Envisioning a digitalised currency

The role of a digital Euro and its consequences

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Agenda

1. What are Central Bank Digital Currencies?
2. The definition-implementation dilemma
3. Should a digital Euro pay interest?
4. Changes in the monetary policy toolkit
5. Reasons for implementation and associated risks

“A digital euro would be a digital form of cash that could be used for all digital payments throughout the euro area, free of charge, both online and offline.”

Fabio Panetta

Key points in definition

“Central bank digital liability”

The literature offers various perspectives when defining a CBDC, but the fundamental idea is widely shared.

The European Position

The European Commission and the ECB unquestionably intend to consider a digital Euro as a complementary tool to cash.

Thus not substituting cash but implementing a safer alternative to digital private means of payment.

The definition-implementation dilemma

- Payment system or payment object?
- Wholesale or retail?
- Token or account?
- Universal or store-of-value?
- Traded at par?
- Interest bearing?

Should a digital Euro pay interest?

“Depending on the scope and implementation, a digital Euro could heavily interfere with monetary policy transmission; introducing an additional large-scale central bank liability requires adopting new tools to fine-tune its circulating volume”

Paolo Fegatelli

Working scenario

Assumptions

H1) The central bank continues to implement monetary policy via interest rates i.e. business as usual.

H2) The central bank wants to preserve the neutrality principle between different payment means.

H3) The central bank wants to preserve its independence.

Equilibrium rate

1. $R^C = R - \varphi^C$
2. $R^x = R^C + \varphi^x$

Non-interest-bearing

- Effective lower bound raised to zero
- Undermining of central bank’s policy objectives
- Interest-free is more cash-like, following European authorities' idea

Interest-bearing digital Euro – policy rates

- Disruption of banking business model & Lenin's "monobank"
- $R^D = R^C + \varphi^d$
- Stronger monetary transmission
- Compromission of two-tier financial systems
- "rate-discrimination" between banks and non-banks
- Financial illiteracy

Interest-bearing digital Euro

- Existence of private monies implies lower boundary for CBDC rate, $L(U_{PM} < R^C \leq \min(0, R)$
- CB's neutrality on means of payment
- $R^{C^*} = \varphi^{B^*} - \varphi^{C^*} = R - \varphi^{C^*} < \mathrm{R}$
- H3 implies upper boundary on CBDC remuneration

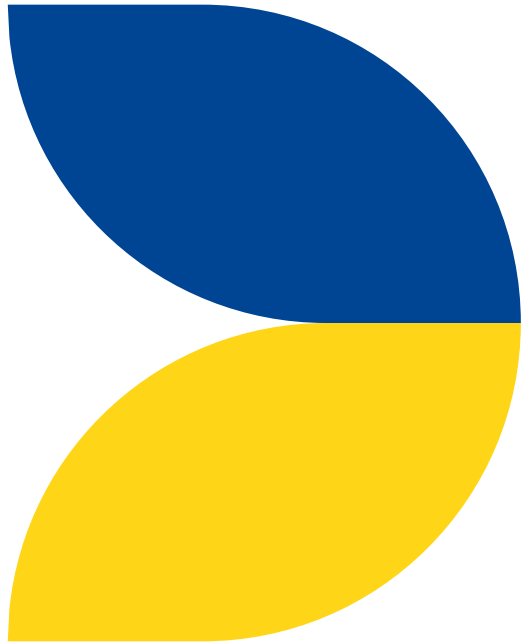
Interest-bearing as variable fee

- Interest beared as a variable deposit fee
- Financial illiteracy and reduced demand for CBDC in this scenario
- CBDC deposit fee anchored to main rate
- Negative rate scenarios

The cash-complementarity problem

- Challenge that the literature tries to circumvent is the coexistence of cash and CBDC
- What if we were to fully replace cash with a digital Euro?
  - Threat to financial inclusion
  - European position is inherently contradicting
  - Digitalisation left to privates?
  - Coexistence of cash and CBDC introduces complexity
  - Replacing cash: radical change in the short term, fewer long-term challenges
- European position is still of complementarity

Changes in the monetary policy toolkit



New role for reserve requirements

- The central bank could raise (lower) the RR on bank deposits when an increase in the policy rate raises (reduces) the differential with the CBDC rate to offset an excessive increase (decrease) in the public's supply of bank deposits while pushing the bank deposit rate back towards its previous level.
- To address shift between deposits and CBDC holdings
- RR as “emergency brake”

New and enhanced policy measures

1. “Helicopter money” by Friedman
    1. Direct distribution of newly created money
    2. CBDC could support quantitative easing by directly transferring central bank funds to individuals and firms
    3. HE may be more effective than Quantitative Easing
2. Negative Interest Rate Policy
    1. Stimulate the economy
    2. Faster recovery after crisis
    3. Require elimination of cash and cryptos
    4. Counter-limits doctrine and constitutionality

Reasons for implementation and associated risks

Not only Economics

Social pact

- Nature of fiat currencies
- Digitalization requires evolution of the social pact
- Democratic legitimization

Trust & Sovereignty

- Extension of central bank's role in providing reliable publicly accessible means of payment
- "one Euro is one Euro"
- Trust in central bank

Rise of private moneys

- Fast ascent of private moneys
- Declining use of cash
- Demand for digital means of payments
- Foreign private competitors

Main risks

- Trade-off between privacy and oversight
  - Lagarde: “We should at least provide a level of privacy equal to that of current electronic payment solutions” , not full anonymity
  - Panetta: “it would offer the highest level of privacy”, full anonymity
  - Orwellian dystopia
- Digital bank runs
- Distress to banking system
  - Fragile maturity transformation
  - “monobank” risk
  - Credit crunch

Conclusions

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- Economic research on CBDC is extensive but needs political, legal, and sociological input to progress further
- Need for a democratically grounded vision of digital Euro(too many internal contradictions)
- Political authorities must define the acceptable trade-offs between privacy and oversight and the circumstances when disruption of free competition is acceptable

Thank you!

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