Liquidity Trap and Stability of Taylor Rules

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Abstract: We study a productive economy with fractional cash-in-advance constraint on consumption expenditures. Government issues safe bonds and levies taxes to finance public expenditures, while the Central Bank follows a feedback Taylor rules by pegging the nominal interest rate. We show that when the nominal interest rate is bound to be non-negative, under active policy rules a Liquidity Trap steady state does emerge besides the Leeper (1991) equilibrium. The stability of the two steady states depends, in turn, upon the amplitude of the liquidity constraint. When the share of consumption to be paid cash is set lower than one half, the Liquidity Trap equilibrium is indeterminate. The stability of the Leeper equilibrium too depends dramatically upon the amplitude of the liquidity constraint: for low amplitudes of the latter, the Leeper equilibrium can be indeed stable. Policy and Taylor rules are thus theoretically rehabilitated since their targets, by contrast with a vast literature, may be reached for infinitely many agents’ beliefs. We also show that a relaxation of the liquidity constraint is Pareto-improving and that the Liquidity Trap equilibrium Pareto-dominates the Leeper one, in view of the zero cost of money.

Keywords: Cash-in-Advance; Liquidity Trap; Monetary Policy; Multiple Equilibria.

Journal of Economic Literature Classification Numbers: E31; E41; E43; E58.

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