Discussion on
Central Bank Digital Currency and Monetary Policy
by S. Mohammad R. Davoodalhosseini (Bank of Canada)

Discussion by Mariana Rojas Breu
(Université Paris Dauphine, PSL)

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The setting

- Lagos-Wright model, permanent buyers and sellers, preference shocks, proportional bargaining, cash and cbdc
- the “direct” cost of carrying cbdc is $K$, while for cash it’s zero

Policy: cash / cbdc

- open market operations
- transfers (no taxation) → cash: lump-sum; cbdc: non-linear
- flexible exchange rate between cash and cbdc

⇒ Clear focus: retail cbdc, trade-off cbdc/cash: non-anonymity vs. anonymity and contingent transfers vs. lump-sum transfers
Results

Benchmark results

- costless cbdc, homogenous buyers

Main contribution

- heterogenous buyers: cbdc may allow attaining efficient DM trade (unlike cash)
  → allows transfers contingent on money holdings / types (this paper) vs taxation (usual argument)

- Coexistence of cash and cbdc may entail lower welfare than cbdc or cash only (cash: outside option)
  - Cash as outside option wrt banks (e.g., Berentsen, Camera & Waller, 2007; Rocheteau, Wright & Zhang, 2018; Lagos and Zhang, 2019).
  → here different perspective.
Assumption on the cost $K$

- the planner can know the buyer’s type if the buyer uses cbdc $\rightarrow$ shortcut.

- cost $K$ from losing anonymity: on balances? on transactions / types? motive not modelled.

- why agents cannot exchange cbdc for cash when they want to keep anonymity? (get higher return).

- extension where $K = 0$ but cbdc cannot be used in all transactions: easier to interpret (e.g. consumption that agents wish to keep private).
Privacy part

- Privacy concerns: the planner wants to protect privacy on the types.

- No overlapping? In the baseline model the planner cares about the fact that agents incur the cost $K$.

- $K$ derives from losing anonymity vis-a-vis the planner (proportional bargaining: the seller observes money holdings).

- Clarify the role of $K$ here:
  - Now the planner refrains from observing the types but agents still incur cost $K$?
  - Why would someone who misreports incur the cost $K$? In the off-equilibrium payoff to someone who hides his/her identity the cost $K$ is subtracted, although the identity is being hidden.
Cash as an outside option

- Cash is a clear outside option in an equilibrium if coexistence cash/cbdc.

- What about an equilibrium where all buyers use cbdc?
  Planner’s constraint:  
  \[- (1 - \beta) D_w (\tilde{q}) + \beta \sigma \theta (w_\theta (\tilde{q}) - c (\tilde{q})) - K \geq \max_{\tilde{q}} \left\{ - (\gamma_c - \beta) D_w (q) + \beta \sigma \theta (w_\theta (q) - c (q)) \right\} \]

- Since the CB does not commit to a fixed exchange rate btw cbdc and cash, the price of one could be positive and the other zero in equilibrium (both fiat).

- Goal is to eliminate cash equilibrium? The planner is not able to select a particular equilibrium (cbdc only or cash only).
Is cbdc different?

- Relation to the literature
  - Banks’ deposits/credit vs cash: e.g, English, 1999; Erosa and Ventura, 2002; Lacker and Schreft, 1996; Andolfatto’s cbdc paper.
  - Reminiscent: Cash in small transactions; cbdc in large transactions.

- Is cbdc different? I think Mohammad identifies a feature that makes it different: non-linear transfer scheme.

- But need to compare with fiscal policy
  - → is cross-subsidisation related to the role of cbdc as a medium of exchange?

- What if heterogeneity over labor endowment in CM (instead of $w$)? The planner may want to transfer more to those with smaller cbdc balances.
Why $M1$ is a good choice? Big part of $M1$ is not anonymous.

- Low adoption scenario for cbdc: instead of biased/unbiased, could that come from heterogeneity over $K$. Data? Maybe you do not want to have two sources of heterogeneity?

- Interpretation of results: for US, introducing a cbdc will lead to an increase of 0.12% – 0.21% consumption. What about effect of $K$?
Nice and elegant paper with clean results on the welfare-improving effects of cbdc.

Need to clarify the disadvantage of cbdc.

Your paper could provide implications for the design of cbdc → token-based for small transactions / account-based for large transactions:

- e.g., CBDC Policy-Maker Toolkit (2020), World Economic Forum
- Rogoff’s proposal for abolishing cash (2016): large-denomination vs. small-denomination bills