

Demand and Supply: Discussion of Brunnermeier “Coexistence of Private Digital and Central Bank Currencies”

ABFER-MAS-NUS Business School

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Discussant's outline

1. Brunnermeier's comprehensive account. The deep economics of money, both classical and forward-looking.
2. Demand and supply
 - a. Disruption. Digital. AI (Deep learning)
 - b. Global order
3. Conclusions

The Demand Side

$$\begin{aligned} & \max U \text{ (Dynamic)} \\ & \text{s. t. } B = 0 \text{ (Budget)} \\ & \mathcal{L} \leq 0 \text{ (Liquidity)} \end{aligned}$$

⇒ Demand curve

$$E_t[MU_{t+1} \times R_{t+1}] + \frac{\partial \mathcal{L}}{\partial a} \frac{\lambda}{\mu} = 1$$

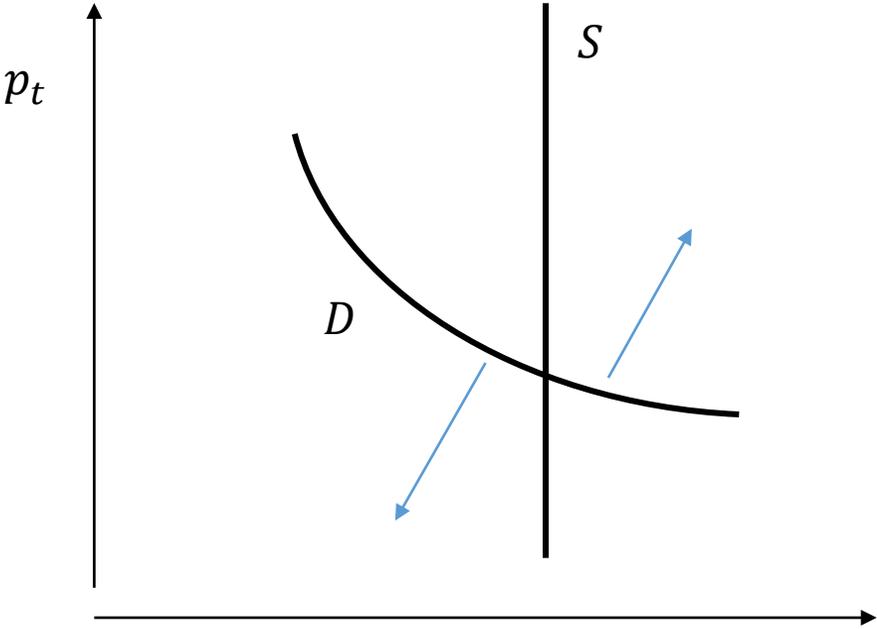
with

$$E_t[MU_{t+1} \times R_{t+1}] = \text{cov}(MU_{t+1}, R_{t+1}) + E_t[MU_{t+1}]E_t[R_{t+1}]$$

⇒ Price $p_t = v_t + l_t + b_t$, functions of $\{MU\}$, $\{R\}$, $\{\mathcal{L}\}$

The Supply Side

I. Inelastic?



The Supply Side (2) – Competition?

1. Controls (governments vs libertarian fringe?)
2. Blockchain trust. Mining constraints on supply
3. Rogoff government capacity; Eichengreen's uniform national circulation; Yermack's states in emerging markets
 - Not all states alike. Shifting global distribution of power
 - World's reserve currency

The Supply Side (3) – Competition?

3. Intermediate intermediaries

- Not private providers vs states but private providers vs a fractional reserve banking system
- Money multiplier; money supply mechanism

The Supply Side (4) – Bundling?

Information management, not just medium of exchange or store of value

- Can digital currency providers whether central banks or private suppliers offer (as a consequence, intended or unintended, in equilibrium):
 - Security and privacy; anonymity?
 - Financial inclusivity (the poor, rural; India)?
 - Bundling and integration with smartphone apps; personal information aggregation dashboard?
 - Lowered transaction costs and AI-driven improved matching of buyers and sellers?
 - Building trust in societies where Delivery vs Payment challenges remain, where rule of law is tenuous?
- Not competition but private-public partnerships on digital currency provision to alleviate concerns

Conclusions

1. Brunnermeier's comprehensive account. The deep economics of money
2. Demand and supply
 - a. Different hierarchies and multiple levels
3. Where do we think the disruption to be most powerful, if at all; where do we model that disruption?

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