

Discussion of

“A Ramsey Theory of Low Interest Rates”

By Marco Bassetto and Wei Cui

Workshop on “Monetary Policy in the New Normal: Strategy,
Instruments and Transmission,” Banca d’Italia, Rome

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The financing of fiscal shocks: mind the "gap"

- Regarding the dynamic adjustment of the fiscal balance to large expenditure shocks, there is a "disconnect" between empirical findings and prescriptions of theoretical models:
 - Empirically the fiscal balance is restored mainly through a reduction in the return on government debt.
 - But optimal-taxation models prescribe instead an increase and/or devaluation of government debt.
- The authors provide a "fix" by introducing in a standard neoclassical growth model a *liquidity friction*.
- They claim in particular that, if government bonds are a source of liquidity, then the government faces a tradeoff between providing public liquidity and potentially *crowding in* private capital accumulation.

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Start with 2-period model: public liquidity *crowds out* private capital investment

- Continuum of firms that produce output. In period 1 they use labor only, while in period 2 they also rent capital.
- Continuum of households, i.e. entrepreneurs and workers, with an *exogenous* amount of government debt:
 - In period 1 entrepreneurs turn output into capital, and sell claims to that capital—while facing a credit friction—so to borrow funds from workers. This asset liquidity is endogenously determined by search-and-matching.
 - In period 2 no new investment takes place, and the government can tax (or subsidize) capital.
- The Ramsey outcome, i.e. best competitive equilibrium, depends crucially on whether the entrepreneurs are financially constrained. They will be constrained only if *public liquidity* held by workers is *scarce*, see figure 1.

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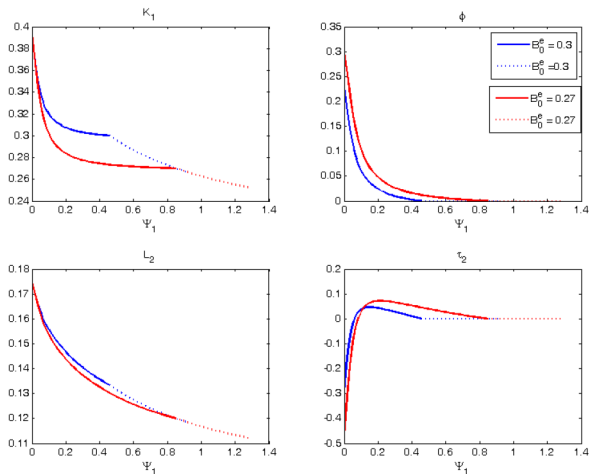
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Fig. 1: Effects of public liquidity on capital investment (K), asset liquidity (ϕ), and capital tax (τ)



Note: Financially constrained (solid) vs. unconstrained (dotted).

With 3-period model: public liquidity reduces interest rates

- Now in period 0 the households can choose how much government debt to hold. This model extension allows to study the optimal supply of public liquidity.
- Under the Ramsey plan, as in the simpler model, public liquidity *crowds out* private capital investment, see figure 2.
- Now an increase in public liquidity raises the capital tax, so to finance the higher government debt. It also pushes down the interest rate, which is needed to limit the increase in government expenditures, see figure 2.
- A final comment. The authors interpret an increase in public liquidity as an *adverse fiscal shock*. This interpretation seems reasonable, but it could certainly benefit from a more detailed explanation through the lens of their model.

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Fig. 2: Effects of public liquidity on capital investment (K), government debt (B), asset liquidity (ϕ), capital tax (τ), interest rate, and welfare

