



EUROPEAN CENTRAL BANK

EUROSYSTEM

Discussion of Caballero & Simsek

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Katrin Assenmacher
Directorate General Monetary Policy



Disclaimer

The views expressed here are those of the presenter and do not necessarily reflect those of the ECB.

The model: setup

Two periods: (0, 1), with output at potential in period 1.

Two assets: equity and bank-issued debt.

Two agents: Households, banks with heterogeneous risk preferences (+ government for LSAPs).

Banks have higher risk tolerance and are leveraged.

$$\bar{a}_0^b = \kappa_0 (y_0 + z_0 Q_0) - (1 + e^{-\rho}) \kappa_0 l_0$$

$$\bar{a}_0^h = (1 - \kappa_0) (y_0 + z_0 Q_0) + (1 + e^{-\rho}) \kappa_0 l_0,$$

Banks' wealth fluctuates more than households' wealth when asset prices change because of leverage.

The model: key results

A negative supply shock can lead to a shortfall in demand if interest rate is constrained.

- Asset price balances demand for goods and for risk.

- Average, economy-wide risk tolerance falls with negative supply shock.

LSAPs are optimal at ELB although government is as risk averse as households.

Optimal policy implies larger LSAPs when supply shock is more severe and/or when banks initially have higher leverage.

LSAPs only to boost demand if rate is constrained, not to overcome financial frictions.

The model at a glance

$\tilde{\omega}_0^g$ ω_0^h τ^b σ^2 b_0^g
 \bar{a}_0^h Q_0 τ^h z^*
 y_0 η^g κ_0 a_0^g
 $\tilde{\omega}_0^b$ λ l_0 $r f^*$ c_0
 a_0^b $\tilde{\omega}_0^i$ \hat{Q}^h γ $e^{-\rho}$
 Q^* \bar{z}_1 a_0^i

Comment 1: Where is the rate of inflation?

The model at a glance

$$\begin{array}{ccccccc} & & \omega_0^h & \tau^b & \sigma^2 & & \\ & \tilde{\omega}_0^g & & & & & \\ & & Q_0 & \tau^h & & b_0^g & \\ \bar{a}_0^h & y_0 & \eta^g & \kappa_0 & z^* & & \\ & \tilde{\omega}_0^b & \lambda & l_0 & r^{f*} & a_0^g & \\ a_0^b & & & \hat{Q}^h & c_0 & & \\ & \tilde{\omega}_0^i & & \gamma & e^{-\rho} & & \\ Q^* & & \bar{z}_1 & a_0^i & & & \end{array}$$

Is COVID-19 shock inflationary or deflationary?

Prices are fixed (but model can be extended).

Comment 2: Tinbergen's rule

There is one target (asset prices) but two instruments (r^f and LSAPs).

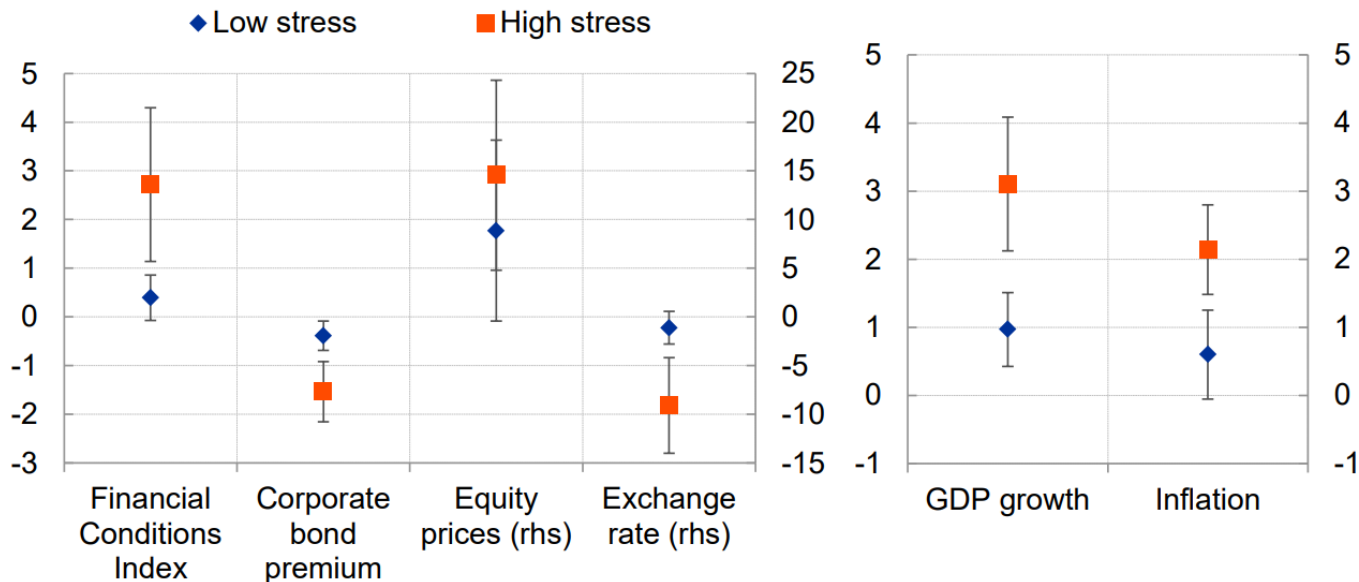
If unconstrained, interest rate falls after a negative supply shock to balance risk and output relations – no LSAPs.

LSAPs only play a role at ELB.

Not compatible with notion that different monetary policy measures act as complements and reinforce each other.

Comment 3: Are LSAPs more effective in stressed conditions?

Impact of asset purchases during low and high market stress: the US experience



Source: Motto, Rast and Ristinemi, mimeo.

Notes: Local projections on monthly sample (2009-2019). Low stress events refer to periods when the VIX is below 25. IFSs scaled to a 50bp decline in the 10-year yield on impact. Markers denote point estimates, error bars 68% significance bands.

Comment 4: Banks can be bankrupt

Safe asset that pays the safe interest rate is bank debt.

Banks can be bankrupt in period 0 if their debt exceeds their asset value.

Banks net wealth is zero.

Households own all of the market portfolio.

If solvent in period 0, banks cannot be bankrupt in period 1.

$$\log \bar{z}_1 = \log z_0 + g$$

Bankruptcy can introduce jumps in optimal LSAP because government can find it too costly to save the banks.

Comment 5: Wealth effects

Wealth effects are central to the mechanics of the model.

Empirical evidence for the US points to small impact of wealth on consumption.

Chodorow-Reich, Nenov and Simsek (2019) find a marginal propensity to consume out of 1\$ of stock market wealth of 3.2 cents per year.

In the model, all financial wealth is consumed in second period.

Use OLG setup?

Thank you