

Discussion of Del Negro, Eggertsson, Ferrero
and Kiyotaki's
"The Great Escape?"

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All opinions expressed are personal and do not necessarily reflect the views of the European Central Bank

Summary of the paper: a syllogism

- Many central banks, including the ECB, adopted non-standard measures to respond to the financial crisis
- The non-standard measures deployed by the Fed avoided a new Great Depression
- This is a great paper!

Summary of the paper

- An evaluation of the Fed's non-standard measures based on the Kiyotaki-Moore (2008) model of liquidity risk. Compared to KM, this paper:
 - a **quantitative exercise**, rather than illustrative results
 - incorporates **nominal rigidities**, which prove to be important
 - analyses role of the **zero lower bound**

My main comments

- Emphasise why the paper is interesting, compared to other explanations of the crisis
- Discuss impulse responses and relevance of the ZLB
- Suggest some scope for further clarifications

Why the paper is interesting

- Crisis created unprecedented challenges for monetary policy:
 - (1) how did the crisis transmit from interbank markets to economy?
 - (2) are standard and non-standard policies complements or substitutes (only use second at ZLB or also at $i > 0$)?
 - (3) better direct credit to non-fin sector (buying which assets?), or recapitalise banks?
 - (4) how large moral hazard and fiscal costs of non-standard measures?
- The paper makes progress on (2): non-standard policy only useful at ZLB; nominal rigidities key to match large **quantitative** effect of fin shock and non-standard measures

Alternative explanations

- Gertler-Karadi (2009): frictions in banks, nominal rigidities, optimised policy rules – ZLB ignored, but "credit policy significantly moderates the contraction ... dampens the rise in the spread ... and investment decline"
- Curdia-Woodford IV (2010): reduced form frictions in banks and non-fin. sectors; nominal rigidities, optimal policy – credit policy useful independently of ZLB; ZLB tackled as in Eggertsson-Woodford
- Gertler-Kiyotaki (2009): GK meets KM, real model – role for inter-bank market; credit policy useful independently of ZLB and nom rigidity

Why the paper is interesting (2)

- Calibration of non-standard measures based on flow-of-funds:
 - average liquid-illiquid assets ratio gives steady state re-seability constraint $\phi^* (= \theta^*)$
 - change in liquid-illiquid assets ratio over 2008Q4 gives re-seability shock $\hat{\phi}_L$
 - government equity purchases \hat{n}_t^g in 2008Q4 gives reaction coefficient ξ in policy rule $\hat{n}_t^g = \xi (\hat{\phi}_L - \phi^*)$; standard Taylor rule for $R_t = 1.5 \pi_t$
- Remarkably: quantitative output, inflation and interest rate responses to $\hat{\phi}_L$ shock roughly consistent with crisis evidence

How seriously to take quantitative results?

- In IRF policy rates rebound immediately – show IRF with longer ZLB? (why not using log-normal shocks and deterministic nonlinear solutions?)

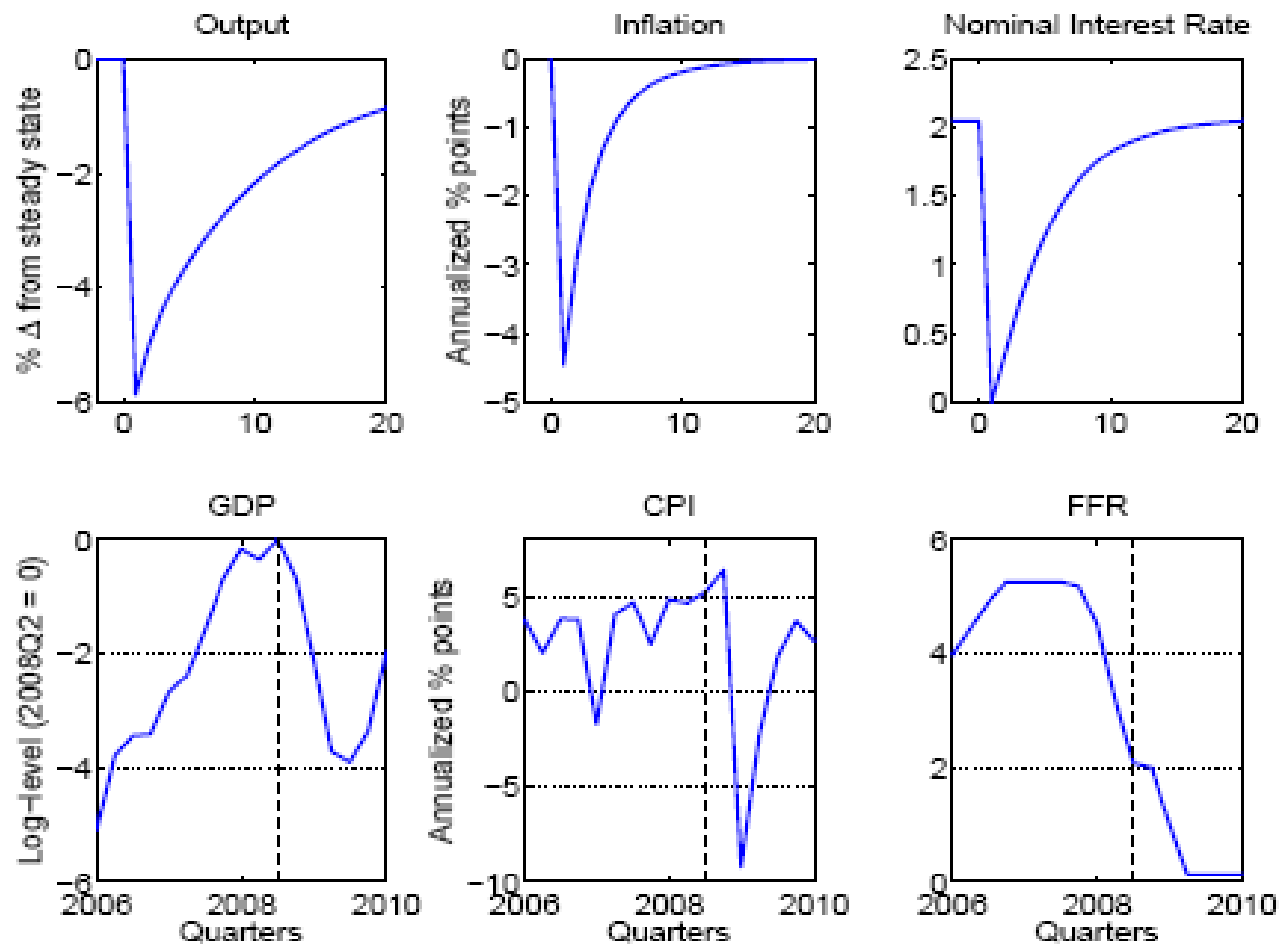


Figure 5: Response of key macro variables to a shock to resellability of assets (with interventions).

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- Could optimal interest rate policy at the ZLB avoid the need for non-standard measures?

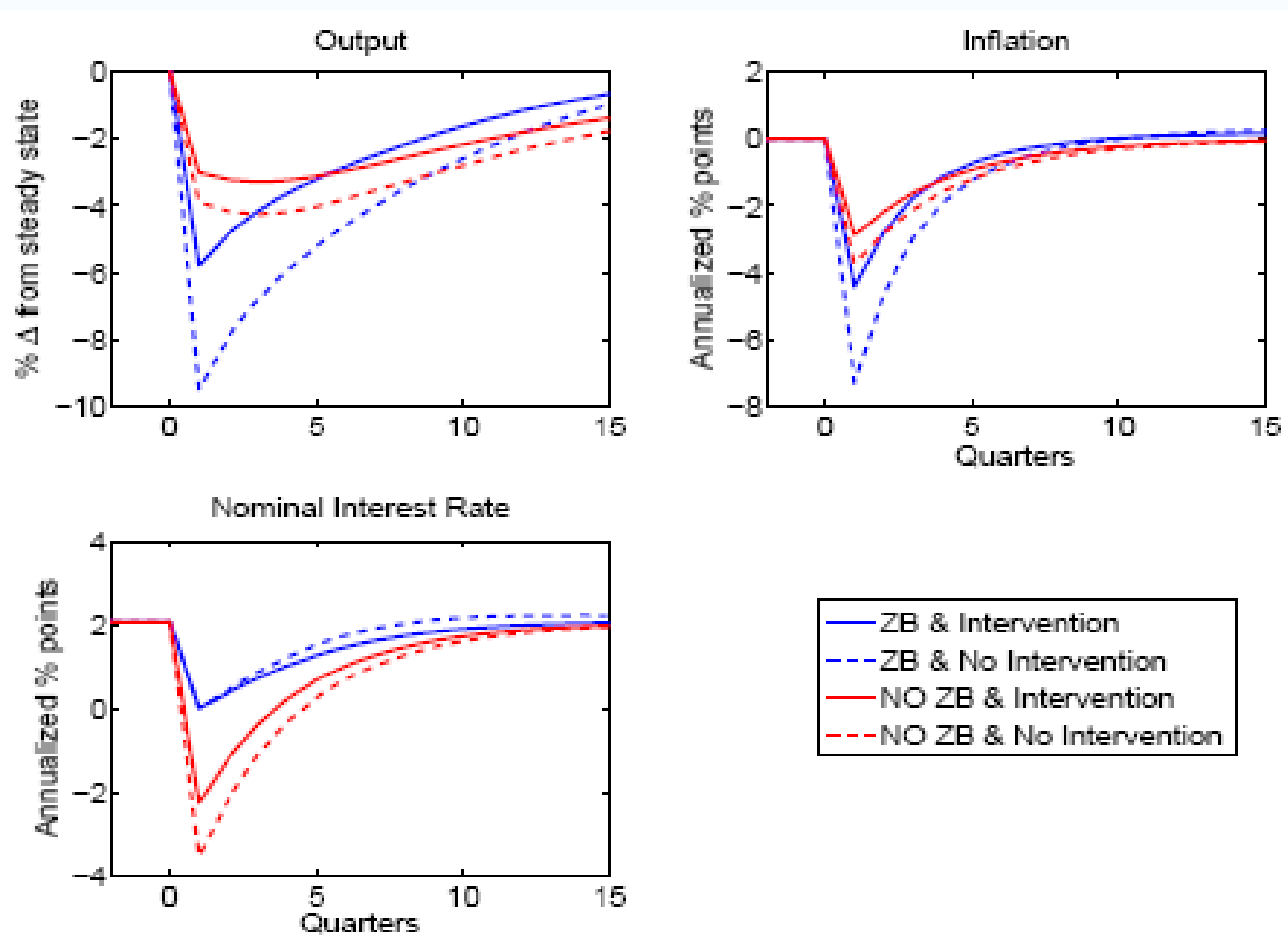


Figure 10: The role of the zero bound

How seriously to take quantitative results?

- In IRF policy rates rebound immediately – show IRF with longer ZLB? (why not using log-normal shocks and deterministic nonlinear solutions?)
- Could optimal interest rate policy at the ZLB avoid the need for non-standard measures?
- Rule $\hat{n}_t^g = \xi (\hat{\phi}_L - \phi^*)$ prescribes interventions as long as $\hat{\phi}_L < \phi^*$. How important for results (and credible) is promise of future interventions? Would a different ξ do even better?

Confusing naming conventions

- real bonds, l_t : “liquid assets”, “money”
- nominal bonds, b_t : “reserves”

Demand for bonds

$$c_t^e + p_t^I i_t^e + q_t (n_{t+1}^e - \lambda n_t^e - i_t^e) + l_{t+1}^e - r_{t-1} l_t^e + \frac{b_{t+1}^e - R_{t-1} b_t^e}{P_t} \leq r_t^k n_t^e$$

$$c_t' + q_t (n_{t+1}' - \lambda n_t') + l_{t+1}' - r_{t-1} l_t' + \frac{b_{t+1}' - R_{t-1} b_t'}{P_t} \leq r_t^k n_t' + \dots [w_t, \Pi_t, \tau_t]$$
$$n_{t+1}', l_{t+1}', b_{t+1}' \geq 0$$

$$\int l_t' + \int l_t^e = L_t$$
$$\int b_t' + \int b_t^e = 0$$

Demand for bonds

- Severe incompleteness for households: hand-to-mouth
- Why no money: if remunerated (cashless economy), relative demand for b_t , l_t and money is indetermined. Hence also $B_t = 0$ (why not $L_t = 0$ instead?).
- Economy is dynamically inefficient and normally $r_t < 1/\beta$ (e.g. in ss). But under nominal rigidities and the ZLB, the real rate can increase. **Don't households want to hold bonds when $r_t > 1/\beta$?**

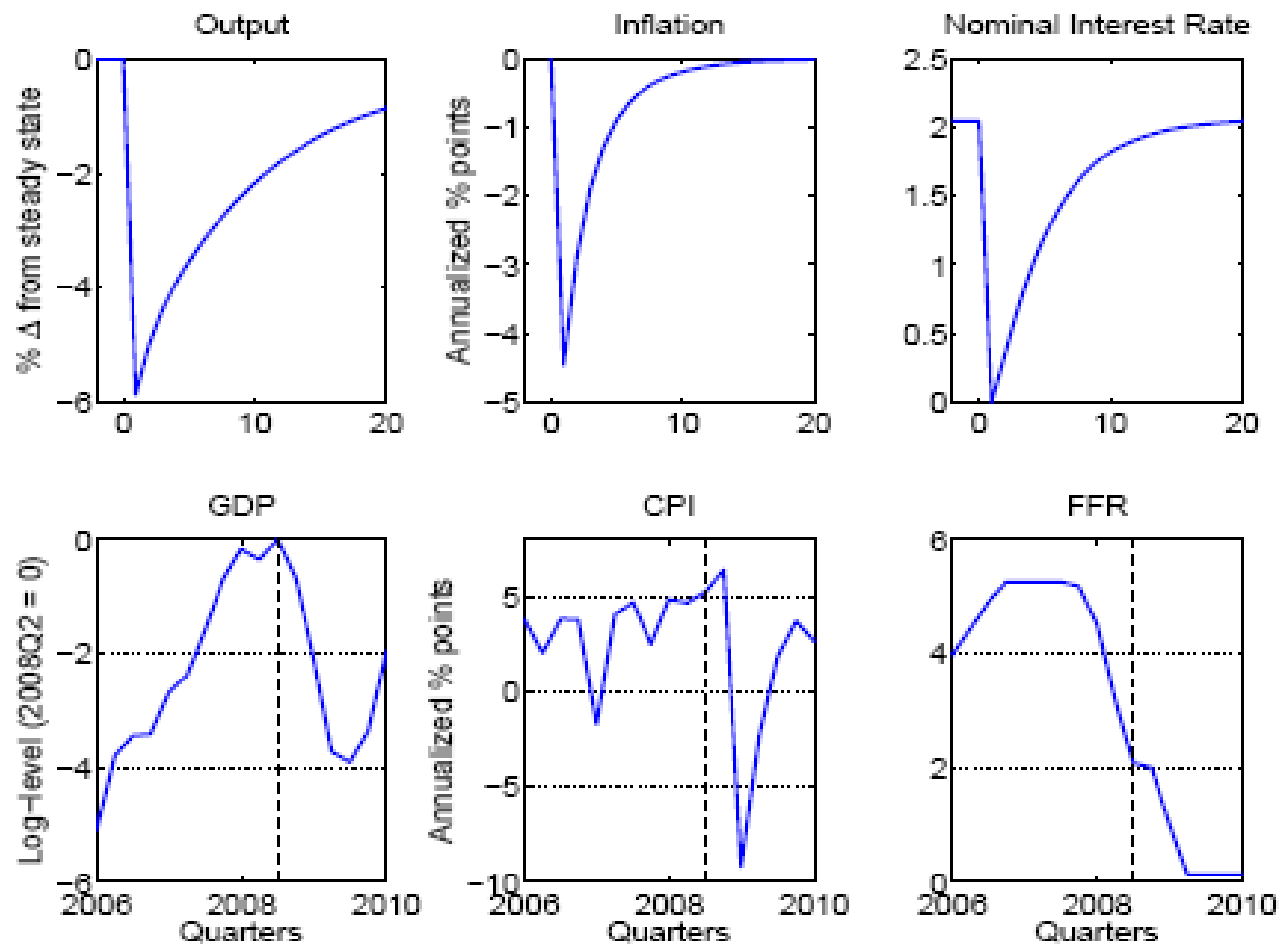


Figure 5: Response of key macro variables to a shock to resellability of assets (with interventions).

Conclusion

- Crisis created unprecedented challenges for monetary policy
- This paper is the first attempt to seriously calibrate the effects of non-standard measures
- It sheds light on whether standard and non-standard policies are complements or substitutes