Non-Neutrality of Open-Market Operations by P. Benigno and S. Nisticò Discussion

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Message of the paper by Benigno and Nisticò

This is a very interesting and timely paper:

- carefully done
- relevant
- thought-provoking

Message of the paper by Benigno and Nisticò

General question addressed in the paper:
Beyond the standard interest-rate channel, do CBs have additional tools which operate through balance sheet policies, i.e.
i) expansion and
ii) changes in the composition of CB balance sheets ?

Current policy relevance of the paper:
Are i) quantitative easing and ii) credit easing additional tools of monetary policy at the lower bound (*here:* $i = 0$)?

Answer given by BN:
In a broad class of widely used macro-models...
...balance sheet-policies are typically ineffective (i.e. "neutrality of open-market operations"),
...but when exactly?

Message of the paper by Benigno and Nisticò

Starting point: (→ see fn 30)

- **Irrelevance** results of Wallace (1981) and Eggertsson and Woodford (2003) as reference points
- but: BN focus on **separated budget constraints of CB** and **Treasury**

Main results

→ Given some conventional monetary policy rule, effectiveness of additional balance sheet policies requires **risk shifting from private sector to central bank**

1. Under **standard assignments (passive fiscal policy)** and compared to Eggertsson and Woodford (2003), balance sheet policies can become effective if **solvency of the central bank is treated as a separate concern**
2. Under **active fiscal policies** (FTPL-logic) balance sheet policies matter

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Model features: Core (consistent with New Keynesian benchmark)

- Aggregate demand

$$Y_t = E_t \Gamma(Y_{t+1}, i_t, \Pi_{t+1}, z_t) \tag{1}$$

- Aggregate supply

$$\Pi_t = E_t \Upsilon(Y_t, \Pi_{t+1}, z_t) \tag{2}$$

- Some conventional monetary policy rule

$$\text{various specifications possible (including Taylor-rule)} \tag{3}$$

- Money demand (via single friction, *here*: CIA-constraint)

$$\frac{M_t}{P_t} \geq L(Y_t, i_t, z_t), \tag{4}$$

$$\text{with} \quad \frac{M_t}{P_t} = L(Y_t, i_t, z_t) \quad \text{if} \quad i_t > 0$$

$\longrightarrow$ core feature of (1)-(4): separable from other eqns (incl. fiscal part)

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Model features: Monetary and fiscal arrangement

→ *Simplify:* no reserves; no long-term securities → *Recall:* $B_t^G = B_t + B_t^C$

- **Government:**

$$\text{Flow BC} \quad : \quad \frac{B_t^G}{1+i_t} = B_{t-1}^G - A_t - T_t^C$$

$$\text{Intertemp. BC} \quad : \quad \frac{B_{t-1}^G}{P_t} = E_t \sum_{T=t}^{\infty} \widetilde{R}_{t,T} \left[\frac{A_T}{P_T} + \frac{\mathbf{T_T^C}}{\mathbf{P_T}} \right]$$

- **Central bank:**

$$\text{Flow BC} \quad : \quad \frac{B_t^C}{1+i_t} = B_{t-1}^C + (M_t - M_{t-1}) - T_t^C$$

$$\text{Intertemp. BC} \quad : \quad \frac{M_{t-1}}{P_t} = \frac{B_{t-1}^C}{P_t} + E_t \sum_{T=t}^{\infty} \widetilde{R}_{t,T} \left[\frac{i_T}{1+i_T} \frac{M_T}{P_T} - \frac{\mathbf{T_T^C}}{\mathbf{P_T}} \right]$$

- **Consolidated public sector intertemporal BC:**

$$\frac{B_{t-1}}{P_t} + \frac{M_{t-1}}{P_t} = E_t \sum_{T=t}^{\infty} \widetilde{R}_{t,T} \left[\frac{i_T}{1+i_T} \frac{M_T}{P_T} + \frac{A_T}{P_T} \right]$$

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Wallace (1981) and Eggertsson and Woodford (2003):

- only matter of concern: consolidated public sector intertemporal BC
- isolated "solvency constraints" of CB and Treasury do not have to be satisfied
- **design of CB-transfers to Treasury T_t^C ("remittances") does not matter**
- ingredients of irrelevance results: separability of (1)-(4); money comes in via single friction, lump-sum taxes etc.

BN:

- isolated "solvency constraints" of CB and Treasury matter
- **design of CB-transfers to Treasury T_t^C ("remittances") becomes relevant**

Message of the paper by Benigno and Nisticò

Assume the CB makes losses on its assets. Then, depending on the monetary-fiscal arrangement the CB can

- receive compensation for them (requiring Treasury support)
- accept them (leading to lower net worth of the CB)
- attempt to compensate them via higher seigniorage income (leading to a more inflationary monetary policy stance)

Message of the paper by Benigno and Nisticò

Passive fiscal policies:
Ineffectiveness prevails...
1) ...if there is **adequate Treasury support**
- passive remittances
- **Special case: symmetric Treasury support:** $T_t^C = \Psi_t^C$,
i.e. CB pays out all profits in good times, receives full compensation for losses in bad times, such that net worth remains constant)

2) ...in the **absence of Treasury support** if
- CB is willing to accept losses and
- losses are sufficiently small, relative to capital buffers and expected future central bank profits
Special case: deferred asset regime with non-negative remittances
$\longrightarrow$ CB absorbs losses via retained future profits (and reduced remittances are covered by higher taxes, consistent with passive FP)

Active fiscal policies:
Ineffectiveness ruled out because of FTPL-logic

Comments and Questions

1) Standard assignments (passive fiscal policy): **solvency of CB is introduced as the crucial restriction**

$\longrightarrow$ *"We have therefore a theory of price (and quantity) determination which operates also through the solvency condition of the central bank".*

$\longrightarrow$ Is this **plausible**?

$\longrightarrow$ What motivates the binding nature of

$$\frac{N_t}{P_t} + E_t \sum_{T=t}^{\infty} \widetilde{R}_{t,T} \left[\frac{i_T}{1+i_T} \frac{M_T}{P_T} \right] \geq 0 \quad ? \tag{5}$$

- **But:** Standard assignment is defined such that fiscal consequences of monetary policy decisions should be of no concern

  (i.e. Treasury accepts to offset any changes in the path of remittances via appropriate changes in the primary surplus)
- **Standard assignment** is precisely there to ensure **price stability via CB actions**

  and **not** the existence of a **non-negative NPV of remittances**
- Here: why should a central bank - which is successful within the standard assignment, but "violates" (5) - trigger changes in prices or quantities? After all, the CB will not go out of business via some ordinary insolvency procedure ?

Comments and Questions

2) Standard assignments (passive fiscal policy)**: ZLB considerations**
For the sake of the argument, assume

$$\frac{N_t}{P_t} + E_t \sum_{T=t}^{\infty} \widetilde{R}_{t,T} \left[\frac{i_T}{1+i_T} \frac{M_T}{P_T} \right] \geq 0$$

is able to trigger reactions in response to large losses

- How does this work in the model at the ZLB (i.e. $i_T = 0$), where departures from ineffectiveness result would be welcome...?

  $\longrightarrow$ How can the ZLB engineer a shift to a more inflationary monetary stance, leading to higher seigniorage income?

- Only channel in the EW-model: **forward guidance**...

  ...but forward guidance prolongs the horizon of low CB revenue (i.e. $\frac{i_T}{1+i_T} \frac{M_T}{P_T} = 0$ as long as ZLB binds) and requires **commitment**

Comments and Questions

3) Some policy-related aspects: ECB

- Interactions between budget constraints of 19 member countries and the Eurosystem make things more complex
- Design of EA QE

  - facilitates **risk shifting** towards ECB (which, unlike e.g. BoE, is not indemnified)

  - strongly restricts **risk sharing** between NCB's
- Implications:

  1) Standard assignments

  - do solvency constraints of 19 NCBs matter...?

  - are these conditions to trigger price and quantity effects...?

  2) Active fiscal policies

  - aggregate fiscal stance vs. national fiscal policies

  - FTPL in EMU: channels? evidence ? plausibility?

Summary

- very interesting and rich analysis
- EW-framework makes it difficult to make balance sheet policies effective (beyond aspects related to forward guidance)
- tough starting point to discuss relevance of such policies in practice
- alternative mechanisms: portfolio balance channel... ?

  ...but then the EW reference results disappear as well!
- particular concern:

  $\longrightarrow$ solvency constraint of CB under passive fiscal policies...