

Active and Passive (Un)conventional Monetary and Fiscal Policies for Debt Stability

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- Lead to a big increase of the US debt to GDP and posed questions on its stability

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 - **Passive QE** is responsible for debt stability

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- When profits are remitted to the Treasury, they can make the government's budget constraint **to hold**

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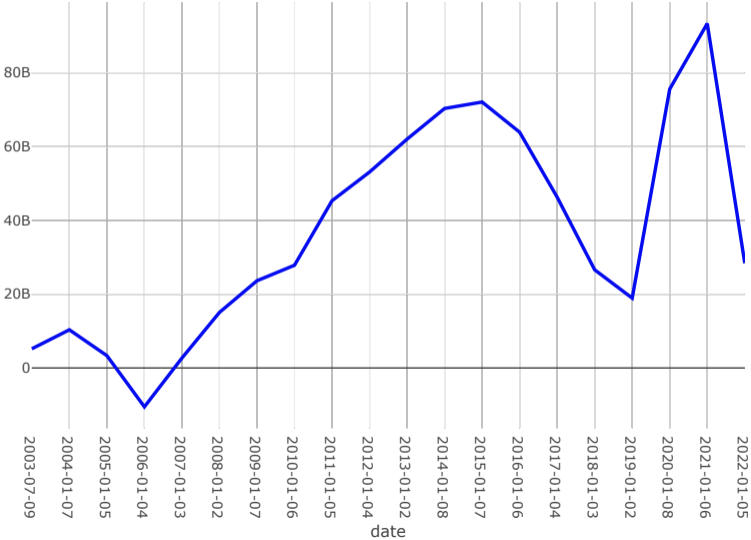
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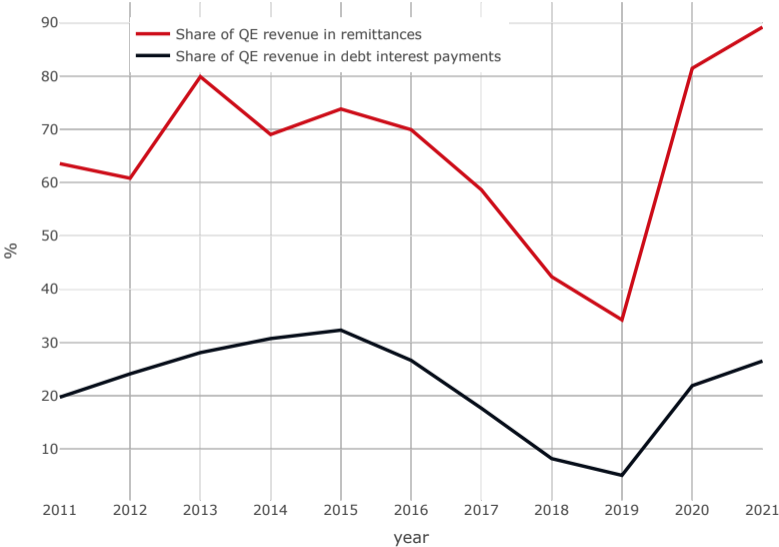
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- (2) Analyse debt stability provided by a **passive QE** in a two agent NK DSGE model with **financial frictions**
 - QE can provide debt stability even without fiscal adjustments
 - Passive conventional monetary policy provides the best responses after a transfer shock; although hard to justify institutionally

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- **Fiscal policy**: Countercyclical fiscal rules for gov. consumption, transfers and distortionary taxes

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- Savers (S)

$$P_t(1 + \tau_t^C)C_t^S + R_t^{-1}D_t = D_{t-1} + (1 - \tau_t^L)W_tL_t^S + P_tZ_t^S + \Pi_t$$

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- The banks fund their expenses with deposits D_t from the savers households and bank equity N_t
- Their balance sheet is:

$$\underbrace{Q_t S_t + P_t^B B_t^b + M_t}_{\text{Assets}} = N_t + \underbrace{D_t}_{\text{Liabilities}}$$

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- Cost: depositors can force the intermediary into bankruptcy and get the remaining assets
- Depositors supply funds as long as

$$\underbrace{V_{j,t}}_{\text{Value of the bank}} \geq \underbrace{\theta[Q_t S_t + \Delta P_t^B B_t^b + \omega M_t]}_{\text{Gain from diverting}}$$

- Easier for the bank to divert loans rather than bonds. Cannot divert reserves $\omega = 0$

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- Passive QE rule

$$\hat{b}_t^{CB} = \rho_{b^{CB}} \hat{b}_{t-1}^{CB} + (1 - \rho_{b^{CB}}) \gamma_{QE} \hat{b}_{t-1}$$

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- The Taylor rule is as follows:

$$\hat{R}_{n,t} = \rho_r \hat{R}_{n,t-1} + (1 - \rho_r)[\phi_\pi(\hat{\pi}_t - \hat{\pi}_t^F) + \phi_y \hat{y}_t] + \epsilon_{MPS}$$

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- $\hat{\pi}_t^F$: inflation needed to stabilize the unfunded share of debt

Fiscal Policy

- The consolidated government budget constraint reads

$$P_t^B B_t + \tau_t^L W_t L_t + \tau_t^C P_t C_t + \underbrace{(R_{b,t} - R_{m,t}) q_{t-1} B_{t-1}^{CB}}_{\text{QE revenues}} \\ = (1 + \rho P_t^B) B_{t-1} + P_t G_t + P_t Z_t$$

with fiscal rules:

$$\begin{aligned} \hat{g}_t &= \rho_G \hat{g}_{t-1} - (1 - \rho_G) \gamma_G \hat{b}_{t-1}^M \\ \hat{z}_t &= \rho_Z \hat{z}_{t-1} - (1 - \rho_Z) \gamma_Z \hat{b}_{t-1}^M + \zeta_{Z,t} \\ \hat{\tau}_t^J &= \rho_J \hat{\tau}_{t-1}^J + (1 - \rho_J) \gamma_J \hat{b}_{t-1}^M. \end{aligned}$$

where $J \in \{c, l\}$ and \hat{b}_{t-1}^M is the debt-to-GDP ratio in deviations from the steady state

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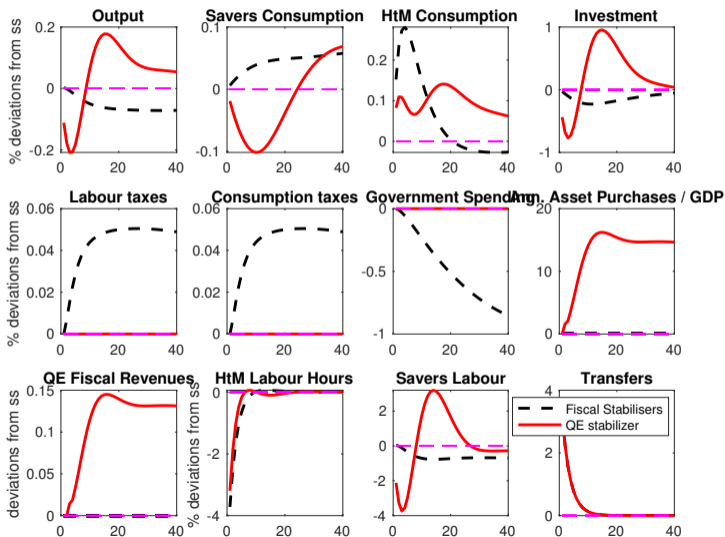
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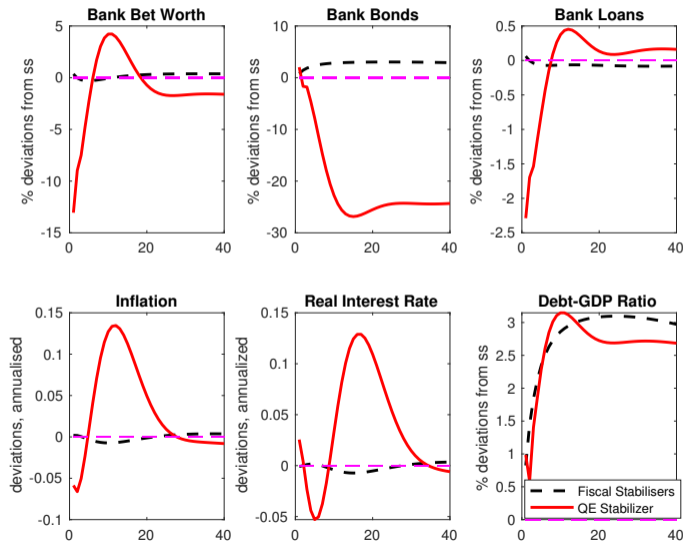
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- Model parametrization follows Bianchi, Faccini & Melosi (2021) **Determinacy**

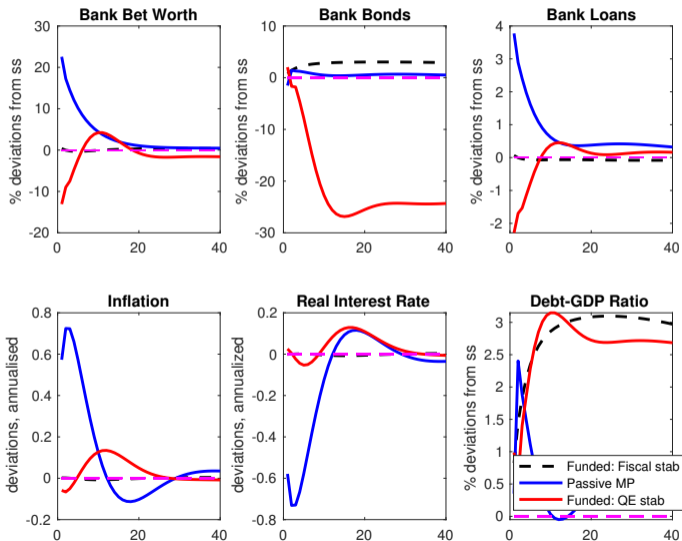
Transfer Shock and Passive QE



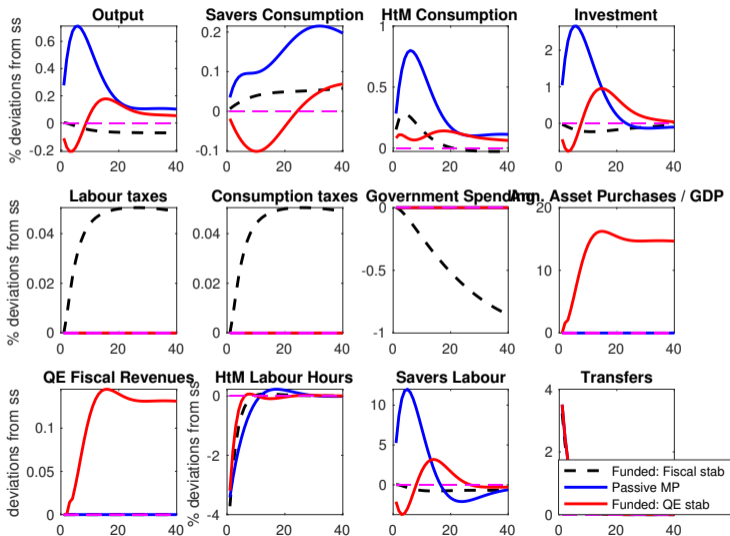
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Passive Conv. Monetary Policy



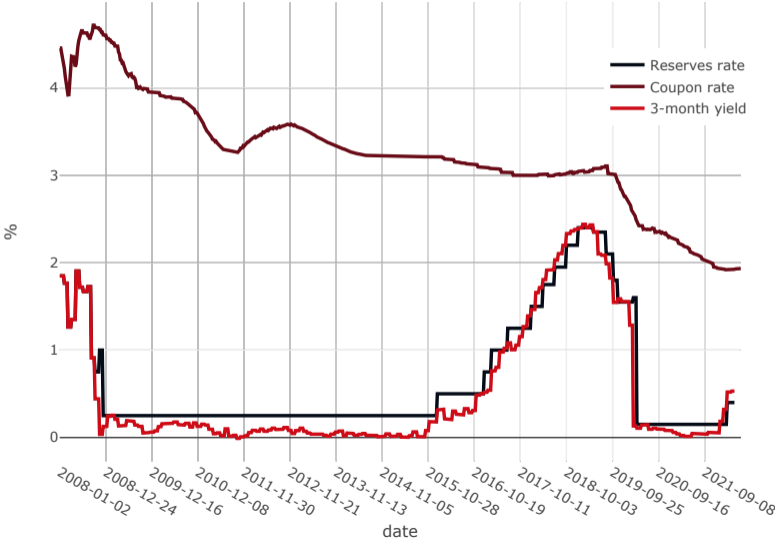
Passive Conv. Monetary Policy



Conclusion

- We study the debt stability properties of QE
- QE creates profits that can be a substantial fiscal revenue
- In the data, they account for up to 1/3 of total debt interest payments
- We build a DSGE model with passive QE and we show that QE can be a debt stabilising mechanism even when fiscal policy is absent
- Passive conventional monetary policy provides the best responses after a transfer shock; although hard to justify institutionally

Coupon - Reserves Spread



Transfer Shock and Passive QE

