

Discussion of Liquid Accounts as a Store of Value by Alessandro Mennuni

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A double coincidence of wants problem (Wallace (2000))

Perfect monitoring makes money inessential

Ellen wants a haircut and has a lecture in economics to offer in exchange. Ellen runs into the standard difficulty of barter, the absence of a double coincidence of wants. She uses money to buy a haircut. The hairdresser can use the money in turn to buy whatever is in the attainable price range.

*If everyone knows whether or not the hairdresser provides a service to Ellen, then the hairdresser can be rewarded or punished in the future depending on whether or not the service was provided. The role of **tangible money** is to provide this evidence. Hence, with **perfect monitoring**, tangible money is not needed*

This Paper: Research Questions

Theory of Money with perfect monitoring and w/out liquidity and credit frictions:

- Money "as a store of value" through search frictions: "goods are hard to find because of search friction"
- Money NOT "necessary" for transactions (seller is willing to trade even if buyer offers IOUs)
- Trades are NOT anonymous
- Money survives along with long-run assets that dominate in return

This Paper: Research Questions

Money in the business cycle:

- Make Money Velocity Pro-Cyclical
- Generate demand for liquidity in recessions

Interesting..

- This is difficult to obtain in pure CIA models
- One needs more frictions (Ragot ('14) uses financial frictions)

Are search frictions in goods markets sufficient?

Some Relevant Assumptions

Timing

- Sub-Period 1: search effort/shopping + payments + compensation from insurance if search fails
- Sub-Period 2: income is cashed

Info.

- Actions are monitored
- Income is totally pledgeable, can be used as collateral for debt within periods
- No end of period debt

Timing: Sub-Period 1: Shopping + Insurance

- Households search for a trading post (TP) and
 - **with prob.** ψ : they find TP and spend x units of account in exchange for q units of the good at price p ($x = pq$)
 - **with prob.** $1 - \psi$: they do not find TP and spend nothing
- Insurance Co. exploiting LLN:
 - Lucky h. gives up $(1 - \psi)q$ units of the good to Ins. Co. and receives $(1 - \psi)x$ units of account from the Ins. Co.
 - Unlucky h. receives ψq and pays ψx

Timing: Sub-Period 1: Shopping + Insurance

Then, for both type of h.:

$$q^{net} = \psi q \quad (\text{net units of good received}),$$

$$x^{net} = \psi pq \quad (\text{net payment made})$$

- ψ is effectively selected by households when they set p , q and search effort
- So far we need to ass. **non-anonymity**, otherwise the insurance contract cannot be enforced
- Why make search effort if you can get through insurance? Big **Moral Hazard Problem** in large economies?

Timing: Sub-Period 2: Income received

- H.'s net Income: $\mathbf{y} = w^r n + R^r k$
- H.'s nominal net claims $\mathbf{a} = \text{IOUs or Money}$

$$a' = a + py - \psi pq, \quad (\text{budget constraint})$$

$$c + k' = \psi q, \quad (\text{cons. + invest.})$$

$$\text{End of period b.c.:} \quad a' + p(c + k') = a + py$$

What role for money?

- 1 **Liquidity constraint or debt limit:** Lucky h.'s end of period claims before compensation from Insurance Co. and after income is cashed cannot be negative:

$$a + py - pq \geq 0 \quad (*)$$

- 2 **Final net asset position stored in money:**

$$a' = m' \quad (**)$$

More motivation desirable: Because no record keeping?

Equations (*) + (**) imply

$$m \geq pq - py = p \left(\frac{c + k'}{\psi} - y \right) \quad (\text{CIA})$$

- If money is dominated in return, CIA is always binding:

$$\Rightarrow \quad m = p \left(\frac{c + k'}{\psi} - y \right)$$

- Households acting on ψ (trade-off: $\psi \uparrow \Rightarrow$ save on money but make more effort)

At equilibrium, $c + k' = y$, and, then,

$$m = py \left(\frac{1 - \psi}{\psi} \right) \Rightarrow \text{Velocity} = \frac{py}{m} = \frac{\psi}{1 - \psi}.$$

- Money Velocity is increasing in the probability of finding a TP
- Pro-cyclical Velocity if ψ is pro-cyclical \Leftrightarrow Market Tightness is pro-cyclical

Good idea but:

- I see no new theory of money - Just a variation on the CIA-type of models (money has value because it provides liquidity services)
- I am skeptical about realism of some assumptions - Strong market power, households set price of insurance and liquidity (tightness of CIA constraints)

Difficult to reconcile with the claims that the model

- does not rely on transaction frictions
- does not require anonymity