The Liquidity Trap

Macroeconomics IV

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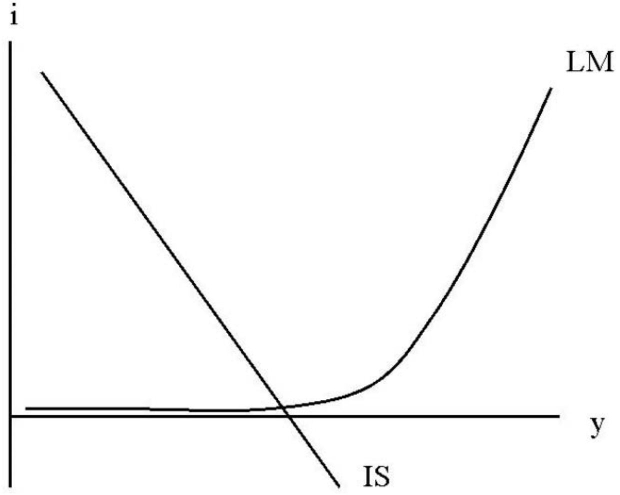
References

- P. Krugman, "Thinking about the Liquidity Trap," *Journal of the Japanese and International Economies*, 14, 221-237, 2000.
- L.E.O. Svensson, "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others," *Journal of Economic Perspectives* 2003, 17:4, pgs 145-66.
- G. Eggertsson, "The Deflation Bias and Committing to Being Irresponsible," *Journal of Money, Credit and Banking* 38, 283-322, 2006

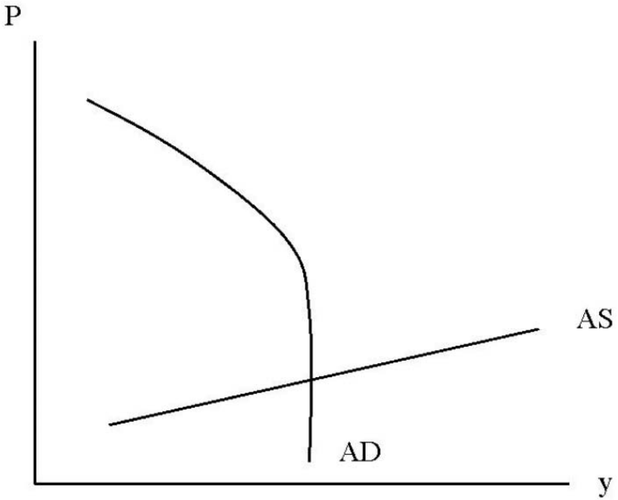
Introduction

- During deflation (full employment) equilibrium may require negative nominal interest rates... but this is inconsistent with bond/money market equilibrium (minimum $i = 0$)
- Concern that (conventional) monetary policy becomes ineffective
- Major issue for Japan in recent decades (second half of the 1990s in particular), and for the US and Europe during the recent financial crisis and its recovery phase
- Policy: Old view (m-ineffective) / New view (future m is effective... but time inconsistency problem)

The Old View



The Pigou Critique



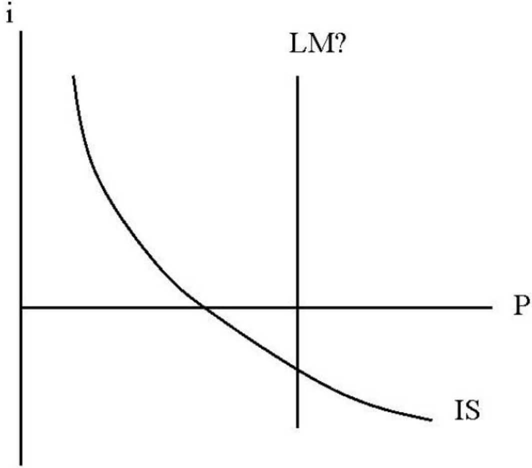
Current versus Future M

- Krugman's manna (exogenous consumption) and money

$$
\begin{aligned}
(1+i_t)\frac{P_t}{P_{t+1}} &= \frac{1}{D}\left(\frac{c_{t+1}}{c_t}\right)^{1-\rho} \\
P_t c_t &\leq M_t
\end{aligned}
$$

- Now consider only a change in the money supply at t but that it is undone next period. That is, take future P and i as given.

Current versus Future M



- Need to raise future M expectation (and hence P_{t+1})...

Keeping rates low for a considerable period... (the modern view)

- Aggregate demand

$$Y_t = E_t Y_{t+1} - \sigma \left(i_t - E_t \pi_{t+1} - r_t^e \right)$$

- Solving forward:

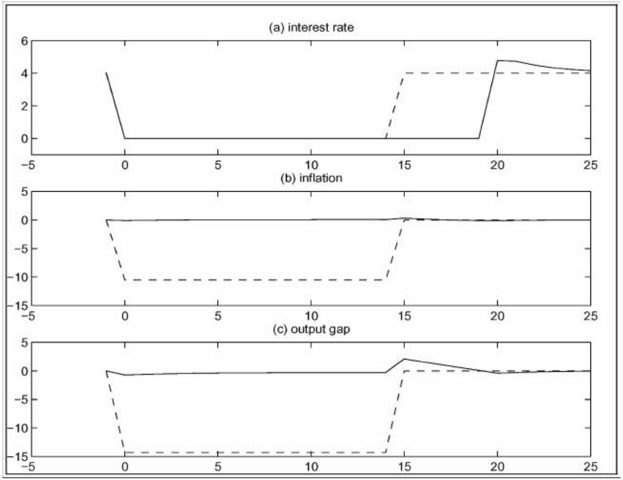
$$Y_t = E_t Y_{t+T} - \sigma \sum E_t \left(i_{t+s} - E_t \pi_{t+s+1} - r_{t+s}^e \right)$$

- And the key constraint is:

$$i_{t+s} \geq 0$$

- Recipe: Make people believe that i will be kept below the time consistent level once the equilibrium rate becomes positive...

Keeping rates low for a considerable period...



Final Remarks

- There are many proposal to deal with the deflation bias... but they all some exotic (counterintuitive) side.
- For example: Issue enormous amount of public debt because that will tempt the government to inflate away the problem in the future...
- Perhaps switching to price level targeting?
- Back to asset shortages world: May keep up us uncomfortably close to a liquidity trap for a very long time...

Some concepts/models you should get from 14.454

- Collateral and amplification: Bernanke-Gertler and Kiyotaki-Moore
- Credit crunch: Holmstron-Tirole
- Runs, contagion, panics: Diamond-Dybvig and general ideal of Caballero-Simsek
- Bubbles: Allen-Gale's risk shifting; lecture notes on RE bubbles; and general idea of Abreu-Brunnermeir
- Capital flows and sudden stops: Caballero-Krishnamurthy I, and the general idea of Caballero-Farhi-Gourinchas and Caballero-Krishnamurthy II
- Liquidity traps: Today's lecture notes.
- Good luck next Wednesday!