

Liquidity Traps

How to Avoid Them and How to Escape Them

Non-technical summary

The credible targeting of a low rate of inflation should result, on average, in low nominal interest rates. The administratively determined zero nominal interest rate on currency sets a floor under the nominal interest rate on non-monetary financial claims. An important policy issue then is the following: how likely is it that the economy ends up, as a result of shocks or endogenous fluctuations, in a situation where the zero short nominal interest floor becomes a binding constraint, that is, how likely is the economy to end up in a liquidity trap?

If low average nominal interest rates also tend to be stable rates, the risk of ending up in a liquidity trap need not be enhanced much by targeting a low rate of inflation. The empirical evidence on the relationship between the level and volatility of short nominal rates is, however, mixed. The cross-sectional evidence supports a strong positive correlation between the average level of the short nominal interest rate and its (unconditional) variance. The time-series evidence for the UK is ambiguous. At very high (daily) frequencies, the correlation between the level of short sterling futures and a volatility index derived from short sterling futures options is negative. At weekly frequencies, the correlation is positive for most of the post-1975 period is positive, but the correlation is negative since 1993, the beginning of inflation targeting in the UK.

Once an economy lands itself in a liquidity trap, there are just two policy options. The first is to wait for some positive shock to the excess demand for goods and services, brought about through expansionary fiscal measures or through exogenous shocks to private domestic demand or to world demand. The second

option is to lower the zero nominal interest rate floor on currency by taxing currency. A negative interest rate on currency would also reduce the likelihood of an economy landing itself in a liquidity trap.

The paper revisits a proposal by Gesell for implementing a negative nominal interest rate on currency. Under this proposal, currency would cease to be current, and could be subject to confiscation, unless a predetermined periodic payment is made by the bearer to the issuer. Currency would have become 'stamp scrip'. Another perspective on Gesell money is to view it as involving periodic monetary reform, in which the conversion terms between old and new currency define the own interest rate on currency.

The transactions and administrative costs associated with such periodic currency reforms would be non-negligible. Such currency conversion costs could be reduced by lengthening the interval between conversions, but they would remain significant. These 'shoe-leather costs' would have to be set against the risk of ending up in a liquidity trap, if a very low rate of inflation is targeted without taxing currency, or against the cost of targeting a higher rate of inflation. It may take a lot of shoe leather to fill an output gap or to rub out the distortions associated with the inflation tax.

We then develop analyse the behaviour of a small analytical macroeconomic model in which negative interest on currency is a policy option. In the Keynesian, sticky price version of the model, there are two kinds of equilibria, 'normal' equilibria and liquidity trap equilibria. If the inflation rate falls to a sufficiently low level, the economy may end up in the liquidity trap zone in which it will cycle permanently around the liquidity trap steady state. Imposing a negative interest rate on currency lowers the critical rate of inflation at which the economy enters the liquidity trap

zone. Once caught in the liquidity trap zone, a reduction in the nominal interest rate on currency provides a means of escape.

If there are indeed benighted countries threatened by, or even caught in, a liquidity trap, the policy makers there have one more option they might wish to consider on its merits: Gesell money.