

Discussion of

# **Survey insights on digital euro affinity and their implications for outflow of deposits**

by P. Gertler, A. Cupak, D. Hajdiak, J. Klacso and S. Rychtárik

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**Digital euro and its holding limit: how to calibrate it? - ECB**

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\* The views expressed here do not necessarily represent those of the Bank of Italy.

# My discussion

- Very interesting paper!
  - Nice stats on demand for a D€ in Slovakia
  - A creative approach to computing potential outflows
- **Summary** of the paper
- **My comments**
  1. Calculation of potential deposit outflows
  2. Some words of caution on estimated outflows
- **Implications for digital euro holding limits**

# Paper summary

## 1. Digital euro awareness, potential use and design preferences in SK.

- **Awareness** correlates with political preferences, education, age, internet usage and financial assets ownership
- **Potential use** also impacted by trust in EU institutions (positively) and affinity with cash (negatively)
- The most important **design attributes** to consumers are privacy and anonymity

## 2. Potential deposit outflows.

- **Survey data:** Slovakian households plan to spend about 27% of monthly net income (35% of avg. overnight deposit) as digital euro
- **Quantitative estimates** based on deposit micro data and survey questions: potential outflows in SK of about 2-6% of existing deposits

# My comments

## Calculation of potential deposit outflows

$$\frac{OutflowsDep}{TotalDep} = \underbrace{\left( \frac{OvnDep}{TotalDep} \cdot \frac{EligibleDep}{OvnDep} \right)}_{\text{Share deposits "at risk"}} \cdot \underbrace{\left( \overbrace{\frac{WouldUseD€}{}}^{\text{Extensive margin}} \cdot \overbrace{\frac{MonthlyExpD€}{MonthlyIncome}}^{\text{Intensive margin}} \right)}_{\text{Exp. outflow per € of deposits}}$$

- I would try to be even clearer on the exact steps involved in the computation.
- Assumptions:
  - Adoption rate (ext. margin) ← Not explicitly reject D€
  - %Outflow (int. margin) ← Intended D€ exp. as a fraction of income [\[more on this later\]](#)

# My comments

## Some words of caution on estimated outflows - 1/2

F11c. In such a case, how much euros would you pay monthly from your digital euro account in this way?

- Assume expenditure = income for simplicity.
  - Before digital euro:  $\alpha_0\%$  is paid for in cash;  $(100 - \alpha_0)\%$  using deposits
  - After digital euro:  $\alpha_1\%$  is paid for in cash;  $\gamma\%$  using D€;  $(100 - \alpha_1 - \gamma)\%$  using deposits
- The question above asks agents about  $\gamma\%$
- Authors implicitly assume that  $\alpha_0 = \alpha_1$   
In reality, D€ is likely to displace some of the expenditure done in cash ( $\alpha_1 < \alpha_0$ ).  
**This would reduce expected outflows [relevant for cash-intensive countries like SK]**

# My comments

## Some words of caution on estimated outflows - 2/2

- The relevant object to estimate outflows are desired D€ **holdings** ( $\neq$  **expenditure**)
  - HHs could use their D€ for a lot of purchases, but still have low average holdings (avg. deposits would be high)
  - Example: transfer from dep. to D€ account right before payment (even easier with **reverse waterfall** functionality!  $\infty$  velocity)
- With the data at hand, the authors do the best they can.
- Would be nice to map average D€ expenditure to average D€ holdings making assumptions on the design of funding/reverse waterfall functionalities.

*“Digital euro funding will be possible via cash (at an ATM or in-branch) or via a private money account. Intermediaries may offer **both manual and automated funding**. Individual users would also have the option of **setting a default balance** for their digital euro holdings, which would be **funded automatically** after any outflow has occurred. The default balance could not be higher than the holding limit set by the Eurosystem.”*

# Implications for digital euro holding limits

Question	Applicability	Details/suggestions
Effect of holding limit	✓	Change in “deposits at risk”
Impact of speed of adoption	✗	Requires a different setup
Pre-funding vs reverse waterfall	✓	Show sensitivity of results to different preferences?
Impact of slow reverse waterfall	✓	Show sensitivity of results to different RW takeup?
Pre-funding needed with monthly top-up	?	Probably hard to integrate

# Summing up

- Interesting and clearly relevant question + creative approach to measurement.
- Useful survey evidence on awareness, potential adoption and preferred design attributes in Slovakia.
- Calculation of expected deposit outflows, with some caveats to bear in mind.