optimal asset purchase and interest rate policy: theory and practice

- Optimal purchase policy is characterized by

$$\dot{\hat{k}}_t^{CB} = -\zeta \hat{k}_t^{CB} - \lambda_p \hat{p} \hat{y}_t$$

for some $\zeta > 0$.

- Assume we are at steady state and positive shock happens to py_t .
- Selling assets is the optimal policy response.
- But implementability requires the CB to hold a **positive amount of risky assets in steady state!**

Model and policy implications

1. **Model:** Does the steady state level of risky assets on the balance sheet matter?
2. **Policy:** Familiar issue of market footprint and picking winners and losers.

On footprint

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Thank you very much for your attention!

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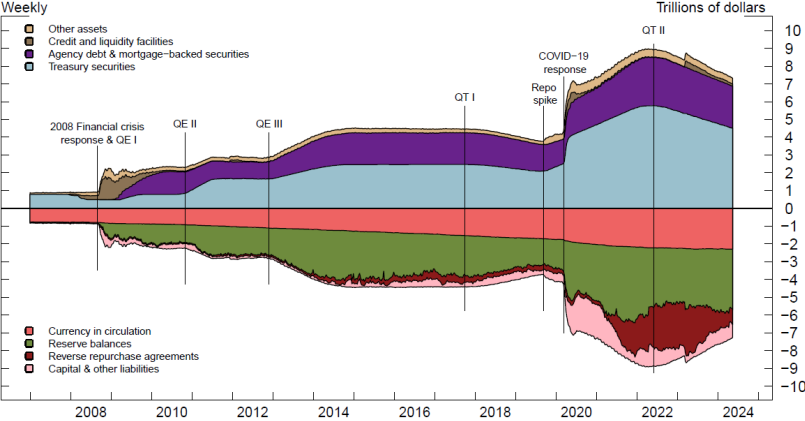
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Federal Reserve Balance Sheet over Time

Figure 1: Federal Reserve Assets and Liabilities
Weekly

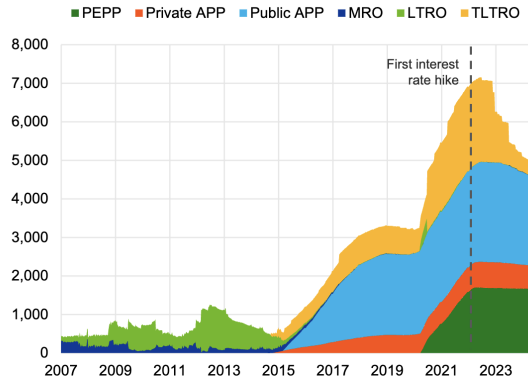


Note: "Other assets" includes repurchase agreements, FIMA (Foreign and International Monetary Authorities) repurchase agreements, and unamortized premiums and discounts on securities held outright. "Credit and liquidity facilities" consists of primary, secondary, and seasonal credit; term auction credit; central bank liquidity swaps; support for Maiden Lane, Bear Stearns Companies, Inc., and AIG; and other credit and liquidity facilities, including the Primary Dealer Credit Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Commercial Paper Funding Facility, the Term Asset-Backed Securities Loan Facility, the Primary and Secondary Market Corporate Credit Facilities, the Paycheck Protection Program Liquidity Facility, the Municipal Liquidity Facility, and the Main Street Lending Program. "Agency debt and MBS" holdings includes agency residential mortgage-backed securities and agency commercial mortgage-backed securities. "Capital and other liabilities" includes the U.S. Treasury General Account and the U.S. Treasury Supplementary Financing Account. QE is quantitative easing; QT is quantitative tightening. The key identifies shaded areas in order from top to bottom. The data extend through May 15, 2024.

Source: Federal Reserve Board, H.4.1.

Monetary policy assets

(€ billion)

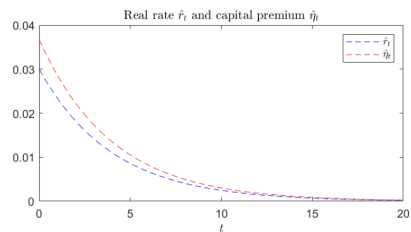
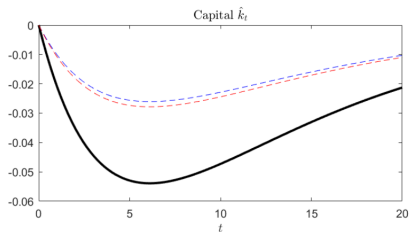
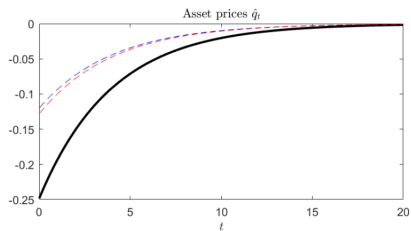
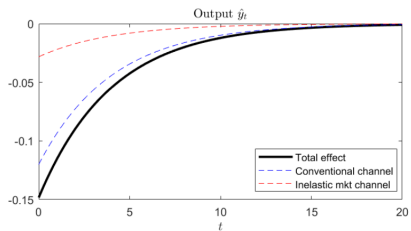


Source: ECB.

Notes: Public APP is PSPP, Private APP is CBPP3, ABSPP and CSPP.

Latest observation: May 2024.

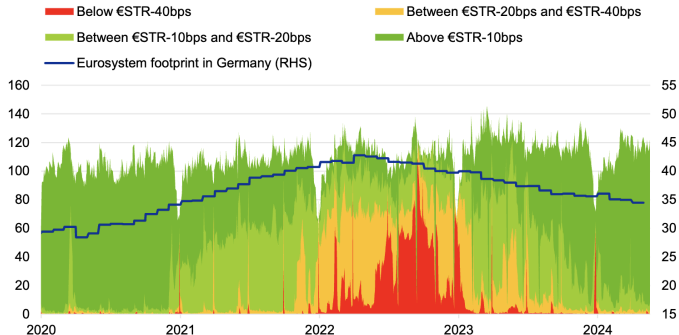
Figure 3: IRF to MP shock



Footprint of the ECB in the Bund Market

Volume of repos against German government bonds by rate bracket and Eurosystem footprint

(LHS: EUR billion; RHS: %)



Sources: MMSR, Eurosystem, ECB calculations.

Notes: Footprint measured as a share of Eurosystem's German central and regional government bond holdings and mobilised collateral (adjusted for government bonds lent back to the market via the Eurosystem's Securities Lending against cash arrangement) compared to nominal amount outstanding. Specialness of repo market is displayed as volumes per rate bucket in EUR billion. Specialness of repo market is displayed as volumes per rate bucket in EUR billion.

Last observation: 17 May 2024 (specialness of repo market); 30 April 2024 (Eurosystem footprint).